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বাংলাদেশ জার্নাল অব পলিটিক্যাল ইকনোমি
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Editorial Note

Bangladesh Journal of Political Economy (BJPE) is a persuasive endeavor of Bangladesh Economic Association. This volume accommodates a respectable number of illuminating papers authored by illustrious economists, professionals of social repute, noted academicians and young talented writers. The volume covers a broad spectrum of economic, social and ethical issues having national and global significance. Findings on different topics are expected to provide valuable insights into the way the experts and policymakers deeply think and take important decisions. This volume opens exciting new avenues for scientific discourses and offers a concrete look at how these insights apply to development policy.

More striking, this volume presents materials for informed and reasoned public action. It also provides essential information for those concerned with developments shaping a ‘new Bangladesh’ and today’s global economy. I am confident that none of these papers are disparaging, rather most of them are attributed with profound thoughts, splendid beauty of ideas and encomiastic style of writing. This issue sharply focuses on some of the most pressing questions our policy makers are constantly asking. The papers contained in this volume were reviewed by both internal and external reviewers and concurred by the Editorial Board for publication.

Finally, I feel honor-bound to convey my heart-felt thanks and deep sense of gratitude to the respected authors, reviewers and Editorial Advisory Board for their contribution in the publication of this issue. Thanks to the Editorial Board of the Journal, especially to Prof. Subhash Kumar Sengupta (member of Editorial Board) for devoting his time to ensure high standard of BJPE. Our unfeigned efforts will be more spawning provided the papers published in this issue prove to be useful to the passionate and careful readers. We appreciate constructive criticism and resounding feedback for further improvement of the Journal.

The approach and new messages conveyed in this volume has immense promise. In epitome, the subtle views will certainly help to shape our decision appropriately and designing interventions based on a clear understanding of people’s social preferences and ‘cognitive resources’ and exposing individuals to new experiences and ways of thinking.

Abul Barkat, Ph.D.
President, Bangladesh Economic Association
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Abstract: Ethics is about being “fair” to other people, while economics deals with the creation of wealth from individual selfishness. Fairness and selfishness are conflicting individual characteristics, and this is the source of heated debate between economists and ethicists on various issues. If one is to assess whether an action or policy is “fair” or not, then value judgments need to be made, but economists opposes such normative analysis based on their belief that economics is a positive science. But can ethics be ignored in economic analysis? Many will argue in the negative way because ethical issues are indeed intimately connected with many economic issues; for example, when economists perform cost-benefit analysis, they have to fix the standard which will be used to determine what should be considered as a benefit and what as a cost. On the other hand, in economics individuals are seen as not only having values but also preference relations between those values. Based on this, it can be argued that economics is already an ethical science, possessing its own perspectives and has the potential to contribute to ethical thinking. Finally, even though virtue ethics, as the study of moral character, has historically been an important part of moral philosophy, contemporary economists have paid little attention to it. Virtue ethics has been critical of the market economy and of economics in general. This critique is however not flawless. All these issues are critically examined in this paper.

1. Introduction

Ethics and economics have traditionally experienced a troubled relationship. It is generally believed that ethics is about being “fair” to other people, while economics is about the creation of general wealth from individual selfishness:

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Ethicists think that economists hold a poor opinion regarding human nature (characterizing it as selfish), and at the same time, they have little regard for moral behavior. Economists, so argue the ethicists, are obsessed with incentives and markets as the panacea for all economic problems. On the other hand, economists allege that ethicists are constantly preoccupied with discovering mystical intrinsic values, and in the process sacrifice systematic thinking through their relevance for the real world. Traditionally, economists have generally tended to avoid making value judgments rooted in ethics and have stuck to positive and objective analyses of policy issues in order to be 'scientific'. The adoption of a positive methodology may indeed have diminished the usefulness of such studies, and according to some analysts, the results of such analysis may even have been erroneous. Thus, there is a clear scope for a deeper integration of economics with ethics.

2. Positive versus normative economics

Most economists agree that economics is a positive science which is concerned with “facts” and that it should be distinct from a normative inquiry into “values” and what ought to be. After all, there is a clear distinction between facts and values, between what is and what ought to be. Most economists therefore strongly believe that economics should be regarded as a “positive science” that aids policy makers in choosing the means which can be used to achieve their ends. What has been said so far is standard undergraduate microeconomics text book stuff. But many economists do not agree with this “standard” view for several reasons.

Firstly, economic “science” is a human activity, and like all human activity, it too would be governed by values. Of course, the values that govern the activity of economists need not necessarily be the same as those that govern policy-makers. This will make the policy decision even more value-loaded or normative. Secondly, economics is largely built around a normative theory of rationality. Can we distinguish the values implicit in such theories from the values that govern policies? If these values are different, then a conflict is likely to arise. Thus, for example, we cannot say that for the individual, rationality means maximizing behavior, but simultaneously insist that social policy should resist maximizing growth, for example, in the name of freedom, rights, or equality.

Most economists would argue that the relevance of economics to policy can be traced to the (positive) information that economic analysis provides regarding the consequences of policy. Yet these very same economists do not hesitate to offer their advice on how to fix the economy! Moreover, the whole field of welfare economics is normative economics. Economists typically use the yardstick of
welfare to assess outcomes, because they believe that economics has the appropriate tools to address welfare issues. Economists have written about other dimensions of moral appraisal, but welfare has received the maximum attention. There is little wonder, therefore, that normative economics has often been referred to as “welfare economics”.

3. Dominance of normative economics during the Middle Ages and the subsequent rise of utilitarian ethics

The ancient philosophers and theologians of the middle ages focused not so much on analyzing how the economy works but rather concentrated on providing advice on morally acceptable behavior in the economic arena. Between the twelfth and the sixteenth centuries the dominant economic issues were ‘just price’ and ‘usury’, and these were always considered from the standpoint of ethics and separated from the working of the economy as a whole.

This emphasis on moral and ethical issues can be traced back to the great Greek philosopher Aristotle in his *Nicomachean* (350 B. C.) who condemned accumulation of wealth through commerce, and in particular castigated commerce in money, that is, loans with interest. Later on in the 13th century, the Scholastic writer St. Thomas Aquinas expressed his opposition to the charging of interest on loans in principle, but justified a moderate rate of interest. The moral condemnation of interest for consumption loans continued till the 16th century, although charging interest on commercial loans was viewed as justified at the doctrinal level somewhat earlier.

The Scholastic notion of ‘just price’ also is a normative concept which dates back to Aristotle. ‘Just price’ was defined by Thomas Aquinas as the price prevailing in the markets in the absence of fraud or monopolistic practices. It may be noted that at that time the competitive market was the exception, and so reference to market price had a normative value, but no descriptive value.

The study of economics by classical philosophers and theologians of the Middle Ages was heavily biased towards moral issues because their objective was to ensure through their writings that people displayed morally acceptable behavior in their economic relation with others. However, when political economy was born, the focus shifted to two issues: the moral issue and the scientific issue. Insofar as the moral issue was concerned, the question was which rules of conduct human beings should follow in the field of economic activities. On the contrary, the scientific issue was how a society based on the division of labor should function in order to maximize the wealth of a nation. Obviously, the two questions
are connected, and the answer to the moral issue depends on the answer to the scientific issue.

If we consider how the relationship between ethics and economics has evolved historically, we find that it depended on how the moral issue was thought of at that particular period of history under consideration. During Medieval times a ‘deontological’ approach to ethics was adopted, while a utilitarian ethics later came to the fore in the eighteenth century.

The deontological approach to ethics maintained that moral judgments were based on absolute criteria, independent of circumstances. Thus it was argued that actions are ‘good’ or ‘bad’ in themselves. In other words, the moral quality of any action is a characteristic intrinsic to it; killing is bad, helping the sick is good. Deontological theories in ethics were traditionally associated with religious commandments and were typical of societies oriented towards respect for tradition. Scholastic economics is a good example of that approach.

By contrast, in utilitarian ethics, moral judgments were mainly anchored to the factual effects or consequences of the act under consideration at a particular time. This ‘consequentialist ethics’ began to gain ground in the 18th century, particularly through the works of Bentham (1776). The consequentialist approach maintained, by contrast to the deontological approach, that any action should be judged within the specific context in which it takes place that is by looking at its consequences. Thus, harming a person may be ‘good’ if, for instance, one is forced to do so in order to prevent the person from killing somebody else. Consequentialist theories of ethics came to the fore with the new rationalistic orientation of the Enlightenment age.

Consequentialist ethics was summed up by Bentham in the phrase ‘the greatest happiness principle’, or ‘the principle of utility’. Bentham wrote, ‘it is the greatest happiness of the greatest number that is the measure of right and wrong’. (Bentham, 1776, p. 393). Bentham proposed the ‘felicific calculus’ as an essential component of his consequentialist ethics. It comprised of quantitative evaluation and algebraic summation of pleasures and pains emanating from an action or set of actions (where pleasures have a positive sign and pains a negative sign). When the felicific magnitude is positive it implies good which increases the ‘amount of happiness’ within human societies. Bad is whatever gives as its result a negative felicific magnitude, and such action reduces the amount of social happiness. The ‘felicific calculus’ was used to evaluate the social impact of both individual action and public policy choices, though Bentham focused on the latter.
For a long time, those writing in the field of economic matters did not clearly separate the moral issues from the scientific issues. Consequently, we witness the birth of political economy as a moral science, and as a science of society. But gradually the two fields of research began to be separated. This change in perspective was prompted by discoveries taking place in the natural sciences. It was gradually recognized that scientific issues, which concern our understanding of the physical world, need to be analyzed differently and independently of moral issues. Machiavelli (1469-1527) had taken a similar turn in his writings when he distinguished between political science and moral philosophy. In the former there is analysis of the behavior princes must adopt in pursuit of power. In the latter there is moral judgment on such behavior.

4. The connection between ethics and economics: can ethics be ignored?

Values and virtues are studied in ethics. A value is a good to be achieved or a standard of right to be followed, while a virtue is a character characteristic that makes it possible for someone to attain the good or act rightly. Ethical issues are intimately connected with economic issues. To take an example, when a cost-benefit analysis is undertaken, economics gets directly linked to a major issue in ethics: what standard should we use to determine what should be considered as a benefit and what as a cost? There are various standards like happiness, equality, freedom, and so on.

The results of economic analysis also directly give rise to ethical issues. For example, when capitalism and socialism are compared, some argue that capitalism is good while others argue that socialism is good in theory, but it is not practical. It is implicit in the argument in favor of capitalism that practical consequences determine goodness. On the other hand, implicit in the argument of those who believe socialism to be an impractical ideal is the view that goodness is different from practical consequences. This discussion on goodness gives rise to a second important connection between economics and ethics. Should goodness or badness be determined by real world practical consequences or by using some criteria such as divine revelations, rational consistency, or dictates of an inner conscience?

From the foregoing discussion we get two questions of ethics that bear directly on economics. Firstly, what is the standard of good? Secondly, how do we establish that something is good? A third relevant question of ethics is: Who should be the beneficiaries of the good? Should we focus on self-interest? But the question that begs itself here is whether self-interest is moral, amoral, or immoral? If a person takes responsibility for his life and works to achieve happiness, will this be moral
behavior? On the other hand, if a person accepts responsibilities for others and is willing to sacrifice for them, should we label this as morality? This is the debate in ethics between egoism and altruism.

In debates on the morality of capitalism, Adam Smith’s thoughts on self-interest assume great importance. Smith wrote in *The Wealth of Nations*, “It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from regard to their own interest.” (1776, P. 16). In this famous statement, Smith has taken the middle path between traditional ethical theories which have emphasized altruism and his economic theory which expresses optimism about the egoistic behavior of individuals in a free market.

Self-interest has traditionally been viewed as immoral because it works against the interests of society as a whole. And since capitalism is based on self-interest, it has to be a system which gives rise to conflict. And because the overall social good is the standard of value, it follows that self-interest and capitalism must be restrained.

Adam Smith, a professor of moral philosophy, held on to the traditional ethical belief that the good of society as a whole is the moral standard of value. However, he demonstrated through his perceptive analysis that the pursuit of self-interest by individuals would lead to the social good in a capitalistic economy characterized by division of labor, the profit motive, and property rights.

The debate between egoism and altruism is also reflected in environmental values and policies. Egoists see the environment as a pool of resources which is there to be used by humans for their benefit. By contrast, altruism dictates that humans should sacrifice their interests to the needs of other species or to the environment as a whole. In this view, we humans should preserve the environment rather than use it thoughtlessly.

5. **Inter-relationship between ethics and economics**

If we consider the fact that two of the most influential classical economists, Adam Smith and John Stuart Mill, added strong doses of ethics in their economic analysis, then we start to realize the importance of ethics in economics. After all, Smith was a professor of moral philosophy and Mill an ethical and political philosopher. True, in more recent times, the worldly philosophers have moved away from ethics. But we can ill-afford to ignore the fact that the subject of economics is ethical- the study of human character and its virtues. Any attempt to sidestep ethics will lead to wrong economic analysis.
If economics fails to address the ethics of getting more, which is undeniably part of any pursuit of happiness, then study of such economics can hardly be justified. Since the 1920s, economists have channeled all ethical questions to the branch of economics called “welfare economics”. The students of neoclassical economics have been taught for generations that they should diligently avoid making ethical judgments in their analysis because otherwise it would not remain positive economics. The only ethical judgment that an economist could legitimately make was the least controversial one, namely, what is labeled “Pareto optimal”: if every person is made better off by some change, then the change should take place. Admittedly, in more recent times, welfare economics has attempted to handle more complex ethical issues, as evidenced in the works of the philosopher-economist Amartya Sen. But the bulk of welfare economics still remains 19th century utilitarianism.

Modern economics began its journey as ethical reflections about commercial societies. But now it has substituted perhaps too much of rationality for the fuller reflections by the founders of economics. In fact, ethics and economics have had a strained relationship from the outset. Ethics is perceived to be about being fair to other people, while economics justifies selfish behavior of individuals which is believed to lead to the social good. Ethicists view economists as being obsessed with markets and incentives as the solution to all problems and in the process overlook the richness and morality of human nature. By contrast, economists think that ethicists are obsessed with unraveling mystical intrinsic values which have little relevance in the real world. But moral philosophers have rightly criticized economics for refraining from making explicit ethical arguments, preferring to stick to a more neutral, scientific approach.

In defense of economics it may be said that a great deal of economics is concerned with ethical issues. If we understand it properly, economics is found to be applied moral philosophy. For it focuses on understanding, managing and fulfilling the heterogeneous and often conflicting values, interests, and capacities of large numbers of individuals who are operating within the constraints of limited resources in a particular community. This attention to the key aspects of heterogeneity, conflict, and scarcity within a community should be a central concern of moral philosophy, but it generally isn’t.

Economists have come up with an interesting conceptual innovation from which moral philosophy can take lessons. In economics, individuals are seen as not only having values, but also preference relations between those values. Thus, individuals are allowed to not only evaluate whether things are valuable or not,
but also to determine their relative value, that is, how valuable they are relative to other valuable things. Thus economics allows individuals to make rational choices when they cannot have everything they desire because of scarcity. In moral philosophy, however, only sources of intrinsic value are identified, for example, of Nature. Thus, it can be argued that economics in already an ethical science, possessing its own perspectives, and has the potential to contribute to ethical thinking. At the same time, however, economists should not get carried away by some sense of scientific neutrality and ignore the perspectives that moral philosophy can bring, something they have tended to do ever since the Marginalist revolution. Perhaps the greatest ethical problem economists are faced with is not that they lack ethical interests, but their belief that “economic scientists” should not talk about ethics.

6. Ethics and welfare economics

The determination of what things are intrinsically good for human beings has been a central question addressed by moral philosophy. This is not at all surprising because individual welfare or well-being is assigned an important place by all plausible moral views. This is definitely true of utilitarianism wherein it is held that what is right maximizes total or average welfare. Even non-utilitarian views have to give importance to welfare if they are concerned with the interests of individuals, or if they recognize the virtue of benevolence.

What constitutes well-being? Understandably, there have been different answers to this question. Among economists, the view that initially prevailed was that of hedonism, wherein good is considered to be a mental state such as pleasure or happiness (which can be measured). Subsequently, the view shifted to one where welfare can be measured by the satisfaction of preferences. It should be noted that equating welfare with the satisfaction of preferences is not equating welfare with any feeling of satisfaction. If we measure welfare by the satisfaction of preferences, then a person is better off if what he or she prefers comes to pass, regardless of whether that occurrence makes the agent feel satisfied. However, it should be realized that once we equate welfare with preference satisfaction, then making interpersonal welfare comparisons becomes questionable, and this is why few economists defend a utilitarian view of policy of maximizing total or average welfare. Instead, they have attempted to make welfare evaluation of economic outcomes and policies without making interpersonal comparisons.

Let us consider two economic outcomes S and R. Now suppose some people prefer S to R and that nobody prefers R to S. In this case, S is “Pareto superior”
to R or S is a “Pareto improvement” over R. So, we can conclude that people’s preferences are better satisfied in S than in R, and we don’t need to make any interpersonal welfare comparisons to reach this conclusion. If there is no situation that is “Pareto superior” to S, then economists say that S is “Pareto optimal” or “Pareto efficient”. Here efficiency refers to efficiency with respect to satisfying preferences rather than minimizing inputs to produce a unit of output.

An economist would argue that if a state of affairs is not “Pareto efficient”, then some people’s preferences can be satisfied better without reducing the welfare or worsening the preferences of any other person. Such an improvement in welfare is costless. So, if a Pareto efficient state has been reached, then society avoids the failure of being unable to costless improvement of social welfare.

Apart from this, a Pareto efficient state has no other obvious virtue. Yet mainstream economists have found these concepts useful in two ways. First, they have proved two theorems which focus on properties of perfectly competitive equilibrium. The first theorem states that perfectly competitive market equilibrium are Pareto optimal, while the second says that the allocation of resources in perfectly competitive market equilibrium is Pareto optimal. Both theorems emphasize the importance of competitive markets and explain why mainstream economists view perfectly competitive markets as ideals. However, in view of the fact that perfectly competitive markets are hardly, if ever, found in practice, the significance of these theorems is debatable. The second way in which economists have used the idea of Pareto efficiency is to perform cost-benefit analysis, which is a widely used and accepted tool for policy analysis.

There is no denying the fact that welfare economics dominates normative economics, even though it does not exhaust the subject. Subsequently, economists along with philosophers have actually contributed to recent research in ethics and normative social and political philosophy.

7. Virtue ethics and economics

Economists have not only used but also contributed to the development of different branches of moral theory. These include utilitarianism, social contract theory, libertarianism, and capability theories of justice. However, in spite of the fact that virtue ethics, that is, the study of moral character, has been an important part of moral philosophy for thousands of years, contemporary economists have paid little attention to it. One plausible reason for this could be that much of the philosophical work in virtue ethics has been critical of the market economy and of economics in general. The criticism is that the market depends on instrumental rationality (that is, rationality as
a means) and extrinsic (that is, not intrinsic) motivation. The result is that market interactions fail to respect the internal value of human practices and the intrinsic motivations of human actors by attaching central importance to market exchange. This critique is however not flawless, as argued by Bruni and Sugden (2013).

What is virtue ethics? Moral character— that is, what sort of person one is and should be—is the main concern of virtue ethics. Virtues are acquired character traits or dispositions that are judged to be good. Aristotle’s *Nicomachean* (350 B.C.) is traditionally seen as the founding text of virtue ethics. The Aristotelian notion of virtue is that, within any practice or domain of life, goodness is understood in relation to the “telos” (literally, “end” or “purpose”) of that domain. Aristotle was critical of the market and profitable exchange undertaken therein. He wrote, “The life of money-making is one undertaken under compulsion, and wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else.” (Book I, Aristotle 350 B.C.). Two criticisms of economics originate from this idea of Aristotle. The first is that when individuals participate in markets, they are not acting autonomously; rather they are acting under compulsion. The implication of this idea is that a truly autonomous person would not need to seek wealth (perhaps, because he has as much as he needs without having to seek for it). The second critique is that the motivation for economic activity is extrinsic and hence of an inferior type— the things economic activity can achieve are merely useful and for the sake of something else.

Contemporary virtue ethicists have applied these ideas in their critiques of economics and the market. McIntyre (1984) provides an account of morality that is developed on the concept of a practice. A practice, according to McIntyre, is a coherent and complex form of socially established cooperative human activity which realizes goods internal to that form of activity. A practice has intrinsic ends and internal standards of excellence that make sense in relation to those ends. According to McIntyre, a person who fails to treat an activity as a practice with an internal end is failing to display virtue. If we think in this way, then markets immediately become morally condemnable. When goods are produced with the objective of exchange in the market, then this motivation conflicts with the idea that goods, or the activities that results in their production, are ends in themselves. So McIntyre argues that when a practice is exposed to market forces, then its excellence and virtues tend to get corrupted.

Anderson (1993) and Sandel (2009) accept that markets are an essential part of social organization. But they argue that the instrumental logic of markets is liable to corrupt virtues that are proper to other domains of social life, and hence the state should impose limits on the scope of markets.
Thus, in the literature of virtue ethics, the market is viewed to be in conflict with virtue because intrinsic values are not respected in markets. Intrinsic value is attributed to practices in which goods are produced (for example, the practice of art), as well as non-market practices which transfer goods between individuals, like giving gifts. But virtue ethicists are unwilling to treat the market as a practice in its own right, having its own forms of intrinsic value.

It can be argued that economists themselves are partly to blame for the difficulty that virtue ethicists have had in viewing the market as a practice. Beginning with Adam Smith (1776), generations of economists have conceived of the market as a domain in which the pursuit of private interests by individuals leads to socially desirable consequences. Two famous expressions of this idea are due to Adam Smith (1776, pp. 26-27, 456) – the assertion that “It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest”, and the description of the merchant who “intends only his own gain [but is] led by an invisible hand to promote an end which was no part of his intentions”. In Smith’s theory of markets, the primary motivation for action is self-love, although such self-interested actions combine to create benefits for all. It would, however, be erroneous to conclude from this that Smith lacked interest in virtue ethics. The virtues of sympathy and benevolence are important in Smith’s earlier work, *The Theory of Moral Sentiments* (1759), even though they play only minor roles in his economic analysis. According to Smith, self-interest pursued within the rules of a commercial society is not opposed to virtue. As Hirschman (1997) has argued, character traits such as prudence, temperance, and self-command, which are associated with the pursuit of long-term self-interest, are undeniably virtues.

Can the market be viewed as a practice with its own intrinsic values? From the standpoint of virtue ethics, the answer to this question begins by asking another question: what is the “telos” of the market? In other words, what is the characteristics end or purpose of the market?

Some economists of great repute have attempted to provide thoughtful answers to the above question. With regard to the question of coordinating economic activity, Milton Friedman (1962, p.13) wrote that, “The technique of the market place” is “voluntary cooperation of individuals”. In a similar vein, Buchanan and Tullock (1962, p. 103) wrote: “The raison d’être of market exchange is the expectation of mutual gains”. What emerges from the above two strands of thought is that markets do have a purpose, and that is mutual benefit from voluntary transactions.
An alternative answer to the question raised above is that the “telos” of the market is wealth creation. This line of reasoning comes from Adam Smith who in his book *The Wealth of Nations* (1776) had argued that wealth is created from the division of labor and the extension of the market. Division of labor, according to Smith, is the result of the human desire and inclination to exchange one thing for another.

Some economists have considered economic freedom as the “telos” of the market. Famous expositors of this idea include Mill (1848), Marshall (1920), Hayek (1948) and Friedman (1962). Economic freedom has been interpreted as the freedom a person has to use his own possessions and talents as s/he sees fit and to trade with whoever is willing to trade with her/him.

The common thread running through the above interpretations of markets is that they facilitate mutually beneficial voluntary transactions. Such transactions can be viewed as valuable for several reasons: they satisfy preferences of individuals, they create wealth, and they reflect economic freedom. Therefore, mutual benefit may be taken as the “telos” of the market.

8. **Concluding remarks**

Even though the study of economics began with a healthy dose of ethics and particularly moral philosophy in the Middle Ages, the gap between economics and ethics began to widen in subsequent years. In their eagerness to become ‘scientific’, economists tried to avoid normative analysis and value judgments and turned to a positive analysis of issues. In the process, ethics and morality were sacrificed at the altar of a presumed scientism. Surely this is not desirable because, among other things, any economic analysis devoid of ethical considerations may lead to wrong conclusions and faulty policies. There is therefore a strong justification for a deeper integration of economics with ethics.

Most economists believe that economics should be regarded as a “positive science” that can aid policy-makers in choosing the means which can be used to achieve their ends. Many other economists believe equally strongly that the practice of economics as a science is a human activity, and like all human activity it too would be governed by values. We also should not forget that economics is largely built around a normative theory of rationality. Hence, from the methodological viewpoint also, there is the need to integrate economics with ethics.

The relationship between ethics and economics has evolved over time depending on how the moral issue was thought of at that particular period of history. Thus
the “deontological” approach to ethics of the Medieval times, where it was argued that actions are ‘good’ or ‘bad’ in themselves, gave way to utilitarian ethics in the 18th century where it is argued that any action should be judged within the specific context in which it takes place; that is by looking at its consequences. The ‘felicific calculus’ of Bentham which is one important form of consequentialist ethics was based on a hedonistic philosophy. Modern economists use utilitarian economics but overlook the ethical underpinnings of this approach.

Ethicists are critical of economics because it portrays human beings as selfish and egoistical. Self-interest has traditionally been viewed as immoral because it works against the interests of society as a whole. It is further argued that since capitalism is based on self-interest, it has to be a system which gives rise to conflict and therefore should be restrained.

Virtue ethics- the study of moral character- is critical of the market economy and economics in general because the market depends on instrumental rationality and extrinsic motivation. In this context it is critically important to examine the “telos” (that is, end or purpose) of the market to defend it against the criticism of virtue ethicists. In the literature of virtue ethics, the market is viewed to be in conflict with virtue because intrinsic values are not respected in markets. Some famous economists have shown in their writings that the market has a definite “telos” and hence not morally suspect. The “telos” of the market can be taken to be the satisfaction of preferences of individuals, the creation of wealth, and a reflection of economic freedom.
References


Is there any Impact of Microcredit on Women’s Health? What about an Alternative Model?

ABUL BARKAT*

Abstract: This paper, despite absence of empirical evidences of impact of microcredit on women’s health – is an exploratory one. Therefore, an attempt has been made in this paper to draw logical inferences about the possibilities/impossibilities and possible pathway of impact of microcredit on the health status of borrower-women. First, an analysis has been made to understand who gets microcredit? Estimates show microcredit potentially reaches 37% of the population with 16.9% in the lower middle class (“near poor”) and 20.1% in the upper echelon of the absolute poor (“upper poor”) – almost all these households are food-poor viewed from multidimensional poverty measures. About 80% of the people in the absolute poor category do not have access to microcredit. Second, based on the above estimates and pertinent assumptions it is argued that impact of microcredit on women’s health needs to be assessed for women borrowers in 4.4 million households. Third, it is reasonably argued that microcredit can impact on women’s health mediated through increased income, changing pattern of expenditure, savings, knowledge and attitude, and changing choice behavior. However, it is also argued that since almost all borrowers are poor (‘near poor + upper poor’) and suffer from multidimensional poverty, they tend to spend most of their incremental income (attributable to microcredit) in mitigating household multidimensional poverty including food, chronic illness, and housing. Finally, it is argued that health-poverty reduction especially that of women’s health is possible. And in order to make this possibility in to reality an alternative model is proposed. This model bespeaks in favor of conscientization-mediated development first coupled with pro-activating the public health care delivery system (which is both under-funded and not poor

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friendly) and side-by-side with appropriate supply of economic inputs (microcredit, ownership and access to public resources, agricultural input, employment, marketing and so on). It is contended that microcredit can be a good instrument of taking care of women’s health only if the following equation is followed: conscientization plus pro-active public health care system plus microcredit (including other economic inputs).

**Keywords**: Bangladesh, Microcredit, Beneficiaries, Impact, Health, Women’s Health, Conscientization.

### Introduction

Microcredit has become a buzz word due to various reasons – known and unknown, understandable and non-understandable. Microcredit, according to many, is synonymous to development or synonymous to poverty reduction or synonymous to asset building for the poor. There is, however, others who hold critical positions on this due to various logically sound reasons. In this backdrop, providing precise answer to the question “Is there any impact of microcredit on women’s health?” – is not easy, rather extremely difficult. The key reason behind this difficulty being lack of empirical evidence about how does microcredit impact on women’s health(?) i.e., the pathway of impact, how much is the impact and on whom (?), and how much is the impact by women’s preventive and curative health (?). These common sense questions take further complex shape due mainly to three reasons, namely (1) who gets microcredit i.e., which class of women in the economic ladder (?), (2) who commands over the benefits of microcredit i.e., whereas most microcredit takers are women a predominant part of users are men (i.e., incidence-benefit equation), and (3) the reality of health inequality in a class based society i.e., socio-economic class differentials in health outcomes (morbidity, malnutrition, and disease prevalence), health behavior (preventive and curative), and economic burden of ill-health.

### Who Gets Microcredit?

Theoretically speaking – in absence of valid empirical evidences – it can be asserted that any developmental intervention including microcredit has the potential to positively impact human health including women’s health. This is most likely because of the fact that microcredit – at least officially – is intended to raise income and build asset of the beneficiary poor. Once income is enhanced it is up to the beneficiary how s/he will spend that earning (or incremental earning). This is basically a problem of choice, meaning depending on the socio-economic status of the beneficiary, s/he can spend certain amount of the money...
on food (if we are talking about a ‘food poor’ household) and/or some amount on other basic essentials including health, education, employment, cultural items, and so on.

Here the most pertinent key question would be – WHO GETS MICROCREDIT? Currently (in 2016), we have 160 million people in Bangladesh. Economically, these 160 million people are located in different positions of the wealth pyramid. The economic-class distribution of these 160 million people, according to my estimates, is as follows: 105.5 million people (66% of total population) is absolute poor, of which, 65.5 million (41% of total population) is hard core poor; 50.1 million people (31.3% of total population) belong to the middle class with 27.1 million people (16.9% of total population) representing lower middle class, 15.6 million people (9.7% of total population) are in the middle middle-class, 7.5 million people (4.7% of total population) are in the upper middle class; and 4.4 million people (2.7% of total population) represent the rich class in the wealth pyramid (Barkat 2017: 47-48). The fact is that the access to loan and credit market is not class neutral – ‘rich’ will never choose for microcredit and the poor have no access to commercial banks. This is not just an issue of choice, rather an issue of access shaped by dominant market equation.

As shown in Figure 1, the reality of who/which class is ‘entitled’ to receive loans/credits from which institution (formal or informal) depends on the location of his/her class position in the wealth pyramid. Commercial banks have traditionally, and mostly still do, reach only the top of the pyramid (i.e., 11.9% of the total population). Credit unions, especially those based on community have done better in reaching further down the pyramid through their cooperative principles; they can potentially reach mid-middle class and part of the lower middle class (i.e., at best 15% to 20% of the population at the middle of the wealth pyramid). The microcredit system – whatever the theory is or intention is – do not reach all poor. Information show a total of 20.4 million borrowers of microfinance as on June 2008 (Microcredit Regulatory Authority 2009: 3). To the best of my judgment and observation, microcredit reaches the upper echelon of the absolute poor and the lower middle class (who are situated just above the absolute poverty line). As shown in the shaded circle in Figure 1, microcredit reaches 37% of the total population with 27.1% in the lower middle class and the rest 10% in the upper echelon of the absolute poor. This implies that microcredit do not reach the majority poor including all hard core poor (41% of the total population) and a part of those above hard core poor (11% of the total population). If these estimates are close to reality – microcredit do not reach 70% of the absolute poor or, in other words, microcredit is inaccessible to about 73.5 million
poor people out of a total about 105.5 million poor in Bangladesh. Logically, it is therefore, if 70% of the poor in Bangladesh do not have access to microcredit, then question does not arise about any possible impact of microcredit on women’s health for at least the same proportion of poor men and women.

Figure 1: Where to search the possible/potential impact of microcredit on women’s health?

Where to search the possible/potential impact of microcredit on women’s health?

It is a matter of common sense that the impact of microcredit on women’s health, if any, has to be searched among women in those households who have access to microcredit. As already stated, such access is evident in 37% of the population with 27.1% belonging to lower middle class (i.e., near poor) and 10% belonging to absolute poor – more precisely representing upper echelon of absolute poor (i.e., upper poor). Assuming, across socio-economic class the household size is more or less equal (nationally 4.4 person per household), the potential access to microcredit is applicable for 37% of the total households in Bangladesh representing ‘near poor’ (lower middle class) and ‘upper poor’ (upper echelon of absolute poor). However, since microcredit is primarily a rural credit phenomenon, the potential reach-ability will be about 28% and not 37% of the household – “near poor” plus ‘upper poor’. Based on these parameters, the estimated numbers of ‘near poor’ and ‘upper poor’ households within the potential reach of microcredit would be 8.75 million (28% of total 31.25 million
households in Bangladesh). Assuming, a high rate of 50% of beneficiaries of microcredit at a given point in time (out of the “potential reach”) – the estimated total number of poor rural households (near poor plus upper poor) who could be at the moment recipient of microcredit will be about 4.4 million households. Since 95% of the recipients are women, the total number of poor women (‘near poor’ plus ‘upper poor’) who constitute the beneficiaries of microcredit at the moment would be about 4.2 million. Therefore, the impact of microcredit on women’s health needs to be assessed for these 4.2 million rural women in Bangladesh. This figure may be more than 4.2 million women due to two factors, namely (1) possibilities of inclusion of more than one women-beneficiary in some households, and (2) cumulative number of real beneficiaries’ women.

Then what could be the possible impact of microcredit on women’s health?

In absence of ‘real’ empirical data on changing health status of women beneficiaries of microcredit, the only way to understand possible or potential impact of microcredit on women’s health is to draw logical inferences. However, before drawing such logical inferences it would be worth mentioning some of the pertinent key findings on impact of microcredit available in the research body of literature. The most pertinent findings are as follows:

1. NGO-MFI (Micro-finance Institutions) are successful at reaching the wealthier poor; it is less successful at reaching the ultra hard core poor and destitute groups (Haque and Yamao 2008:670).

2. Microcredit is not an effective tool for poverty reduction particularly for the poor with previous indebtedness. Microcredit can reduce the poverty of that group of poor who have achieved a certain economic level without previous indebtedness (Haque and Yamao 2008:670).

3. “Increases in access to income are often at the cost of a heavier work loads” with “adverse effects on women’s health and well-being” “as they struggle to combine income-earning with unpaid domestic responsibilities” (Mayoux 1999: 33).

4. Each additional 100 taka of credit to women increases total annual household expenditures by more than 20 taka: 11.3 taka in food expenditures and 9.2 taka in non-food expenditures. In stark contrast, there is no appreciable returns to male borrowing (Khandker 2005).

5. Impact on children’s health – especially on children’s nutritional status (height and arm circumference) – from women’s borrowing is substantial,
but not from male borrowing, which had an insignificant or even negative effect (Pitt et. al 2003).

6. Grameen Bank plays a role in empowering women and affecting their fertility decisions in addition to providing funds for income generating activities (Sukontamarn 2007:16).

7. “Micro-borrowers often fail to break out of income poverty and many even get caught up in an increasing debt-burden syndrome and slide further into poverty, let alone moving on the significantly higher levels of income and living standards. Not much has happened in relation to women’s empowerment through micro-credit. Only about 10% of the respondents have said that they are in full control of the economic activities run by using the micro-credit they take. About a quarter of the female borrowers currently face physical and mental torture from one member or another of her family, usually the husband. About 60% of them have said that the intensity of torture has increased since enrollment. In the families of 82% of the female borrowers, exchange of dowry has increased since their enrolment” (Ahmad (ed.) 2007: 47).

8. “There are no good studies to date that have looked specifically for effects of micro-finance participation on mortality or even morbidity (illness or injury)” (Dunford 2006:12).

Whatever little empirical data are available, it would be safe to draw some contradictory conclusions that MICROCREDIT

- Is less successful in reaching the “lower echelon of poor”
- Is less efficient for poor with previous indebtedness
- Is instrumental in increasing debt-burden syndrome
- Is instrumental – within patriarchy and poverty – in increasing women’s workload, thereby, adversely affects women’s well-being (including health)
- Is a reason for increasing physical and mental torture, and dowry
- Is instrumental in increasing dependency on multiple credit-agencies (each microcredit recipient women receives loan from 3-4 NGOs)
- Is one of the means to accelerate the process of women’s empowerment (in terms of increasing autonomy, mobility, enhancing group solidarity, participation in decision making, building awareness, building confidence, increasing household expenditures)
Is instrumental in changing health status of children, especially children’s nutritional status.

The extent of impact of microcredit on mortality and morbidity (illness, injury etc) is not known, at least empirically (Dunford 2006:12). It is also not known (also empirically) as to what is the precise impact of microcredit on women’s health, and how that impact generates (i.e., the pathway of impact). Let it be clear that maternal health including maternal nutrition, ANC, safe delivery, PNC is just a part (critical part) of women’s health; women’s health is not just absence of diseases, but encompasses complete physical, mental and social well-being of women; and women (especially women from poor household) suffer much from *diseases of poverty* including maternal mortality and morbidity, UTI, STI, STD, tuberculosis, malaria, arsenicosis (Barkat 2008). Viewing from this complex perspective of women’s health, it would be even logically difficult to establish direct linkages between microcredit and reduced burden of ill-health of women.

Theoretically speaking, the answer to the questions as to whether or not there is any impact of microcredit on women’s health (specifically health of the women beneficiaries of microcredit) – could be both YES and NO! The answer can be yes only if there is an evidence of microcredit-mediated *women’s health-poverty reduction*, and if that evidence is not just sporadic or not mostly attributable to factors other than associated with microcredit. Such causal relationships with microcredit as ‘cause’ (independent variable) and improved women’s health status as ‘effect’ (dependent variable) can be a possibility. Theoretically, such causal relationship can be both direct and indirect. For example, if microcredit increases women’s real income and changes expenditure pattern towards health care of women-then the causal relation is direct (Figure 2). However, if health status of women improves due to intervening variables (such as income, savings, health knowledge and awareness, autonomy etc.) caused by microcredit then the causal relation is indirect (Figure 3). These are just theoretical possibilities, albeit complex, without empirical evidence to substantiate.
The opposite to my above positive argument is that microcredit has no impact on health of the women beneficiaries; and may have even negative impact due to physical and psychological stresses associated with meeting the repayment schedule (with high interest rates) coupled with hard work of complying with unpaid domestic responsibilities (which are never monetized, never recognized as useful labor, and treated as “love economics”). My assertion of saying ‘No’ is relatively stronger than accepting the theoretical proposition ‘Yes’. The key reasons for my strong inclination toward ‘No’ are as follows:

First: In reality, the recipients women of microcredit are mostly drawn from the ‘near poor’ and ‘upper poor’ households who represent a distinct food-intake poor households (i.e., consume around 2,122 k.cal/day/person). Even if these women beneficiaries manage to increase their real income attributable to microcredit they spend most of the incremental income to mitigate their household food-poverty aiming at reducing nutrition-poverty. In their choice of spending the incremental income, sectors like health and more so their own health (i.e., women’s health) obviously is not a priority. This is more so true for preventive health as compared to curative health. However, if somehow these women manage to increase their income and contribute to address their
household food-poverty status that has value in terms of enhancing nutrition status, which, in turn might contribute to their body resistance (due to higher energy intake in terms of kilocalories) and, therefore, improved health status. But in no way this should be treated as positive impact of microcredit on women’s health. This is more so because empirical evidences show some betterment of nutritional status of children associated with microcredit.

Second: Even if microcredit somehow reaches those who are still not reached – the lower echelon of poor; the poorest of the poor; the ultra poor; the hard core poor; the asset less and landless marginalized women and men (representing 53% of the total population and 80% of the poor) – the likelihood is high that the health status of these women will not improve. This is mainly because of the fact that food-poverty is more acute in these households. This is most likely that all incremental income of these households mostly spend on purchasing essential food items.

Third: It is already widely recognized that, to a large extent, the money taken by women as microcredit is being handled by males (husband, brother, father). Therefore, in large part, women become a passive recipient of microcredit – whose job is to attend the group meetings, receive the money, and repay the loans as per schedule. Therefore, the real command over the microcredit lies with the male. And this has already been proved that there is no appreciable return to male borrowing (Khandker 2005). In many instances, this active-passive borrowing situation causes tension in the family, and may potentially cause ill-being for the borrower-women.

Fourth: Women’s health is not only a complex and broad area, but also an issue of human rights, Constitutional rights and justiciable rights. Both from the view points of human rights and complexity – addressing women’s health should rightfully be the domain of the State to deal with as public good through public health care system. As part of this, public-private/public-NGO partnership may be of high utility, if designed appropriately.

An alternative model towards betterment of women’s health: Conscientization plus microcredit

Microcredit should not be seen as a panacea. It should not be considered as a single most important pathway towards improving health status of the beneficiary.
women. This does not necessarily mean that women’s access to microcredit is unimportant. To the contrary, access to microcredit is important provided that access is instrumental in ensuring “true empowerment” and “active autonomy” – economic, social and political – of women. And to make this instrument work for the betterment of women’s health status it is absolutely necessary to expedite the whole process of conscientization of women and men (especially the huge majority of poor and lower middle class ‘near poor’ comprising 128.4 million out of 160 million people of Bangladesh or 83% of the total population) and pro-activate the public health care delivery system (which is both under-funded and not poor-friendly; see details, Barkat 2008).

In order to accelerate the process of improvement in women’s health status – women, especially poor women should be conscientized. Other factors including microcredit should follow the process of conscientization to generate added value towards improvement of health status of women. This alternative model of conscientization-mediated improvement in women’s health (or health-poverty reduction) is schematically shown in Figure 4.

Figure 4: Model of conscientization-mediated improvement in women’s health

It would be worth elaborating the alternative model depicted in Figure 4. “Health” is the most essential indicator of development; and ‘people’s health’ should be seen as the most appropriate barometer of “success or failure” of a nation. And, development is about right- both Constitutional and justiciable. It is both about
knowledge about these human rights as well as about means and ways to apply these rights or realization of these rights by the poor and marginalized people for whom, under class society, consistent denial of these rights is a rule. The central argument I want to forward here is that people’s conscientization is the key to sustained development of the poor and marginalized. This argument implies that true conscientization process has all-encompassing potential to set an empowerment process in motion through which it is possible to transform human deprivation into human development, through which poor and marginalized people’s agency role in development realizes, and through which they can become proactive solicitor of rights rather than passive recipients of right-based services (including public health services). To set this process of conscientization in an active motion, imparting and sharing knowledge about rights (human rights, knowledge about fundamentalism, worldview etc.,) is a necessary precondition, and struggle towards attainment of rights is a sufficient precondition. This necessary precondition forms the basis for internalization and the sufficient precondition forms the basis for informed action (praxis). Implementation of these two preconditions is necessary to realize the conscientization-mediated development which enlarges opportunities for a full life to people, expands real freedoms that people enjoy, expands choices to lead lives people value, and establishes a dignified human life. In other words, this conscientization-mediated development should be seen as a route to crystallize the process of development with dignity.

Conscientization is a process by which the learner advances towards critical consciousness which is necessary for informed actions (social praxis) – the key goal of development education. Conscientization should not be equated to just consciousness raising because the latter may involve transmission of pre-selected knowledge in congruence with ‘dominant culture’, ‘cultural hegemony’, ‘status quo’ etc. Conscientization is the heart of liberatory education. Conscientization means breaking through prevailing mythologies to reach new levels of awareness-in particular, awareness of oppression, against being an ‘object’ of others’ will rather than a self-determining ‘subject’. This process of conscientization involves identifying contradictions in experience through dialogue and becoming part of the process of changing the world. It is based on the above analysis I argue that conscientization-mediated development is liberatory-development, and, thereby, forms the basis for real human(e) development.

Evidences, presented in Table 1, show that conscientization–as route to development–works. Conscientization as a process of liberatory learning and informed action works. The process of conscientization, as experienced by the
members of conscientization schooling, has been instrumental in their internalization of essence of human rights (including Constitutional and justiciable rights), knowledge about (anti) fundamentalism and worldview, and based on that prepared them for informed actions. As compared to the non-participants (of conscientization schooling), this conscientization-mediated development process has enlarged opportunities for a full life to the participants, expanded real freedoms that they enjoy, expanded choices to lead lives they value, and established a potential basis for dignified life. By being member of this conscientization schooling, the participants have learned the causes and consequences of social, political and economic contradictions and injustices, which has paved the way for their breaking the ‘culture of silence’. They are now much more empowered than their counterparts, and have transformed from passive recipients of public services to pro-active demander of rights-based services (Table 1).

Table 1: Impact of conscientization on poor women who have passed through conscientization schooling and those who did not

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Women passed through conscientization schooling</th>
<th>Women did not pass through conscientization schooling</th>
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<tr>
<td>Overall conscientization score</td>
<td>72.5</td>
<td>33.4</td>
</tr>
<tr>
<td>Rights</td>
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<td>32.3</td>
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<td>Fundamentalism</td>
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<td>50.0</td>
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<td>Worldview</td>
<td>54.3</td>
<td>18.0</td>
</tr>
<tr>
<td>(Of rights) Demanding HEALTH</td>
<td>84.3</td>
<td>25.0</td>
</tr>
<tr>
<td>Access to power structure</td>
<td>25.9</td>
<td>11.5</td>
</tr>
<tr>
<td>Access to credit program</td>
<td>62.9</td>
<td>51.1</td>
</tr>
<tr>
<td>(Composite) Well-being score</td>
<td>49.6</td>
<td>37.2</td>
</tr>
</tbody>
</table>


Conscientization promotes collective action of the poor and marginalized. This is evident from the fact that many poor people passing through conscientization schooling have become so empowered that they contest the local government elections; many poor women not only participate actively in the local arbitration (shalish) but also act as a shalishkar (judge in dispute resolution); some participant groups have formed health watch committees to oversee public health service in the public health facilities, and so on.
Conscientization has the potential to “break culture of silence” at household level. Ideally speaking, every women has something to acquire through inheritance; women from landless and marginalized families have little or nothing to inherit. Whatever the case is, the reality is that property inheritance is dominated by patriarchy and primarily dictated by the religious personnel law (for Muslim women “Sharia” law, and for Hindu women “Daibhag” law). In rural Bangladesh (where 70% of the total population live) only 4% of the privately owned land (agricultural, homestead and water body), is effectively owned by women (‘effective ownership’ means: have deed of ownership, can command over the production process, and can take decision about selling land and output sales). The relevant interesting findings include: (1) as opposed to 64% of those out of conscientization schooling orbit a 94% women who passed through conscientization schooling said categorically that “there should be equal rights on inherited property”, and (2) women who have passed through the conscientization schooling for ten years or more have inherited property at least two-three times more (8%-9% of the privately owned land) than women out of such schooling process (Barkat et.al 2008: 401). The health situation of the former (who have passed through conscientization process) is better than the later, and the former have more effective command over microcredit than the later.

Finally, it is also found that conscientization efforts add more value to economic inputs in development. It has been found that poor and deprived people who have passed through the conscientization process perform much better with subsequent economic inputs (credit, agricultural input, marketing etc.) as compared to those who receive economic input without passing through the conscientization orbit (Table 1). Economic input produces synergy if followed by strong conscientization schooling. This is most likely due to the reason that the process of conscientization empowers people politically, socially and culturally which act as essential ingredient for dignified life, and that forms a strong foundation for appropriate processing of economic inputs. Therefore, in ensuring true human development of the poor and the marginalized people, the process of conscientization must proceed before injecting economic inputs.

Some concluding remarks

Impact of microcredit on women’s health is difficult to ascertain due mainly to lack of empirical evidences. Theoretically, such impact is both possible and impossible. The causal linkages of possibility can be both direct and indirect. Such possibility is mainly mediated through increased income, changing expenditure pattern, savings, knowledge, awareness, practice, empowerment, autonomy, and
changing choice behavior. *Impossibility* of improving women’s health status attributable to microcredit is mainly related to the fact that in reality most microcredit recipients are drawn from lower middle class (‘near poor’) and upper echelon of absolute poor (‘upper poor’) representing food-poor households (i.e., those consuming around 2,122 k. cal/day/person). Even if the women borrowers of microcredit somehow manage to increase their income (attributable to microcredit) they spend (or force to spend) most of the incremental income to mitigate their household food – poverty. Spending the incremental income for health and more so for their (women’s) own health is low in their expenditure choice ladder. Microcredit’s potential possibility in reducing food – poverty and thereby in improving nutritional status of children (which has evidence) can be treated as a pathway of improvement in the health status of children in the borrowers’ household. However, such contribution on health is limited, because among 105.5 million poor in Bangladesh 70% do not have access to microcredit. Therefore, nationally, impact of microcredit on poor people’s health (more so on poor women’s health) should be insignificant. These arguments should not be treated as non-necessity of microcredit. To the contrary, poor people’s access to credit should be seen from the view point of ‘right to credit’. This right to credit, however, should not be seen as the key pathway towards improvement in the health status of the borrower and members of their household.

The proposed conscientization-mediated development approach can be seen as an alternative model towards betterment of women’s health and health-poverty reduction. This model presupposes that if women (and men) are conscientized first (i.e., they pass through organized conscientization schooling) to know about their rights, exert those rights, and break the ‘culture of silence’, and side by side public health delivery system pro-activates and economic inputs (microcredit, ownership and access to productive resources, agricultural input, employment) are poured into – then women’s health, especially that of the poor and marginalized women will bound to improve. The process of conscientization self will create demand to pro-activate public health care system (which is currently both under-funded and not poor-friendly) as well as demand for justified economic inputs including microcredit (both through the NGOs and the Government institutions).
References


What Shakes and What Shapes the Code of Ethics in Economics: Evaluating the need for the code of Ethics for the Economists

JAMALUDDIN AHMED*

Introduction

Is economics an independent science, which has nothing to gain from other disciplines, including ethics? What is the rhetorical position of economists today on this point? Would such a view have been accepted in the past? Is a value-free economics even possible? If some links between ethics and economics are inevitable, where do they manifest themselves? Would economics benefit from an explicit and deeper involvement with ethics? These, and many other intricate questions emerge when someone begins to think about economics and ethics.

Lionel Robbins opined that “Economics is the science which studies human behavior as a relationship between ends and scarce means which have alternative uses” (1945:16). Robbins himself notes, however, that a discipline cannot be defined in advance but only after the boundaries of investigation have been determined. In proposing the ends and means criteria of definition, Robbins sought to stretch the boundaries of the field beyond the confines of his day, in which economics was limited to explaining only the causes of material welfare. Robbins expands it to include any outcome-directed activity in which there are resource constraints.

In light of the three ethical frameworks presented in this chapter, it can be offered broader definition: Economics involves the systematic examination of the patterns

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of individual and group behavior used for the provisioning of the socio-economic system. In addition to prices and markets, this definition encompasses duty and commitment in economic life (Sen, 1977) and the study of cognitive mechanisms that are not consciously controlled, yet likely play a role in economic activity.

Zak (2011), a neuroeconomist, provides evidence of an autonomous brain function that controls social behaviors through the release of hormones such as oxytocin (the “moral molecule”). By varying hormone levels, Zak alters the degree of “fellow-feeling” and hence changes behaviors in experimental settings. Hormones and neural networks appear to provide the biological scaffolding for sociability that underlies Adam Smith’s conception of moral behavior. Social modeling thus grapples with interpersonal ethical considerations that are psychologically, philosophically, and biologically intertwined. Smith theorized that humans pursue self-deceptive goals whose ultimate ends are not consciously knowable, even as they serve higher purposes (1759: 183). The “invisible hand” arises within this context: “It is this deception which rouses and keeps in continual motion the industry of mankind” (1759: 183).

Over the centuries, Smith’s philosophy devolved into the separate (and, to a large degree, isolated) disciplines of psychology, philosophy, economics, sociology, political science, and law. In the 1920s, Balliol College at Oxford (where Smith had studied) began reintegrating the study of philosophy, politics, and economics (PPE). One can use the academic novel, Saving Adam Smith: A Tale of Wealth, Transformation, and Virtue (Wight, 2002) to explore Smith’s moral underpinnings for creation of wealth as a pillar of his market philosophy.

There are many ways to define what is meant by ethics. One working definition is: Ethics is the study of one’s proper interactions with others: it is the analysis of right and wrong. Ethical beliefs and practices constitute a vast and unseen institutional force. A famous example is the generous tip that a satisfied traveler leaves at a highway restaurant—an eatery to which she never intends to return. Why would anyone leave a tip in this case—when there is no expectation of future economic return? The typical diner shrugs and says it is customary or traditional to show generosity for good service and giving a tip is simply the “right thing to do.” However, we can imagine deeper answers than this. Economic actors may leave a gratuity because they are altruistic; or, diners may not want to incur the social stigma of not tipping; or, they may believe that they have a duty to act in certain ways; or, they self-consciously act in ways thought to be virtuous. Of course, not everyone tips, so the simplistic account of the economic actor as homo economicus—a selfish miser—is correct much of the time. But the “economic
actor” model cannot help us understand why O.J. Simpson’s book was booed out of the market before production, nor can it help us explain generous highway restaurant tips. The greatest distinction between humans and other animals is not our rational minds, Charles Darwin argued, but our moral capabilities which allow us to cooperate.

These capabilities are honed instinctive responses. In his conclusion to The Descent of Man (1871), Darwin noted that: Any instinct, permanently stronger or more enduring than another, gives rise to a feeling which we express by saying that it ought to be obeyed (Charles Darwin, 1871). The social instincts work initially through the human capacity to sympathize with others, but are strengthened by instruction, exercise, and habit. Ethical beliefs and practices make up the formal and informal rules that generate trust, promote interdependencies, and spur work productivity in a myriad of ways. In everyday economic life there is a vast grey area in which economic behavior is shaped by these social instincts and unconscious moral constructs.

Everyone in the society implicitly accepts the ‘ethical mores’ of life in a social group, which extends to consideration of the nation and one’s civic duties. People are bound together in a shared endeavor and celebrate togetherness in ritual feasts like thanksgiving. Although people may be selfish, they restrain themselves because of ethical commitments that do not fully rely upon a calculation of gains and losses. Adam Smith, the founder of modern economics, wrote The Theory of Moral Sentiments (1759) to model the process by which instinctive human nature is socialized for cooperation. Empathetic man is the one Darwin relied upon in writing about human evolution. Smith also wrote in The Wealth of Nations (1776) about the invisible hand of the market; few realize that trust and ethical norms—derived from moral sentiments—were essential components for making trade work without the heavy hand of government.

The study of ethics in economics offers a complementary understanding of hidden currents and tides that also move actors on the commercial stage—workers, suppliers, managers, and customers. Ethics provides the “institutional framework” within which economic activity unfolds. The biographies of great entrepreneurs show that they often hold complex motives and inspire others for a variety of reasons. Many technological breakthroughs of the 20th century, for example—relativity, computing, DNA, television, and the Internet—were driven by entrepreneurs with non-pecuniary motives. Non pecuniary motives may relate to internal intentions or they may relate to social rewards of esteem and fame. In either case, ethical behavior is intertwined with concepts of personal meaning and
social acceptance. It is important that many developed world economists routinely provide advice to developing countries. If ethical institutions are ignored because they are thought to be irrelevant, advice can go badly awry. Economic policies themselves can change the moral norms in society. In advocating policies, economists may unwittingly also change norms.

The thesis of this paper is that economics should be studied within an ethical framework. The hypotheses that underlie this view are that: 1) Science progresses better when practitioners adhere to basic ethical norms of truth seeking and honesty. 2) Economists can understand and predict outcomes more effectively when they consider the role of ethical beliefs and commitments [(e.g., can do better positive economics). Positive economics is the study of the economy as it currently exists (e.g., the discernment of facts). Positive economics is also used to make predictions about the impact of changes to the economy based on models or theories about how the world works. Positive statements of prediction take the form, “If this action is taken, then this would be the outcome”; and 3) Economists can provide more sound policy advice when analyzing a broader ethical framework (e.g., can do better normative economics as Normative economics entails a judgment about the kinds of actions that ought to be taken). In summary, economists should be careful about what we think we know about the world—and even more careful in recommending policies—if the ethical landscape is unexamined.

The “economic way of thinking” is purported to be scientific reasoning, as espoused by many 20th century economists. George Stigler (1965), who won the Nobel Prize in 1982, opined that: “The basic role of the scientist in public policy, therefore, is that of establishing the costs and benefits of alternative institutional arrangements. Stigler, in this statement, adopts a particular moral framework (e.g., that only consequences matter) and a particular moral standard about evaluating consequences (e.g., emphasizing those that can be quantified through dollar costs and benefits). “Economics is finally at the threshold of its golden age,” Stigler wrote in 1965 (Edward Elgar, 2009). His pronouncement was prophetic, as the methods of economists soon overran the fields of political science and sociology, and made significant inroads in law and philosophy. But in a larger sense, as economics spread across other subjects, the discipline has also drawn inwards in terms of the questions and methods considered. In short, economics became less an active participant in liberal education.
Justifying an Ethical Framework

As noted above, Kantians use rationality for understanding the appropriate mirror of acting (rather than for achieving a particular end). And virtue ethicists like Smith explore the emotionally cognitive behaviors that arise from instincts needed for survival in groups. Economists argue that people make rational decisions to achieve the goal of maximizing utility. In reality, people make decisions for complex reasons, not all of which can be understood by a single model. The practice of tipping at highway restaurants, for example, relates to all three approaches: first, because of a rational calculation of reputation-building and future services to be received (economic); second, from logically derived rules for treating others with respect (Kantian); and third, from instinctual fellow-feelings (Smithian). Many other economic behaviors can be modeled in deeper ways than simply connecting means with desired ends. If there are valid multiple perspectives, how can any one of these be “right”?

One approach is to simplify economics to produce a “single, coherent” set of concepts that won’t confuse students. Hence, many teachers portray economics as engineering, with non-controversial goals and methods that yield the “right” answers to allocation questions. In his Nobel Prize address, Ronald Coase (1960) laments: “What is studied is a system which lives in the minds of economists but not on earth. I have called the result ‘blackboard economics’.” In addition to being unscientific, “blackboard economics” is antithetical to critical thinking (Nelson, 1989).

A commitment to critical thinking requires that teachers deal with complexity and controversy. When policy issues are discussed, teachers should encourage students to think outside the economists’ toolbox. It is not simply that there are additional outcomes (besides preferences) that could be considered, it is also that non-outcomes-based ways of thinking are ubiquitous. During emergencies, people instinctively reject markets in favor of rules for sharing derived from duty or virtue ethics. Non-price allocations are also widely used in families, churches, and schools, institutions which are paternalistic and geared toward cultivating virtuous habits in young people. The moral justification for markets arises from considering the problems that arise within these contexts (Wight, 2009).

Teachers can discuss Bentham’s (1789) advocacy of utilitarianism as a result of his growing discontent with policies imposed by authority and precedent. In the 18th century, Enlightenment thinkers contended that the institutions of human society should be examined and debated just like the laws of physical science; public policies should be chosen based on their outcomes rather than simply the
tyranny of tradition, or by misguided appeals to duties, rights or virtues. Hence, even after considering the objections of other ethical frameworks, a strong justification for policies based on a consequentiality cost-benefit analysis can be made (Frank, 2008).

**Objective and Structure of the Paper**

The objective of this paper is to evaluate the need for code of ethics for the practitioners in the field of economics. Given the considerable debate over the ethical issues of academics and practitioners economist, this paper tries to bring light on the literature for code of conduct of ethics. The economists face conflicting situations in their professional career while performing their daily life, while working with government policy makers, working as advisor in private sector, in their research work, working with the educational institutions and working in various capacities of professional life. In order to address this objective, structure of this paper is as follows:

Section One: Introduces the subject economics with a review of conceptual issues on ethics in economics, immorality challenges of system efficiency, state of play in the economic discipline, the ethical crisis of economics, two grand narratives of ethics and economics, the grand narrative of Amartya Sen, the grand narratives Cropsey, Staveley and their followers seeks critiques of the main stream and his alternative approach to economics.

Section Two: This section deals with the need for the code of ethics in economics profession, identification of areas where economists lack code of ethics which poses challenge, advocating for code, questioning the need for code, and tips for intertwining economists, and economists facing flak over ethics, economists has no true professional body.

Section Three: Deals with the interconnectedness of economist and conflict of interest, ideology and the financial crisis, academic economists affiliation with private sector financial institutions, identification of economists in their writing, financial economists opinions on financial reforms, recent changes in disclosure norms, conflict of interest and, Section Four: Summarizes the paper.

**Economics is not a neutral science**

Economic theory is not morally neutral but also reflects a value system. When proponents of positive economics (Friedman, 1953) suggest that we need to separate questions linked to efficiency (did the decision meet its goal?) from those related to legitimacy (is action justified?), they criticize the use of value
judgments, but at the same time they also submit a proposal that is itself a value judgment. A philosophical movement like English utilitarianism, as promulgated by economists such as John Stuart Mill, contains a certain ideal of the common good, in other words, satisfying the largest number of people and increasing happiness overall.

Moreover, as economics is based on production and exchange within human communities, it is largely dependent on moral values and social customs, and is interwoven with society (Beckert, 2006). Sidgwick (1883) was among the first to differentiate between positive economics that simply states the facts (what is) as opposed to normative economics which expresses value judgments (what ought to be). The work by Sen (1985; 1987) falls into the field of normative economics research. Normative economics may set out certain requirements, but above all it examines how different ethical principles (related to moral philosophy or the debate on contemporary society) place restrictions on social institutions (leading to conditional recommendations). These principles may include equal opportunities, the fight against inequality, and access to education, for instance.

Walras distinguishes between economic science, which explains how competition can ensure the development of wealth, and morals, which indicate how we should intervene to make the distribution of wealth fairer. State intervention is meant to establish a precarious balance between morality and economics (this is the goal of the economics of welfare (Pigou, 1920). This brings us to the general definition of social justice criteria (Rawls, 1971). Mandeville (1714) called for “the skilful management of the dexterous politician” whose intervention is essential to transform “private vice” into “public good.” He believed that public action did not mean always getting involved and regulating everything in detail, but rather, defining the legal and institutional framework necessary for sound business operations.

There is nobody out of the community, no community without moral and religious beliefs. Under such conditions, it is to say whether it is the requirements of the individual or of the community must prevail, but whether the principles of justice that govern the basic structure of society may be neutral with respect to moral and religious convictions adopted by citizens (Sandel, 1982). Value judgments inevitably occur at the end of the research, as the results were presented. It is important to point out the danger of radical separation between science and value judgments rather than their confusion. The responsibility of the economist does not end with the achievement of the objectives of the research. Moral responsibility begins only when the process of scientific knowledge with respect
to a given problem, is completed. That responsibility lies in the constant review of political and moral consequences of scientific work. We do not expect economists act as legal authorities, but their moral responsibility is not to forget the ethical issues (though economics has a difficulty to explain why moral beliefs are shared by members of a nation).

**Immorality challenges the system’s efficiency**

Morals and ethics remain central to public policy justifications. Basically, the government’s role is to limit abuses linked to the way that markets work and to protect the most vulnerable members of society. In 1796, Kant noted that “politics says: be wise as serpents,” while adding in the same sentence that morality demanded the restrictive condition that we remain “as harmless as doves.” This led Savidan (2014) to note that: “Kant and his followers were always careful not to get their hands dirty. We can see in this a form of guilty idealism, or a somewhat naive way of not taking the real difficulty seriously, that which arises of course when, to preserve one’s innocence, we must abandon all acumen, or attack the dove when acumen recommends it.” Economics cannot function without a minimum of rules. Numerous examples show that misappropriation of corporate assets, immorality, manipulation, fraud, lies, insider trading, money laundering via tax havens and so on all create obstacles to the successful conduct of business operations.

Corruption is a cancer that can remove authority and all of a country’s financial resources. It is not painless and, in authoritarian regimes, may be the main cause of people’s suffering. The exorbitant pay packets awarded to leaders of multinational firms are also problematic. When there is no limit to the drive for profit, societies reach crisis point. The difficulties experienced by western societies are almost certainly linked to the weakening of three anti-utilitarian standards of the past, namely, aristocratic, Christian and socialist ethics. When exclusively individual interests take priority, violence and predation follow; it is the fear of such violence that leads us to introduce moral antidotes (which involves sublimating individual interests and diverting them towards collective goals). Nevertheless, we cannot have an exclusively moral attitude towards the corruption or towards the fraud, because it would forget the conditions which engender the troubles of which we disapprove.

One of the greatest barriers to meaningful debate within and about economics has been the successful mainstream rhetoric that economics is a technical subject. Where economics is presented as a science, ethical considerations are deemed to
belong to non-science. According to this view, the economist’s role is to produce technical results to be handed over as expert advice to policy makers, for them to use according to their (separable) ethical principles. Where the issue of ethics has arisen within mainstream academic economics, it has tended to refer to the kind of generic academic ethics applied by funding bodies, employers of consultants and publication outlets: not to plagiarize, to declare conflicts of interest, not to be abusive, and so on. While important in themselves, these are ethics of personal behavior which are considered to be independent of research methodology and research content.

But ethical responsibilities have come to the fore in public discourse in the wake of the recent financial and economic crisis. Given the real consequences of the crisis and their uneven distribution, questions arise as to how far economists are morally culpable. Not only did mainstream economists fail to alert the authorities to the forces leading towards crisis, but their theories had equipped financial market players with the technical skills to stoke the system’s vulnerability to crisis. Moral issues continue to arise, given the policy advice in favor of fiscal austerity which came from the same economists. The nature and role of expert advice raise moral issues surrounding the status of economic knowledge itself.

There is clearly more scope for ethical issues to arise in economics than implied by narrow generic academic ethics. In order to consider this scope we raise issue with the notion of economics as a purely technical discipline and explore the implications for ethics in relation to economics as a whole and in relation to the responsibilities of individual economists. There has for some time been growing academic interest in considering ethics and economics in this wider sense, such that there is now a body of resources by which to address these issues, such as the Handbook of Economics and Ethics (Peil & van Staveren, eds., 2009). Meanwhile, George De Martino (2011) had spearheaded discussion of the possibility that economists, like other professional groupings, might be required to sign an oath which established ethical standards. A range of perspectives on such a possibility and related issues was published in the Oxford Handbook on Professional Economic Ethics (De Martino & McCloskey, eds., 2016).

Ethical issues enter at the level of how economic knowledge is produced. Where mainstream economics textbooks refer at all to methodology, it is to a logical positivist approach whereby economists derive positive propositions and test them against independent facts. While Hume had simply pointed out the distinction between ‘is’ and ‘ought’ statements, modern mainstream economists assert that economics is only concerned with the former (see further van de Laar
It is not that economists do not seek to contribute to the betterment of society; most do, but rather that this is to be done by producing useful, empirically-validated positive statements.

The resulting methodology is seen as defining the discipline, effectively ruling out other approaches. But modern economics began, with Hume among others, as a moral science within the field of moral philosophy; ethics were integral to economic reasoning (Dow, 2009). It is not then a question of whether it is desirable to strip economics of ethics, but rather whether it is actually possible to do so. As Kayatekin (2014: 605) argues with respect to Hume: ‘to the extent economic behavior is determined by passions such as greed, benevolence and pleasure, we cannot separate economic activity and morality’. The theoretical framework itself determines how values are discussed. Thus ethical concepts such as trust and moral hazard are analyzed in mainstream theory in terms of incentives and self-interest, while elsewhere they are analyzed in terms of institutions and social conventions (Nootenboom, 2009; Dow, 2012). Inevitably policy advice too is formulated in terms of the framework employed, an important issue for example for banking reform in the wake of the crisis.

Ethical judgments are thus embedded even in apparently-technical mainstream models, and in concepts such as efficiency (van Staveren, 2009). Within a mainstream framework, market competition is presumed to ensure that labor and capital are paid the value of their marginal product, justifying the pattern of income distribution, for example. Similarly, mainstream theory supports promotion of free trade on the grounds that it produces a net increase in welfare, i.e. where losers could in principle be compensated by winners, even if compensation does not actually take place. The embeddedness of moral values is even more apparent beyond the mainstream, where market forces are analyzed as being as much matters of power and social convention as they are about price incentives.

This brings us to the ethics of the economist herself, as researcher, as teacher, as consultant and as policy adviser. The first implication of economics being a moral science is that it is unethical to present economic propositions as separable from ethics (Dow, 2015). Theory is contestable, not just in relation to alternatives, but also in relation to its moral presuppositions. It is therefore incumbent on the economist to be explicit about the ethics embedded in her theorizing and to be prepared to engage in debate about them. But the responsibility extends further to being open about the limitations of any one approach to economics. This requires the economist to be prepared to explain and defend her approach relative to alternatives.
Unfortunately, the mainstream approach to economics as a technical subject precludes debate about ethical presuppositions as irrelevant. Yet logical positivism can no longer be sustained in economics (just as the philosophy of science has long since left it behind). This is not just because theory is imbued with ethics; it is also a matter of epistemology. If the subject matter of economics is complex and evolving, no one approach can hope to deal with the whole. Where knowledge is uncertain, and different understandings are possible, pluralism provides the most robust disciplinary strategy.

Different groupings of economists focus on particular aspects of that complexity according to their ontology, and understand evidence in their own way (Dow, 2004). If the truth of propositions cannot be demonstrated, but is rather a matter of persuasion, the economist has a much broader ethical responsibility than simply revealing the values embedded in theory, challenging though that is (Dow, 2016). To engage in honest debate with other researchers, and as a consultant or policy adviser, the economist has a moral responsibility to acknowledge the limitations of her knowledge, and to explain and defend her approach relative to others. The same moral responsibility applies to the economist as teacher. To educate young scholars to be morally responsible economists in the face of epistemic challenges, the economics teacher needs to equip them to understand and choose between different approaches.

According to this type of analysis, the moral opprobrium in which economists were held after the crisis was due to a number of ethical blind spots: economic arguments were presented as definitive, without the show of modesty more appropriate given the epistemological challenges; the arguments were presented as technical, as if there was no ethical content; the responsibility was not recognized to be transparent about ethical content; and the responsibility was not recognized to explain and defend the chosen approach in relation to alternative approaches. Rather than retreating into an unsustainable defense that economics is scientific and therefore, free of ethical considerations, economists should aim to rebuild trust in the profession by accepting that more robust knowledge will arise from addressing the ethical content of the subject and opening it up to debate. The professional ethic of tolerance of different approaches is critical. But non-mainstream economics, with its openness to addressing ethical issues, needs to be recognized by the mainstream as economics. The epistemological argument for pluralism needs to be accepted for the principle of tolerance to have substance.
State of play in the economics discipline

Economics is in disarray. Few would deny it. Some of the signs for this are obvious. Other evidence is more controversial. After commenting on the extent of the crisis, it is worthwhile considering how economics descended into this state. One of the fundamental causes is an ethical failure. First, economists claim to be scientists or technicians who study ‘facts,’ not values; they make ‘scientific’ studies and predictions. They claim that advances in mathematical tools, and the ability and willingness to use them, have allowed economics to far surpass all other disciplines in the social sciences (and the humanities). Yet economists failed to predict the Global Financial Crisis, the largest economic ‘shock’ in seventy years. Since the early 1980s, both Marxist and the Keynesian views of the macroeconomics have been rejected. Not only is the modern capitalist economy free from fatal contradictions/flaws but it is also self-stabilizing. For three decades, the prevailing view of mainstream economists has been that the macroeconomics is inherently stable and self-correcting. Despite the embarrassment of falsification by the Great Depression, we were assured that nothing similar could ever recur.

A little handwringing, however, has recently started to appear in public. When Alan Greenspan, the former US Federal Reserve Chairman, gave evidence to a Congressional Committee in 2008, he admitted to being wrong. He conceded that he had now found a flaw in his worldview: a ‘flaw in the model that I perceived as the critical functioning structure that defines how the world works’ (quoted in James, 2008). The top of the tree of public sector economists in the United States has admitted to having a fundamental misunderstanding of the economy and economic processes. The facts of the world have not supported the economists’ models. Second, all scientists, including positivistic economic scientists, are faced with ethical issues in conceptualizing, conducting, and reporting their work. For example, it is ‘unethical [for economists] not to work on the quality of the data or on the correct use of statistical tests’ (McCloskey, 2000:144; see also 52). In particular, economists ‘should not use statistical significance as the equivalent of economic significance’ (McCloskey, 2000:143; see also 187-207). Fitting equations to historical data can be an absorbing game but using this for future-oriented purposes, such as public policy, can be dangerous.

Nevertheless, despite repeated criticism, economists persist in this ethical lapse (McCloskey& Ziliak, 1996; McCloskey, 2000:187; Ziliak & McCloskey, 2008). Perhaps driven by the dictum ‘publish or perish,’ economists do not feel bound by elementary ethical standards demanded of positive scientists. Similarly, business
economists act like hired guns in the Wild West. When acting as consultants or expert witnesses, they will tell any story that they expect will be supported by their actual or prospective employer. Indeed, they will tell their story in these contexts, even if there is a conflict of personal interest. To some degree at least, these examples demonstrate the adoption of some of the behavioral principles that they have been taught in economics courses (see the next section, below).

The reader may now be wondering if there aren’t some minimal standards to which economists must conform. No professional code of conduct has ever existed. This reflects a professional disposition towards laissez-faire and indifference to ethics. In recent years, some economists have been calling for a code of ethics for the discipline (DeMartino, 2005; DeMartino, 2011). This culminated in a petition of three hundred economists, many associated with the Post-autistic Economics (PAE) movement (see below), calling for a code of ethics for economists (Petition to the American Economic Association on a Code of Ethics, 2011).

Apparently embarrassed by the petition, on 7 January, 2011, the American Economic Association voted to establish a committee to examine the adoption of formal ethical rules for its members. Third, as indicated above, in order to advance their career prospects, academic economists are ‘encouraged’ to publish frequently. The result has been an explosion in the quantity of published material, much of which is of limited worth, misleading, or dangerous. Some of this ‘output’ is purely formal, with no relevance to anyone beyond the formal theorists. Other work appears to be relevant but uses questionable, highly simplified theoretical models. Usually, these end with a section on the ‘policy relevance’ of the paper; this rests on the house of sand previously built. Further, it is never explained how normative conclusions arise out of positive analysis. There are also empirical papers on topics that are relevant, but they often use techniques of questionable validity. Like the theoretical work, policy recommendations drawn from the results of empirical work are often highly questionable or dangerous.

Since the 1980s, economics units within universities have gradually shifted out of Arts, Humanities, and Social Sciences faculties into Business Schools or faculties. The unintended consequence of this apparently strategic choice has been increasing marginalization of the economics discipline; it has been alienated from the disciplines in its former faculty (e.g. political science) and reduced to a ‘service’ discipline (for accounting and management) in its new faculty. Accreditation bodies (such as exist for business schools and for accountants) require some but minimal economics to be studied. Indeed, the trend has been to
require a one-semester unit rather than a full-year first-year course (Guest and Vecchio, 2003). Perhaps indicative of a global trend, economics departments in Australian universities have been subject to frequent amalgamation and staffing levels have declined considerably (Maxwell, 2003:80-1).

Fourth, the disenchantment of students with economics is palpable. They constantly complain about the poor quality of the teaching (promotion is based on research ‘output’) and the unrealistic assumptions that economists make. Courses on the history of economic thought, economic history, and political economy have been cut in favor of subjects deemed suitable for technical ‘training.’ A protest movement began in France in 2000, against the formalism and lack of relevance of mainstream economics education. This spread across the world and became known as the PAE movement (and in May 2011 effectively became the World Economics Association [WEA]). It has gathered considerable publicity and support. Debate within the economics discipline about PAE/WEA concerns, however, has tended to be among those already disaffected with the mainstream.

While some will disagree, let’s take the previous four sets of observations to be fairly obvious. Other signs of crisis in economics are more controversial. Let me give just one example. Consider again the Global Financial Crisis. Greenspan’s remarks, quoted above, were in response to direct questioning in one US Congressional Committee but they must also be seen in the context of his prepared statement. Here Greenspan said that he had ‘looked to the self-interest of lending institutions to protect shareholder’s equity’ (quoted in James, 2008). Along with other public officials, as the Chairman of the Fed, Greenspan repeatedly rejected public regulation of the financial sector. His views reflected the international trends in the 1980s and 1990s favoring deregulation. Apparently, economists were more influential than one may have expected given some of the earlier observations. Following the onset of the Global Financial Crisis, however, public policy ‘best practice’ has shifted to re-regulation. It is de rigueur internationally. Hence, even if they failed to predict the Global Financial Crisis, perhaps economists were responsible for creating it through their advocacy of the now controversial/discredited deregulation policy. Is the current crisis in economics simply another episode in the long history of economics from which it will recover (i.e. a cyclical problem). Or is it an indication of a deeper (secular) malaise. There is evidence of both but my focus is on the latter.

In the 1980s, when Keynesianism was being dismantled, a new arrogance emerged in the economics profession. The new view had a wide range of manifestations: creation (and wide acceptance) of fanciful theories and advocacy
of a neo-liberal agenda (small government, privatization, deregulation, and so on). Well established theoretical problems (e.g. second-best) were ignored (Lipsey and Lancaster, 1956). Everything had to be construed as ‘first best.’ At the heart of the new economics was a simplified version of Adam Smith’s ‘invisible hand’ doctrine. Smith held that within a certain institutional framework, in many cases, self-interest worked to the public benefit (1776, 1976:356, 664, 698; Evensky, 2005: 227). The modern doctrine appears to be a bastardized version of this: ‘greed is good.’ It seems to me that part of the current crisis in economics is an ethical crisis. This secular problem (which I trace to the 1930s) is the topic of the next section.

The ethical crisis of economics

There are two starting points for the relationship between ethics and economics. The first is the fact/value or positive/normative dichotomy; this methodological view is proclaimed early in almost every economics course and textbook. Science, understood as positive science, is concerned with ‘facts.’ With virtually no argument, the economic scientists place economic theory in the former category and economic policy in the latter category. I believe that the fact/value distinction is a dogma and a deadly one. The second point is a sort of amalgam that is built on the first point. Human ends are said to be subjective and beyond rational debate. Means can be subject to rational debate and economics focuses on them. Because ends are subjective and beyond rational debate, they are taken as given.

For the economist/technician, human rationality refers to thinking and calculating about means. The initial characterization of goals/ends is often in terms of gaining satisfaction, maximizing utility (or expected utility), having benefits outweighing costs, or something of the sort (Gans, King, and Makiw, 2009: 5; Heyne, 2008: 25). It is claimed that the goals can be altruistic or public spirited. Hence, claims by critics that economists assume, and build models based on, human selfishness, materialism, or greed are wide of the mark (Heyne, 2008: 25). I believe that this is a rhetorical position which collapses upon closer examination, even for many of those who start off with such claims. In many cases, the rhetoric is dropped once the early genuflection has been observed. Some elaboration on these two points is needed.

First, it is a widely-held view today among mainstream economists that economics is free from any ideology, theology, or moral philosophy. One commentator on the role of ethics in mainstream economics has stated that: The ‘scientification’ of economics ... has led to a separation of economics from its
ethical roots. The ‘mainstream economics’ of the 20th century fully accepts this separation. Economic theory is seen as a positive science which has to analyse and to explain the mechanisms of economic processes. ... [E]thical valuations (‘ought’-statements) ... should not form part of the economist’s research programme (Rothschild, 1993:16). Similarly, a recent commentator on the methodology of economics has commented that ‘economists today ... agree that ... economic theory free from values is essential in establishing the scientific nature of the discipline’ (Drakopoulos, 1997:286). Many others have expressed similar assessments of the prevailing view (see Young, 1997: 4; Galbraith, 1987:124).

The matter-of-fact adoption of this methodology flies in the face of a vast number of criticisms from inside and outside of economics. Inside the profession, thoughtful critiques have been provided by Myrdal (1958), Heyne (2008:12-21), and others. From outside of economics, critiques have been provided by Putnam (2002) and others. Methodologists have abandoned the fact/value distinction and, along with it, the pretense of a value-free science. A certain resistance to change is inevitable, and even healthy within limits, but there is no legitimate excuse for retaining these views today. Until the fact/value or positive/ normative distinction is abandoned, there is little hope for a deeper integration of ethics and economics.

Second, as stated above, the rhetoric of modern economics is rational calculation and scientific neutrality on moral issues. The reality is that self-interest regarding baser material objectives come to the fore. These foci, including self-interest, however, can easily shift towards something else. For example, Yezer, Goldfarb, and Poppen state that ‘introductory microeconomics is based on assumptions of rationally selfish behavior’ (1996:178 emphasis added).

Note that self-interest has slipped to ‘selfish behavior.’ Consider also what one of today’s leading micro economists, David Kreps, has to say: ‘a sparse set of canonical hypotheses—...greed, rationality, and equilibrium—became the maintained hypotheses in almost all branches of [economics] ’ (1997:59 emphasis added). Colander calls these three the ‘holy trinity assumptions’ of mainstream economics (2005: 930).

Note that Kreps and Colander have slipped from the ‘selfishness’ of Yezer, Goldfarb, and Poppen to ‘greed.’ While mainstream economists usually begin by claiming that they are technicians, who can apply their tools to any problem, they frequently make the slip noted above (explicitly, or implicitly): human ‘greed’ is posited as a ‘fact’ from which modeling can commence. Utility maximization is often rhetoric covering the real view of the profession. Indifference to ends differs
from the reality. Other than in the quotes presented above, is there any real evidence that economists tacitly assumed selfishness or greed? One piece of evidence must suffice. Until recently there was not the slightest interest of mainstream economists in theoretical or empirical aspects of altruism.

What is the moral effect of promulgating this view on the behavior of economics students (including future economic consultants and expert witnesses)? Experiments have been conducted to see whether humans cooperate or attempt to ‘free ride’ in a range of situations. In one study, it was found that people were generally cooperative or public spirited, except for a group of first-year graduate students in economics: the latter were less cooperative, contributed much less to the group, and found the concept of fairness alien; the economics students were ‘much more likely to free ride’ than any other group tested (Marwell & Ames, 1981:306). On this same study, Hausman and McPherson comment: ‘Learning economics, it seems, may make people more selfish’ (1993: 674; see also Marwell & Ames, 1981:309). More recently, Frank, Gilovich, and Regan found in their experiments that students of economics, unlike others, tended to act according to the model of rational self-interest to which they are exposed in economics; they concluded that ‘exposure to the [economists’] self-interest model does in fact encourage self-interested behavior’ and that ‘differences in cooperativeness are caused in part by training in economics’ (1993:159, 170 emphasis added). This conclusion leads them to recommend that economists ‘stress a broader view of human motivation [than rational self-interest] in their teaching’ (Frank, Gilovich, and Regan, 1993:170-1). If these studies have validity, by producing selfish and uncooperative individuals, empirical evidence exists to show that economics has become non-ethical in practice. Actually, far from a value-free science, it is a type of religion. The preachers of the cult indoctrinate greed as part of their ‘holy trinity.’ The current ethical crisis of economics is the culmination of longer term trends. Following Amartya Sen, it is argued that the origins can be traced back to advent of Logical Positivism in the 1930s. Nevertheless, if a very long time horizon is chosen, the separation of economics from ethics is actually quite recent.

**Two grand narratives of ethics and economics**

This section is devoted to placing the current ethical crisis in economics in the context of a longer narrative of ethics and economics. There are two grand narratives of ethics and economics, which are the focus of the section. My own version has been sketched previously (Alvey, 1999; Alvey, 2000). Before turning to these, however, there is a preliminary matter to discuss. Economic matters have been debated throughout human history. For example, sacred writings from
ancient times typically included ethical injunctions on wealth accumulation, lending, business, and commerce.

For most of recorded history, economic processes were embedded in the social fabric (including theology, ethics, and politics). This inclined theorists to construct social thought in a holistic way, with economics as simply one small part of social thought. The gradual emergence of the semi-autonomous market fairs in the Middle Ages began the process of disembedding the economy but that process was not completed until the early nineteenth century (Lowry, 1987:3, 253 n.3; see Polanyi, 1944; 2001:60). Similarly, social thought only gradually recognized the notion of an autonomous economic sphere. Hence, the notion of an independent science of economics arose relatively recently, perhaps since the nineteenth century. Until that time, economics was generally discussed as a subordinate part of a broader study of theological, moral, and political matters.

Some commentators, such as Polanyi and his associates, argue that 'economics' began when the modern economy emerged, namely at the time of the industrial revolution (Polanyi, 1957). In their view, there was ethics but no economics before the time of British Classical Economics (roughly 1770 to 1870). Most commentators, however, do not take such an extreme view. The first grand historical narrative of the relationship between ethics and economics is provided by Amartya Sen and his associates and followers, especially Martha Nussbaum. They adopt what may be called a social democratic or egalitarian approach to ethics and economics. The second narrative is provided by Joseph Cropsey, Richard Staveley, and their followers. They adopt what may be called a philosophical/aristocratic view of ethics and economics.

Despite disagreement on some details, the two grand narratives have considerable commonalities. Both accept that there was an ethical tradition in economics in ancient and medieval times and both place Aristotle (384-322 BC) at the centre. Second, they agree that the ethical tradition faded out. Third, they consider the current state of economics to be either ethically thin or amoral.

**The grand narrative of Amartya Sen**

The best place to locate Sen’s grand narrative of the history of economics and ethics is in *On Ethics and Economics* (Sen, 1987). Sen refers to ‘the historical evolution of modern economics largely as an offshoot of ethics’ (1987: 2). The ‘ethics-related tradition,’ he says, can be traced back at least to Aristotle in ancient Greece (Sen, 1987: 3). Sen (1987: 4) argues that there are two moral aspects of economics: ‘the ethics-related view of motivation’ and the ethical view of ‘social
achievement’. First, in the ethical view of motivation, ‘ethical deliberations’ do affect ‘actual human behavior’ (Sen, 1987:4). Compare this with the ‘fact’ of human greed proclaimed by today’s mainstream economists. Second, the ethical view of ‘social achievement’ cannot be limited to the satisfaction of ‘efficiency’: the evaluation ‘has to be more fully ethical, and take a broader view of “the good”’ (Sen, 1987:4). What Sen has in mind by ‘efficiency’ is both technical efficiency and economic efficiency. The latter is the Pareto Optimal condition in which no individual ‘can be made better off without making someone else worse off’; the former is the equivalent condition in production, in which further output of one good can only be achieved by reducing production of another good (assuming inputs are negative outputs) (Sen, 1987:21 n. 20). For Sen, social achievement is a type of distributive justice, in which the distributive standard is independent of Pareto Optimality (Sen, 1987:32-3).

In addition to ethics, Sen admits that there is a second origin of economics: ‘what might be called “engineering”’ (1987:3). This approach also has a long history. In the engineering approach, ends are assumed to be given and it is concerned with logistical issues of means. ‘Ethical considerations ... are not given much role’ in its analysis (Sen, 1987: 6). For Sen, both origins ‘have some cogency of their own’ (1987:6). Engineering contributions, such as general equilibrium theory, are praised, despite their limitations, for showing ‘the nature of social interdependence’ (Sen, 1987: 8). There is a legitimate role for inquiries into both means and ends. The two approaches are not mutually exclusive and can be combined in ‘varying proportions’ (Sen, 1987:6). Nevertheless, it was the engineering tradition which became dominant and came close to obliterating its sibling (the ethical tradition).

In terms of the grand narrative, Sen argues that the ethical tradition from Aristotle continued to flourish through to the 1930s. The advent of Logical Positivism in the philosophy of (natural) science and its adoption in economics by Lionel Robbins represents the decisive turning point for the ethical tradition in economics (Robbins, 1932; Sen, 1987:30; see also Rothschild, 1993; Drakopoulos, 1997). From the 1930s onwards, economics shifted away from ethics. For Sen, however, economics must ‘find an important place’ for the old ‘ethics-related view of motivation and social achievement’ as well as engineering (1987: 6). He concludes that ‘the distancing of economics from ethics has impoverished welfare economics, and also weakened the basis of a good deal of descriptive and predictive economics’ (Sen, 1987:78, 7).

Sen argues that both traditions must be kept alive and he demonstrates this in his own writings. He has made various contributions to economic engineering and,
more importantly, has been a tireless researcher in the ethical tradition. Further, he identifies himself as part of the ethical tradition in economics stretching back to Aristotle. Martha Nussbaum, Sen’s collaborator, has written extensively on various ancient Greek writers. Nussbaum’s early work on Aristotle preceded Sen’s and heavily influenced the latter’s interpretation of the Greeks (especially Aristotle), as shown in his various citations of her work (Sen, 1987:46 n., 63n., 64 n., 66-7n.; Sen, [1999] 2000:24, 73, 300 n. 14, 308 n. 35, 309 n. 40; Sen, 2009:231 n., 436 n. 8; see Duhs, 2008:185, 188).

The grand narrative of Cropsey, Staveley, and their followers

Cropsey and Staveley were students of the philosopher Leo Strauss. The latter made some side remarks about economics but the comments were fundamental to the second grand historical narrative of the history of economics and ethics (see Minowitz, 1993a). According to Strauss, there is a fundamental break in social thought sometime during the Renaissance (probably in the 1500s), and economic thought reflected that reorientation. At that time, a new view of rationality and self-interest arose and along with these went a new view of the ends of human beings.

Modern economics had the same genetic makeup as the rest of modern thought. By contrast, ancient and medieval economics had the same genetic makeup as pre-modern thought. Strauss’s brief remarks were developed by Cropsey, Staveley, Peter Minowitz, and others. Cropsey was influential in the United States, especially in his interpretation of Adam Smith (Cropsey, 1957; Cropsey, 1960; Cropsey, 1964; see Minowitz, 1993b). He regarded Smith as very modern (the few minor pre-modern residues in his writings could be safely ignored) and well outside the classical ethical tradition. Pack correctly refers to Cropsey as having adopted an ‘Aristotelian’ critique of Smith (Pack, 2010: 65). Staveley was influential in Australia; many of his students and followers wrote in the Strauss/Cropsey tradition or were at least greatly influenced by it. A collection of essays by some of Staveley’s students was recently published (McCarthy and Kehl, 2008).

To ensure full disclosure, we should declare that we were a student of Staveley for certain years and adopted his interpretation for a decade or so. We gradually abandoned most of the Staveley doctrine, especially his view of the turning point in the grand narrative (Alvey, 1999; Alvey, 2000; Alvey, 2003; Alvey, 2007). In any event, what is needed now is a sketch of the second grand narrative. According to Strauss and his followers, in the ancient (and medieval) world,
economics was subordinate to politics and ethics in the humanistic studies; indeed, economics played a minor role in such thought. In the face of limited resources, human rationality meant controlling the passions (i.e. the desire to acquire material goods), in order to allow better satisfaction of the true human ends (passions and ends not shared with animals).

Three aspects of modern thinking are relevant to economic thinking. First, modern thought is based on the liberation of self-interest; as summarized by Hume, reason is the servant of the passions ([1739-40] 1978: 415). This fundamentally breaks with the pre-modern view of rationality. Second, the modern view, commencing with Mandeville, is that self-interest leads to the public good (Mandeville, [1714] 1966). This is a further break from the pre-modern view. Third, the grander view of the ends of human beings is replaced by a reductionist view which could be called materialism or economism (maximize material possessions without limit). These modern doctrines are rejected by the followers of Strauss.

Summary

Both of the grand narratives serve two purposes. First, they seek to show the existence of a vibrant ethical tradition at one point in the history of economics. Second, by endorsing the past over the present, they take a stand against the prevailing economic orthodoxy. Each grand narrative is associated with a critique of mainstream economics today. Aspects of both narratives and their theoretical critiques can be questioned. Nevertheless, they do have considerable merit.

Sen’s critique of the mainstream and his alternative approach to economics

Sen is a critic of mainstream economics and a builder of an alternative. After briefly commenting on his critique, this section will focus on his new approach to economics: the Capabilities approach. Sen provides a series of critiques (of positivism, positivistic economics, utilitarianism, and utilitarian economics) (see Alvey, 2005). Some of the criticisms are directed at the inadequacies of human motivation depicted by these theories. Other criticisms are directed at the narrow or inadequate understanding of the purposes of social life. Sen argues that the mainstream views of rationality and human motivation are inadequate or wrong.

Concerning ethical motivation, one point should be made here. The economic theory that was the mainstream after World War II asserted that personal choice and personal welfare were identical (see Sen, 1977:329). In this context, he draws attention to the atomistic unsympathetic individualism assumed in economics that

Nevertheless, it remains ultimately egoistic. Sen takes his critique further by introducing ‘commitment.’ Commitment, he says, ‘drives a wedge between personal choice and personal welfare’ and thus undermines modern economics (Sen, 1977:329). He refers to ‘class and community’ as cases where individuals frequently display commitment, acting against their own welfare in favor of the group (Sen, 1977:344). Even if economists have never seriously considered sympathy from a theoretical perspective or attempted to examine empirical manifestations of it, they do quickly grasp the meaning of the term. On the other hand, economists seem to have enormous difficulties grasping the possibility that ‘commitment’ drives any wedge between personal choice and personal welfare. For rhetorical purposes, commitment is construed as nothing more than sympathy, widely construed.

As stated above, the reality is that neither category has been taken seriously by mainstream economists. Hence, for Sen, economists have not grasped human complexity. By ignoring such ethical behavior, they are left with a reductionist view of human nature represented by the economic man: ‘the purely economic man is indeed close to a social moron’ (Sen, 1977:336). Sympathy and commitment need to be brought into economic analysis.

Indeed, Sen explicitly refers to the need for an ethical framework (including the prevalence of honesty) for a society, and especially a market society, to operate (1977:332). This is an example of commitment that contradicts the model of the economic man. A society of economic men would be one in which markets are constantly tending to break down; the likely end result is a return to a barter economy with a very low standard of living.

Although ethical motivations are relevant, the Capabilities approach is more concerned with social achievement. With regard to the latter, Sen and his followers have built up an alternative philosophy which is the foundation of a new approach to economics. To a large degree, this is a theory of distributive justice. Sen thinks that his theory is an improvement on the existing theories in political science and philosophy. More importantly, as economics has no distributive theory, his theory fills an important gap. Some key points should be mentioned here.
Sen’s goal is to faithfully represent human well-being, or what Nussbaum calls ‘human flourishing,’ which lies between commodities (the physical thing) and utility (the pleasure associated with it). His approach can be presented as a chain: ‘Commodities→ Characteristics→ Functionings→ Utility’ (adapted from Sen, 1982a:30). A commodity, such as a bicycle, has the property of providing transport (i.e. its characteristic); by using that property, the owner can move (i.e. its functioning). The ‘characteristics’ approach was originated by Lancaster; ‘functioning’s’ was formulated by Sen, using insights from Aristotle, Adam Smith, and Karl Marx (Lancaster, 1966; Sen, 1982a: 30; see Sen, 1990a: 43-4).

For Sen, functioning are ‘what the person succeeds in doing with the commodities and characteristics’; he also calls them well-being achievements ([1985a] 1999:6). Some of these functioning are more foundational than others. Sen distinguishes between 1) ‘elementary functioning,’ such as ‘avoiding undernourishment, escaping avoidable morbidity,’ ‘escaping avoidable mortality,’ and ‘undertaking usual movements,’ and 2) ‘complex functioning’s such as achieving self-respect, taking part in the life of the community and appearing in public without shame’ (1980: 219; Sen, 1985b:199; Sen, 1990a:44; Sen, [1999] 2000:66).

The function ‘undertaking usual movements’ would be restricted by physical disability or by cultural views about female seclusion (i.e. cultural norms that require a female to be chaperoned for movements in public). Sen mentioned a vast number of functioning’s in his writings. In addition, he recognizes the importance of freedom, agency, and choice. Hence, he often refers to the ‘capability to function.’ Capabilities provide for freedom to use, or not use, a functioning (e.g. the choice of fasting or eating).

Nussbaum has gone further than Sen and provided a full list of the main features of a human being and a list of human functional capabilities (Nussbaum, 1995:76-80, 83-5; Nussbaum 2000:78-80). In the latter she includes items such as: ‘Being able to have good health’; having ‘an adequate education’; and ‘being able … to participate in political life’ (Nussbaum, 1995:83-4). This year she has provided a work for the general public which summarizes her version of the Capabilities approach (Nussbaum, 2011). In this work Nussbaum argues for ten central Capabilities (Nussbaum, 2011, Ch 2).

Another aspect of Sen’s (and Nussbaum’s) work which is associated with the Capabilities approach is gender equality. If the female rates of ‘mortality, morbidity, under-nourishment, medical neglect’ and illiteracy are higher, and the freedom is less, than for the male counterparts, the female’s functioning are negatively affected (Sen, [1999] 2000:89). Sen has claimed that, in various Asian
countries, females receive less food and medical care than males. He uses his findings to claim that, in these countries, there has been dramatic capability deprivation of females (i.e. there has been a major failure in terms of distributive justice) (Sen, [1999] 2000:106, 109).

In effect, Sen and Nussbaum say that everyone has an entitlement or right to certain basic functioning, including the right to life. This means that there must be an entitlement to adequate provisions (e.g. food) in order to achieve these functioning’s. While concerns with gender may seem to have arisen only since the late eighteenth century, and that Sen is merely proclaiming the current view, that is not correct, as I have shown elsewhere (Alvey, forthcoming, Chapters 3 to 5). In his recent work on the Capability approach, Sen has stressed the role of ‘democracy’, both as a means to achieving other capabilities (e.g. famine prevention) and as an end in itself (he regards public participation as a functioning) (1982b; Sen, [1999] 2000:16-7, 147-8; Sen, 2009:342, 348-9).

It can be asserted, however, that it is better to use another term than ‘democracy.’ What Sen has in mind is not tyranny of the majority but actually an improved (or elevated) democracy including the rule of law, or a regime that Aristotle calls polity (Aristotle, Politics, 1279a 36-79b4; 1293b20-94a30; 1984: 96, 129-31; Sen, 2009:352; see Alvey, forthcoming, Chapter 7). When the various functioning are put together with appropriate freedom and resources, some image of human well-being (or human flourishing) emerges. Similarly, Sen argues that capability achievements, rather than the production of commodities, should be the appropriate metric for the standard of living.

Having developed this framework, Sen has identified various impediments to capability achievement, including poverty and gender inequality (especially female nutrition). Such impediments are ignored in the most widely used national accounting measure of the standard of living (i.e. GDP/head). Sen’s final step is to assert that the political authority must be judged by how well people within its jurisdiction are doing according to the Capability standard. Some duty is imposed on the political authority to support individuals in achieving certain capabilities to function.

The Capability approach requires that many means be provided to every person. This is an alternative to what is at least implicitly the mainstream economics approach to social achievement: a high and growing quantity of commodities available for consumption or, more precisely, a high and growing quantity of commodities per head available for consumption. The conventional measure of the standard of living (GDP/head) has been subject to sustained criticism in recent
times; one source of the complaints is the Capability theorists. In sum, the Capabilities approach constitutes a whole new interdisciplinary social science. There are many problems with this approach but at least it provides us with a sort of checklist of ethical issues which seem to lie outside of the concern of mainstream economics.

The need for code of ethics in Economic Profession

In November of 1929 a Chicago businessmen’s club wrote to the Secretary of the American Economic Association (AEA) to inquire about its code of ethics. Here, in full, is the AEA Secretary’s reply: “You should know that our middle name is “Ethics”, but we have no particular code, consequently, I cannot comply with your request.” That reply, in a nutshell, captures perfectly the attitude of economists regarding professional economic ethics over the past century. With few exceptions, the profession has held the view that its members are committed to social progress; and that in their work economists face no pressing ethical quandaries of the sort that would justify an expenditure of intellectual resources on professional ethics.

This self-perception by the profession is half right and half wrong. Economists as a rule are driven by the imperative not just to understand the world, but to improve it. It is a wonderful irony, in fact, that a profession that portrays human nature as largely self-interested is populated for the most part by other-regarding actors who want to serve the public good. But the profession has made an extraordinary mistake in failing to appreciate that well-meaning economists face daunting ethical challenges in their work.

The case for professional economic ethics is simple. Economists affect the lives of others, often substantially—that is the crux of the matter. Not just one person at a time, as is the case in medical practice; and not just a few people who consent to the economists’ influence—say, those who purchase economic consulting services. No, economists affect the life chances of countless people across the globe, not least through their impact on economic policy. Perhaps it is the enormity of that impact that makes it difficult for economists to wrap their minds around their ethical obligations. Economists’ influence comes to them by virtue of their intellectual monopoly over a subject matter that is vital to social welfare; and by virtue of their positions in the public, private and multilateral sectors that sometimes give economists institutional power.

Moreover, economic interventions typically harm some while benefitting others, and the losers are rarely fully compensated. Finally, economists do their work in
a context of epistemic insufficiency: they just can’t control and don’t know what will be the full impact of the interventions that they recommend. Think of economic restructuring in Russia, for instance, or financial deregulation in the U.S. This implies that economic interventions can generate all sorts of unforeseeable consequences. Some of those consequences may be terribly damaging, especially to those in the economy least able to bear them. It’s a simple case, as we’ve said, one that stands on economists’ influence over others. Yet the profession has failed to accept the ethical responsibility that necessarily attaches to that influence. And that, I’m afraid, amounts to unethical professional conduct.

Fortunately, we may be on the brink of reform. Over the past two years prominent economists have begun to ask, in full public view, whether and to what degree the economics profession contributed to the current financial crisis. Then a few months back Charles Ferguson’s film “Inside Job” was released. It revealed stunning failures by influential economists to disclose their professional entanglements when giving testimony and writing about or advising on financial regulatory reform. Since then, the business press has begun to press the AEA leadership for action on conflicts of interest in economic practice. And just last week, a petition circulated by UMass economists Jerry Epstein and Jessica Carrick-Hagenbarth and now signed by over 300 economists is calling on the AEA Executive Committee to formulate a code of conduct that addresses this issue.

All this is to the good, and long overdue. Not because economists are typically crooks or shills for outside interests, though there are some of those just as in every other profession. But because most economists are trying to do good work in a field where they enjoy extraordinary influence, their interventions generally harm some while benefitting others, and things can go very wrong in unpredictable ways. And so while it is important that the AEA and other economic associations take steps to address conflicts of interest among their members—and while publications like the Economist should as a matter of course begin to demand full disclosure from those economists who appear in its pages and on its blogs—economists and non-economists alike should press for something much more ambitious.

We need a new field of inquiry into the many ethical issues that arise in the context of economic practice, including the risk of causing harm; the role conflict that arises when an economist serves an institution with an agenda that conflict with the public good; the virtues that are required of the ethical economist; and so forth. And perhaps most difficult of all for a profession that has worked so hard to
achieve influence, we need to consider our obligation to convey to our students and to the public not just the capacities but also the limitations of economics, and of economists.

**Economists lack an ethics code, which poses challenges for journalists covering them**

Unlike doctors, architects, dentists, building contractors, journalists and a wide range of other professions and trades, economists do not have a code of professional ethics (Craig Silverman, 2011). That would seem more of an internal matter for the profession if it weren’t for the fact that journalists rely on academic and applied economists as sources. Economists are viewed as credible, authoritative experts. Their words carry weight. So should the lack of an ethical code change the way journalists deal with economists? Or is it irrelevant to the quality of commentary and information they provide? There’s a scene in “Inside Job,” the 2010 documentary about the financial crisis, in which Frederic Mishkin, a former member of the Board of Governors of the Federal Reserve System and a professor at Columbia Business School, is rendered speechless.

It comes after director Charles Ferguson questions Mishkin about his co-authorship of a 2006 report, “Financial Stability In Iceland,” which painted a very positive picture of the country’s banking system. Ferguson notes that Mishkin was paid six figures by the Icelandic Chamber of Commerce to deliver the document—yet nowhere in the text is this information disclosed. The exchange is captured in this clip, which concludes with Mishkin fumbling for a response. It’s a damning few minutes of cinema, and has become a frequently-cited piece of evidence in a growing debate about the lack of formal ethical requirements of economists. George DeMartino, a professor in the global, finance, trade and economic integration program at the University of Denver, said in an email interview that the lack of a code poses a problem for journalists:

“Up until now (and by now, I mean up until the release of Ferguson’s film and the subsequent reporting and studies), journalists tended to presume that academic economists have no significant interests outside of their university appointments – no financial entanglements that might in any way affect their judgments. …

[I]t’s now clear that leading economists can and do make substantial sums from consulting, lectures, service on boards of directors and the like. And yet, when they give testimony before Congress, say, or take other positions on pressing policy matters, they do not routinely make full disclosure of their financial entanglements. That’s a problem – for our profession, and for those who rely on economic expertise.”
Advocating for a code

DeMartino isn’t alone in thinking the lack of a code is a problem for his profession. Earlier this year a letter signed by roughly 300 economists was sent to the president of the American Economic Association (AEA). It called upon the AEA to adopt a code of ethics. The organization responded by creating an Ad Hoc Committee on Ethical Standards for Economists, which Nobel laureate Robert Solow is leading. When contacted, the AEA said it could not provide additional details about the committee’s work. But AEA associate treasurer-secretary Peter L. Rousseau said in an email that a draft report will be sent to the AEA Executive Committee for its January meeting.

“This draft will be for internal discussion only,” he said. “When the report is finalized it will be made available on the association’s website. At this time we do not know when exactly this will occur but we anticipate sometime by late Spring of 2012.” In the meantime, economists operate without a code of ethics. At the very least, it’s something journalists need to be aware of, according to Stephen Ward, director of the Center for Journalism Ethics at the University of Wisconsin-Madison. “Without a code, the public has trouble knowing how to keep professionals accountable because they can’t cite specific principles and standards that the professionals accept and have violated,” Ward said by email. “Unethical practitioners have great space in which to operate if rules are never written down. So codes are not everything in ethics, but they are not nothing, either.”

When one contacted Reuters financial blogger Felix Salmon to offer an opinion about the lack of a code, he answered my questions in a blog post. Salmon offered a blunt assessment of the problems posed by the lack of a code, and the way sources deal with disclosure.

*All too often economists and other professionals feel comfortable with lies of omission when talking to journalists, simply not mentioning a fact that they know is germane ... A good code of ethics should address this: even if there’s a disclosure somewhere about a conflict, the onus should not be on the journalist to find it, but rather on the economist to proactively mention that conflict to the journalist.*

Ward said the job of every journalist is to “make sure they know who their sources are, what political perspectives they may have, and what conflicts of interest may be hidden in the background; and to convey that understanding to the public.” As a result, he said we have a responsibility to perform due diligence on our sources, rather than expecting them to speak up about any potential conflicts. “Journalists should investigate the integrity, expertise and possible biases of their expert
sources in the same way that they investigate any other source of information,” he said. “In fact it may be more important to investigate economists and other experts given their power in shaping public discourse.”

Warren Watson, executive director of the Society of American Business Editors and Writers and a former business journalist, said in a phone interview that his organization’s code of ethics has become an important touchstone for members. However, he doubts business journalists consider whether a source is bound by a similar code. “I don’t think business journalists would routinely ask a source if he or she has a code of ethics,” he said. “... It might be one of those questions that come up at an awkward time in an interview, and it might be off-putting [to the source].” Watson said codes of ethics are important for all professionals, and it’s key to keep them current. “I think we all need something like this,” he said. “This kind of stuff is good to have and good to freshen up from time to time and make sure it’s still applicable and relevant.”

Questioning the need for a code

While the movement toward a code for economists appears to have momentum, some prominent economists question the utility and importance of having one. Lant Pritchett made the argument in an online discussion hosted by “The Economist” that a person’s clients, race, gender or other characteristics should not be a defining factor in evaluating the value of their arguments. “People should be able [to] put ideas, arguments and evidence into the public sphere of economics discourse to be evaluated on their disciplinary merits, not based on their author and his/her peculiar bundle of biases,” wrote Pritchett, professor of the practice of international development and faculty chair of the masters in public policy in international development program at Harvard’s Kennedy School of Government. “To help readers fairly assess my ideas, arguments, and evidence I should voluntarily disclose about myself ... nothing.”

In an Economist article earlier this year, economist Tyler Cowen questioned the utility of a code. As evidence, he said he believes ethical codes for journalists have little impact. “Newspapers already have conflict of interest policies for many (or all) of their writers, but I don’t see they are much enforced or have much improved the quality of most op-ed pages as policy advice,” wrote Cohen, author of “The Great Stagnation.” (He didn’t respond to a request to expand on that thought.) Of course, journalists can be guilty of making poor ethical decisions, but that doesn’t mean ethics codes don’t help. The challenge is making sure newsrooms talk about the codes they have and put them into practice — not just
when an ethical issue arises but in their day to day reporting. A code is not a panacea, be it aimed at economists, journalists or anyone else. DeMartino, author of “The Economist’s Oath: On the Need for Content of Professional Economic Ethics,” acknowledged that while some people will violate a code, its existence provides important guidance and increases the overall level of ethics and disclosure.

Would some people still cheat? Of course. But my sense is that most economists want to do good work, work with integrity, and to do it honestly; and this alone would lead most economists to make full disclosure, were they simply asked to do so. And for the rest — their self-interest would also have them give full disclosure, since failure to do so would imperil their standing in the halls of power, and with the media. Economists want influence — and so they are apt to be careful to conduct themselves in ways that allow them to stay in the game, so to speak. Right now, there are no rules for them to follow, and so each economist is left to figure out when to make a disclosure, and how forthcoming to be in doing so. Not surprisingly, DeMartino added one last item before signing off by email. “BTW: I receive no salary outside of the university, and have no outside financial earnings other than occasional honoraria for giving lectures, paltry book royalties, and my 403b earnings (and losses!),” he said. “See? That wasn’t hard...”

Three tips for interviewing economists

1. For academic economists, check the CV listed on his or her university profile page. For applied economists, find a detailed biography. Review these documents prior to the interview. Focus on the boards they sit on, the companies or organizations they advise and the entities that sponsor their research and retain them for consulting. Who pays them for their expertise, and do they have any financial arrangements related to the topic you want to discuss? “My sense is that it would be good to check CVs and the like (though not all financial entanglements might be listed there),” DeMartino said.

2. Ward suggests checking economists’ previous public statements and their books or major articles to get a sense of who they are and what their perspectives are. Coverage of their work may include information that helps place their perspective in context.

3. During interviews, ask if they have any experience — such as sitting on boards or consulting — that helped form their opinions on this topic. You can then follow up their response with a direct question about whether
they have any engagements or relationships that should be disclosed. “It is perfectly legitimate for a journalist to ask economists directly whether they have any potential conflicts to disclose,” Ward said. “In academia and elsewhere, experts are asked to disclose any potential conflicts.”

Economists facing flak over ethics

Are economists ethical? Short answer: no more than most. Long answer: well, it’s not something they think about much. The question of ethics is starting to raise its head among economists, both overseas and in Australia, particularly in NSW. It’s an issue the Sydney branch of the Economic Society is likely to start debating in the next few months. The issue is arising as more economists find ways to sell their services to big business for big bucks. Business is attracted by the status; an expertise and authority economist brings, and is willing to pay for it.

Various aspects of conventional economics make economists susceptible to such transactions. Almost all economists believe in the market system and believe that the bigger the economy grows the better off we are. So they have an inbuilt sympathy with business and its objectives. They believe self-interest is a good thing because it’s what motivates a market economy. It should never be a bad thing because it’s held in check by countervailing market forces. And there’s a belief among economists that their discipline is “positive” rather than “normative”. It’s a “value-free” description of how the economy actually works, not a statement of opinion about how it should work. It’s because of this belief that, for example, many economists take no account of the implications of their recommendations for the way income is distributed between rich and poor. That’s a “value” question they aren’t qualified to comment on and so leave to others, such as politicians.

That’s what they say when challenged. When they’re not challenged they usually give the impression that distributional issues don’t arise and economic efficiency is the only issue worth considering. In truth, the neo classical model is loaded with values, the most important being that individualism is superior to communitarianism. So you see why ethics isn’t something economists think much about. And this is reinforced by the profession’s lack of organization. Economics is unregulated; anyone can call themselves an economist (we don’t, by the way).

Economics has no true professional body

The Economic Society is the closest they come, but it’s essentially a discussion group that anyone can join. Its other function is to sponsor the academic
economists’ annual conference and the main Australian economic journal (which the academics don’t rate highly because it’s only Australian). Without a proper professional association you could argue economists aren’t a profession, just an occupation. Most are employed by governments and, these days, by banks and other financial services firms, which means they’re not free to express opinions at variance with those of their employer.

Academic economists are free, but often don’t bother. The question of economists’ ethical standards arose in the US after the global financial crisis, when impertinent journalists pointed out that academic economists were writing articles posing as independent experts, without disclosing the financial firms they were affiliated with or for whom they had done consultancy work. In Australia the spur is the rise of the new breed of economic consultancy firms, which are paid to provide allegedly independent modeling to private interests seeking to lobby governments. Sometimes even governments commission private modeling to provide evidence supporting some policy the pollies are pursuing. For some reason, when the independent consultants run their models they invariably reach conclusions that support their paying customer’s proposal.

These carefully contrived conclusions are then used to bamboozle the public, politicians and even judges who don’t know enough economics to know how dodgy many modeling exercises are and how easily models can be tweaked to produce whatever answer you’re seeking. The issue has reached a head in NSW, where Dr Richard Denniss, of the Australia Institute, has appeared as an expert witness in a couple of court cases disputing the “independent” modeling being used to claim the development of a new mine will bring huge economic benefits to the district. One judge was scathing in his condemnation of the use of an “input/output model” to exaggerate the indirect job creation from a project. A report by the independent Planning Assessment Commission on another project criticized the NSW Department of Planning for its uncritical acceptance of estimates of the project’s economic benefits that had been challenged and were “not credible”.

Last week the department’s new minister, Pru Goward, announced that it would commission separate expert economic analysis of all future major mining projects. Good luck. Issues of independence and conduct will be discussed during the NSW Economic Society’s forum on cost-benefit analysis on July 18. And a later meeting of the society is expected to debate whether economists need a code of ethics. I’d start with an ethical code for modellers.
Academic Economists to Consider Ethics Code

SEWELL CHANDLER (30, 2010) reported when the Stanford business professor Darrell Duffie co-wrote a book on how to overhaul Wall Street regulations, he did not mention that he sits on the board of Moody’s, the credit rating agency. As a commentator on the economy, Laura D’Andrea Tyson, a former adviser to President Bill Clinton who teaches in the business school at the University of California, Berkeley, does not usually say that she is a director of Morgan Stanley. And the faculty Web page of Richard H. Clarida, a Columbia professor who was a Treasury official under President George W. Bush, omits that he is an executive vice president at Pimco, the giant bond fund manager.

Academic economists, particularly those active in policy debates in Washington and Wall Street, are facing greater scrutiny of their outside activities these days. Faced with a run of criticism, including a popular movie, leaders of the American Economic Association, the world’s largest professional society for economists, founded in 1885, are considering a step that most other professions took a long time ago — adopting a code of ethical standards.

The proposal, which has not been announced to the public or to the association’s 17,000 members, is partly a response to “Inside Job,” a documentary film released in October that excoriates leading academic economists for their ties to Wall Street as consultants, advisers or corporate directors. Universities and medical schools have tightened disclosure requirements and conflicts of interest policies for scientists, engineers and doctors in recent years, and the main professional associations for political scientists, sociologists and psychologists have all adopted ethical codes. During the American Economic Association’s annual meeting, in Denver next week, its executive committee will take up a proposal to “consider the association’s role regarding ethical standards for economists,” according to an internal committee agenda obtained by The New York Times.

The association’s president, Robert E. Hall of Stanford, would not elaborate on the proposal or say where he stood on it. “Like my predecessors, I’m skeptical that the A.E.A. is well-positioned to cure any ethical lapses that economists may be committing outside the A.E.A. itself,” he wrote in an e-mail. “Still, the topic might benefit from further discussion within the organization.” George DeMartino cites multiple calls within the American Economic Association for a code of conduct. All of them have been rebuffed. Credit Matthew Staver for The New York Times.

The proposal is likely to raise a host of questions: Should economists be required merely to disclose who finances their research, as many academic journals already require? Should they have to reveal which corporate clients they advise, consult...
for or give speeches to? Should they even be allowed to serve as corporate directors and officers, as many business and finance professors do?

Some scholars say the discussion is long overdue. “I’m glad the A.E.A. is taking it up,” said Dale W. Jorgenson, a former president of the association and a longtime Harvard professor (he advised the undergraduate thesis of Ben S. Bernanke, now the Federal Reserve chairman). “I’m hoping they take an activist position.” Professor Jorgenson said that academic economists had fallen behind scholars in other fields in their attentiveness to transparency, and should follow the example of the biomedical sciences, where money from the private sector is subject to rigorous disclosure rules.

But another former president of the association, Robert E. Lucas Jr., said universities were better suited to handle the matter. “It’s good to get this stuff out in the open, but I don’t like the idea of the A.E.A. watching over this,” said Mr. Lucas, a Nobel laureate at the University of Chicago. Mr. Lucas added: “What disciplines economics, like any science, is whether your work can be replicated. It either stands up or it doesn’t. Your motivations and whatnot are secondary.”

Since economics emerged as a modern discipline in the late 19th century, its practitioners have resisted formal ethical codes, said George F. DeMartino, an economist at the Josef Korbel School of International Studies at the University of Denver (Frank D. Tinari (2014).

Professional Economic Ethics: The Posnerian and Naïve Perspectives

The DeMartino (2013) paper provides a provocative and informative review of the key aspects of the ethical problems faced by applied economists. The purpose of this Comment is not to challenge the contrasts drawn by the author between the two ethics perspectives. Rather, it is our intent to examine more closely the ethical issues that forensic economists may potentially encounter, as identified by the author. DeMartino’s paper is rather ambiguous with respect to forensic economic ethics. On the one hand, the paper states that the pressures upon forensic economists are more powerful than those faced by other applied economists; yet, the paper identifies some reasons explaining why there are mechanisms that reduce such pressures.

This Comment argues that the author has already identified the broad parameters that explain why ethical problems are less severe for practicing forensic economists. This Comment also expands upon the reasons for this more favorable situation. As a result, the author’s conclusion that economics “today is a rogue profession” is excessively broad for two reasons: (1) the focus of the paper is on
applied economics, not the entire economics profession, and (2) the phrase would more accurately be stated as: some but not all applied economics comprise a rogue profession.

**Review of Ethical Issues**

The ethical challenges facing applied economists are described in the DeMartino paper, and fall under three categories: time constraints, pressure to generate biased work, and market pressures: “selling expertise” versus “selling opinions.” This Comment focuses on their relevance to forensic economics. We first present a brief review of the three categories.

*Time Constraints:* Time constraints, it is argued, force economists to do “barely adequate work” under unreasonable time limits. Economists, it is said, “have nothing to draw upon in attempting to resist unreasonable demands” and “are left to make even substantial compromises with their professional duties ...” (DeMartino, 2013 :8–9). What is being discussed is the situation where an economist employed by a government agency or private corporation is being told to produce a report supporting a pre-determined position, usually with a time constraint. This has little relevance to forensic economic work.

*Pressure to Generate Biased Work:* Pressure to generate biased work refers to client expectations of the expert “to produce evidence that justifies decisions that are already reached prior to the execution of the economic research” (DeMartino, 2013:9). DeMartino identifies a related bias, namely, the pressure to avoid certain kinds of research. For forensic economists, this might mean not wanting to publish certain findings if such findings were to adversely affect how the economist calculates economic damages. It could also mean even choosing not to do research that might have a similar effect.

A brief discussion of another pressure, namely, to undertake an assignment with inadequate data, is presented: “Economists must then decide where to draw the line between working with inadequate data that are readily available and declining the contract altogether” (DeMartino, 2013:15). DeMartino also points out: “The relationship between economist and client can become particularly fraught when the client offers to provide some or all of the consultant’s compensation in equity or a share of profits rather than in a fixed fee ...” (DeMartino, 2013:13-14). Again, this has little relevance to forensic economic work.

*Market Pressures:* Market Pressures “sometimes push the economist in the direction of providing the client with the result that best serves its interest rather than that which is best supported by the evidence” (p. 11). DeMartino cites one
prominent economist who argued “that ethical economists could not survive in business since there is little demand for their work” (p. 10). However, citing Hardwig (1994), an important point is made by the author, namely, that the market for consulting services is segmented. On the one hand, clients in both the public and private sectors have a need for reliable, unbiased analysis about their markets or economic landscape. “In such cases there is no conflict between the goals of the client and the professional imperatives driving the economist” (DeMartino, 2013:11).

In contrast, contested environments such as in zoning variance applications or in litigation create pressures upon the economic consultant by “clients who want to buy validation and legitimacy, not economic expertise” (DeMartino, 2013:11). One substantial pressure is the offer of high rewards for selling opinions. DeMartino states: “The pressure to adopt and shade one’s findings toward the viewpoint of the client is particularly acute in forensic economics, of course...” (DeMartino, 2013:14). At this point, therefore, it is worthwhile to scrutinize the pressures forensic economists face.

**Forensic Economists and Ethical Pressures**

Having highlighted the key ethical problems faced by economic consultants, we turn to what the author says about economists who work in the litigation arena. Forensic economists, a sub grouping of economic consultants examined by DeMartino, operate within a unique environment characterized by counterbalancing forces that DeMartino recognizes as reducing substantially the ethical pressures other applied economists may encounter. The author’s statements about counterbalancing forces are instructive in this regard. First, in cases where substantial financial or other interests are at stake, the work of the economic consultant is exposed to intensive scrutiny by those opposing the client’s mission. ... [T] he economist’s work may very well undergo a more rigorous test than it would under the review process of a prestigious journal. The adversarial process ensures that tainted or otherwise inadequate work will fail to advance the client’s interests; hence, clients will rationally come to demand expertise rather than opinion. Second ... it is relatively easy for potential clients to ascertain which consultants do good work in the sense of producing credible analysis.

Reputational effects are, therefore, substantial in this industry (DeMartino, 2013:12). In addition, DeMartino points out that consultants believe they are behaving ethically when they are willing to accept contracts from any potential
client who seeks legitimate work. Providing services to clients of divergent interests is consistent with the conception of the work as objective and unbiased. At the same time, it enhances the consultant’s professional reputation (p. 13). In effect, forensic economists who provide their services to both plaintiffs and defendants tend towards doing less biased work than those who choose to work for only one side. In personal injury/death cases, most retention is for the plaintiff who bears the burden of proof in establishing damages. In commercial cases, both sides often retain an economist. In light of the preceding, we revisit the three categories of ethical pressures identified by DeMartino as they apply specifically to the work of forensic economists.

*Time Constraints:* In forensic economic work, it is not unusual to face court deadlines for submission of an economic loss report. In our experience, the blame sits squarely on the shoulders of the retaining attorney who, for one reason or another, delays engaging an economic expert until the very last minute. In many instances, the plaintiff’s attorney is hoping to settle the case without the need to hire many experts. Also, since proving liability and causation take precedence over proving damages in the early stages of a case, attorneys tend to put off hiring economic damages experts until absolutely necessary. Of course, if the economist cannot possibly meet the deadline, he or she will simply not take the assignment.

On the other hand, if a forensic economist can set aside the time necessary to do a “rush job” within the specified time, he or she might take the case. But things can get more complicated, especially if insufficient or inadequate data are provided, with no opportunity to request and obtain needed missing information. In such circumstances, the ethical forensic expert needs to explicitly incorporate conditional statements to the methods and conclusions presented in the resulting economic damages report. If the hiring attorney balks at the caveats stated in the report, it would be wise for the economist to withdraw from the assignment.

Knowledge of potential cross-examination and scrutiny by the adversary attorney during a deposition or trial should serve as a sobering reminder to the expert not to make unsupported statements or assumptions. Those who ignore this fact risk endangering their reputation as credible experts. For forensic economists who have multi-person staffs, taking on a rush assignment may not be a great difficulty. But for those with a substantial case load, this means “bumping” other cases in order to complete the early-deadline assignment. This may delay somewhat the completion of the other cases. In our experience, we have seen practitioners levy an “expedited fee” for rush assignments that serves two purposes: it provides financial resources that might be needed to compensate staff
to work overtime, and it serves as a reminder to attorneys that a penalty is paid for unreasonable lateness in retaining an economic expert. In summary, time constraints in cases with inadequate data are dealt with by adding conditional statements to the opinions expressed.

**Pressure to Generate Biased Work:** The adversarial process poses threats to economic consultants who do biased work. These threats come in the form of deposition and, ultimately, trial cross-examination. As argued by Tinari (1993), critique of an expert’s work from the adversary comes in two stages: first, at the report/deposition stage, and ultimately at the trial stage for those minority of cases that do not settle. Hence, the adversarial competition that exists in the practice of forensic economics is palpable.

Actually, depending on the state venue of the litigation, there could be three levels of potential critique faced by forensic economists. The first level occurs after submission of a written economic loss report since it may be subject to written rebuttal by an economist hired by the adversary attorney in a case. The second level is that of deposition cross-examination wherein, under oath, the forensic economist must explain his or her methods, sources, communications, research and opinions.

Finally, there is the trial level where, again, testimony is given under oath. Most other applied economists do not face this tri-level gauntlet that is part and parcel of working on litigated matters. While it is a fact that most litigation settles before ever getting to trial, the first two levels of potential challenge and examination still serve as strong incentives to minimize bias and unprofessional standards. The more biased or exaggerated the opinion being offered, the more likely it is that opposing scrutiny will be triggered. Further, since an expert’s reputation is, perhaps, his or her most valuable commodity, forensic economists have a strong incentive to maintain as much objectivity and consistency as possible. The fear of losing credibility is acknowledged as one of the most powerful incentives for forensic economists to perform professionally and ethically (Sattler, 1991:264–66).

Ward and Thornton (2013) tabulated the views of NAFE members who responded to an ethics survey. A common theme was that problems in reports issued by economic damages experts seem to stem from incompetence, a lack of knowledge of the literature in the field, and a lack of background facts to make proper calculations, rather than bias or other ethical violations. In DeMartino’s words: “The adversarial process ensures that tainted or otherwise inadequate work will fail to advance the client’s interests; hence, clients will rationally come to demand expertise rather than opinion” (DeMartino, 2013:12).
It should be noted that the dominance of the internet in accessing information serves to reinforce adversarial pressures inasmuch as, in our experience, attorneys have ready access to their colleagues on list-servs, blogs and the like, and can obtain copies of an expert’s report prior reports and testimony transcripts. The existence of a record of past depositions and trial testimony helps to enforce consistency in methods. It is the foolish expert who ignores such potential access.

Another factor serving to minimize biased work is the policy, widely used by forensic experts, of providing one’s services to either side of a litigated matter. With rare exceptions, such availability forces the forensic economist to maintain consistent and defensible methods of analysis. DeMartino recognizes this factor when he states: “Providing services to clients of divergent interests is consistent with the conception of the work as objective and unbiased. At the same time, it enhances the consultant’s professional reputation” (DeMartino, 2013:13).

Of course, in litigation engagements, the expert can only undertake his or her analysis based on the information provided. Thus, it is possible that unintentionally biased work would result if slanted, inadequate or incomplete information is given to the expert. This is all the more reason for the expert’s report to be fully transparent, stating any and all sources, and including conditional statements with phrases such as “our conclusion may change should additional information be uncovered that changes any of the assumptions or inputs in our analysis.” But in these circumstances it cannot be said that the forensic economist is acting in a biased, unethical manner if the economist has been advised that the information provided is complete and accurate.

**Market Pressures:** With respect to potentially very high compensation, expert economists who testify are prohibited by legal standards from accepting contingent payments. While that is not true with reference to other types of applied economic consulting, it is a welcomed ethical blockade to being unduly influenced by the outcome of one’s expert opinion. Nevertheless, it may be that an economic expert may fear that if he or she does not accede to certain assumptions or methods of calculating damages being insisted upon by retaining counsel, he or she will lose that attorney as client in future potential engagements.

After all, the attorney could “shop around” until a desired expert is engaged. While DeMartino states that the economist may have to undertake “delicate negotiations” with the attorney about these matters, a more effective mechanism is in place, namely, the need of the economist to protect his or her reputation and credibility. Only foolhardy experts would take such an assignment without thought to how his or her work will possibly be cited in future engagements.
Again, it is the adversarial process and its mechanisms that force the forensic economist to adhere closely to professional standards or practice, or suffer the potential consequences.

**Summary**

DeMartino’s article and the book from which it is drawn provide a thorough and comprehensive overview of the ethical issues faced by applied economists. With respect to confronting ethical issues within the ranks of economists, DeMartino states: “Forensic economics is the outlier in the profession in the degree to which its practitioners are addressing explicitly the ethical entailments of their work” (DeMartino, 2013:17). This is an unintentionally ironic statement because, as we have argued here, the forensic economics market has several built-in safeguards, countervailing forces, if you will, that serve to minimize the tendency towards unethical practices.

It is ironic inasmuch as all of our discussions of the issue, in our journals and at conferences, as noted in Thornton and Brookshire (2013), are not the main reason for the relatively positive situation in forensic economics. Survey comments submitted by practicing forensic economists expressed a general feeling that adversarial pressures could be relied upon, rather than published ethical standards, to rein in potentially unethical practices: “Cross examination works!” “I prefer to let the ‘market’ to do that (e.g., by providing examples of inconsistency to lawyers to use on cross examination).” “Let word of mouth do it within the legal profession and among practicing economists” (Ward & Thornton, 2013:34–35).

As a result, the author’s conclusion that economics “today is a rogue profession” is overreaching for two reasons: (1) the focus of the paper is on applied economics, not the entire economics profession, and (2) the phrase would more accurately be stated as: some but not all applied economists comprise a rogue profession. Further, with respect to the practice of forensic economics, it appears that the vast majority of forensic economists are constrained to act ethically, and “that unethical forensic economists comprise a minority of practitioners, and that cross-examination, Daubert, and reputation have had an effect on the extent of unethical practice in the field” (Ward & Thornton, 2013:35).

**Dangerous interconnectedness: economists’ conflicts of interest, ideology and financial crisis**

In the wake of the financial crises of 2008, Charles Ferguson’s movie, Inside Job, helped to bring to the fore a troubling possibility: that prominent academic financial
economists, such as those portrayed in the movie, had lucrative connections with private financial firms that they did not disclose to the public even when they were proffering public policy advice on financial matters that could affect the financial fortunes of those financial firms. These interconnections have raised questions about whether academic economists face potential conflicts of interest and whether they should reveal those conditions to the public or, in fact, try to avoid them altogether.

Ferguson reminds us of Larry Summers’ long-standing advocacy of financial deregulation, while pulling down more than $20 million from the financial-services sector between 2001 and 2008.2 Glenn Hubbard, Chairman of George Bush’s Council of Economic Advisers and an advocate of financial deregulation, was paid $100,000 by the defense to testify in the case of the two Bear Stearns executives charged with fraud by the US government. And, according to Inside Job and excellent research by Reuters’ journalists, economists routinely get paid to provide testimony and write papers favorable to the financial industry (see also Flitter et al., 2010).

While one cannot be sure these payments affect views on financial theory and regulation, they certainly create a conflict of interest. Perhaps these connections helped explain why few mainstream economists warned about the oncoming financial crisis. Perhaps they help explain why support among many of these economists for strict financial regulation has been relatively weak. And perhaps they help us understand some of the pressures that have led so many economists to propose austerity as a solution to the economic crisis they failed to warn about.

Yet, as we show here, these economists almost never reveal their financial associations when they make public pronouncements on issues such as financial regulation. These incentives created by potential conflicts of interest are, we believe, cause for concern. Medicine has had a relatively long history of studying this question, particularly with relation to pharmaceutical company funding. A substantial set of studies done from the 1980s through the present time have found that the pharmaceutical affiliations of the researchers and study authors biased outcomes in favor of the sponsoring affiliation (Barnes and Bero, 1998; Bekelman et al., 2003; Bero et al., 2007; Davidson, 1986; Friedberg et al., 1999; Friedman and Richter, 2004; Heres et al., 2006; Jagsi et al., 2009; Sismondo, 2008; Stelfox et al., 1998). Although our sample is too small to prove such a connection in the case of economists, such findings as those in the field of medicine should be strong enough to give economists pause.

Certainly, ideology also plays a strong role along with self-interest. The economists in a study could be mostly of the same mind prior to the last crisis, in
which they failed to forewarn of financial fragility. Now, once again, there seems to be a consensus forming among many economists: the solution to the crisis that they did not predict is to promote austerity, which is not only likely to be inequitable, but also ineffective in confronting the underlying problems that have caused the crisis in the first place. A lack of strong financial regulation and austerity are not likely to be a winning formula for solving the economy’s profound problems.

It can be argued that ideology plus conflicts of interest among academic financial economists play a joint, powerful, yet hard-to-disentangle role in this widespread lunge toward crisis and austerity. We should focus on the issue of conflicts of interest with respect to a sample of prominent financial economists. In particular, the core of this study assesses the links among academic economists, private financial firms such as banks and hedge funds, and public financial institutions like central banks and the International Monetary Fund for a sample of prestigious academic economists.

The choice the economists in the study based on their leading position in academia and their association with groups that advocate a set of policy proposals for the regulation of financial markets. The choice of these economists made it likely they had both a media presence and a stated opinion on financial regulation. Many of these economists did write on financial regulation in the media and opeds, and some did so through their own news columns.

One may look at the conflicts of interest of academic financial economists. In this study, we identify the frequency of these potential conflicts of interest and whether these economists reveal them. Then look at academic economists primarily because of the self-asserted role that economists have played in the post-World War II period. The profession has tried to hold itself up as objective analysts of the economy and, in the realm of policy, as objective purveyors of policy advice. At least until recently, academic economists have been relatively successful in creating this public perception and, as a result, the lack of disclosure of potential financial conflicts of interest among those offering policy advices is troubling.

As we argue below, academic economists who offer economic medicine should reveal potential conflicts of interest just as readily as should medical doctors prescribing pharmaceuticals. Interestingly, more recently, the attention to ethics and conflicts of interest over the past year has led some economists to post disclosure statements on their web sites that indicate their private affiliations. To study this recent evolution in disclosure norms, we investigate how widespread
this practice has become among the economists in our study. Although there are many positive signs that ethics and disclosure are gaining ground, there is much left to do before there is either a consistent formula for disclosure or before disclosure becomes the norm.

This leads us to conclude that there is a need for additional discussion of ethics and conflicts of interest. One mechanism for promoting such discussion and more disclosure itself is through a professional code of ethics. In the USA, arguably the best institution to establish such a code is the American Economic Association (AEA), which is the main economists’ professional organization in that country. Before proceeding further it must be emphasized that this study is not based on a random sample of financial economists; it deals with a small subsection of financial academic economists. But we are not making claims about the broader universe of economists.

We only argue that this is potentially a significant problem because, at the least, it afflicts those among the most prominent and influential economists in this important area. Indeed, the economists in our study are some of the leading figures in the academic world. These financial economists also make public pronouncements on financial issues of public policy. It should be obvious that it is the most prestigious economists who set standards for their field, including such norms as holding both academic and private financial roles, as well as failing to disclose those roles. And, in fact, there is some evidence that a larger study may reveal a similar pattern. In particular, a study by Reuters ‘of 96 testimonies given by 82 academics to the Senate Banking Committee and the House Financial Services Committee between late 2008 and early 2010—as lawmakers debated the biggest overhaul of financial regulation since the 1930s—found no clear standard for disclosure’ (Flitter et al., 2010). They discovered that almost one-third of the time academics failed to disclose their private financial affiliations.

Economists and private sector affiliations

Academic economists’ affiliations with private financial institutions

It is not surprising that academic economists from the most prestigious economics departments in the USA would have private financial affiliations. Private financial institutions seek out these economists. Their knowledge and ‘stature’ can contribute greatly to these institutions’ boards and management, and as consultants. And, on their side, the economists can gain prestige, income and useful knowledge from such activities. Study of two groups of economists that put out proposals on financial reform and that consist of such economists: the Squam Lake Working Group on Financial Regulation and the Financial Reform Task
Force. They investigated what, if any, affiliations these academic economists had with private financial institutions.

More specifically, created five categories of financial affiliations: financial services firms, stock exchanges, financial consultancy firms, credit-rating agencies, and research arms of financial and advocacy firms. Under the category of financial services firms were included the subcategories of private banks, bank holding companies, hedge funds and mutual funds.

To identify these economists’ private affiliations, can be looked through their curricula vitae (CVs) and searched through media archives, all on the Internet. This search seemed fairly effective at locating owners, founders or cofounders and members of boards of private financial institutions, but rather poor at identifying consultancies. If a consultancy is listed in the CV or if the company lists the academic as a consultant then these consultancies can be discovered. If neither the economist nor the company mentions these affiliations, then one may not have been able to find it.

Accordingly, it is a belief that a study most likely can be carried under-represents the linkages between these academics and the private financial sphere. Nonetheless, one can find extensive affiliations between financial academic economists and the private sector. Much more than half of the economists we looked at worked with private financial institutions and in many cases they occupied quite prominent positions. The depth of these connections may vary, of course. In many cases one can find the economists worked with more than one financial firm; in fact, many economists can be found working for two or more financial firms. These suggest that there may, in fact, be a norm in which academic financial economists acquire private financial affiliations.

It is argued that many economists work in some capacity with private financial institutions. For example, many of the financial academic economists are cofounders of private financial services firms where they work in key positions: as vice chairman, managing partner and chief economist. If we examine it may be that the firm is owned by all the managing partners, making the economist an owner of the firm. Economist, works for three banks, in one instance as president of the research arm on the bank and in the other as director.

The financial academic economists serve on the boards of private financial firms and other economists may be identified as consultants for private financial firms. The ‘Private financial affiliation’ refers to and type of private financial affiliations of the economist can lead to conflicting situation. For example Economist one
holds positions in two different financial services firms and two different financial consultancy firms.

In the first financial services firm he is a vice chairman and a founder and in the second financial services firm he is on the board of directors. He serves as chairman of the board of advisors for the first financial consultancy firm and as a senior advisor for the second financial consultancy firm. One can develop a methodology including Economists demarcating a private consulting firm that deals with financial consultancy among other types of consultancy to corporations, law firms and governments identify consultancies, unless either the company or the economist mentions one, it is likely, based on other evidence, that even more economists worked as consultants.

The fact that well over half the economists have positions with private financial firms shows how commonplace the practice is and suggests how widespread potential conflicts of interest may be. This is especially troubling given the extent to which these economists are influential with respect to public policy. The public looked to these economists for guidance in the build up to the crisis. And after the crisis hit, the public has looked to them for guidance on the key questions of financial reform.

These economists, for the most part, failed to warn the public about the looming crisis, and have all taken either an individual and/or a group stance on financial regulation: they have done this while having extensive relationships with private financial institutions that potentially will be significantly affected by financial regulation. This leads to an important question: How often and in what contexts do these academic financial economists reveal their connections to these private firms.

**How did economists identify themselves in their writings?**

To answer this question we can review both general media and academic publications to determine how the economists identified themselves in both domains. Emphasizing the media because it is here that policy pieces directed at influencing public opinion appear and, thus, where the clearest potential conflict of interest occurs. We can focus on economists’ affiliations with private financial institutions and reviewed if the economists identify these affiliations either in their general media articles, interviews and testimony or in their academic papers. Of course, for those economists who do not work in the private sector, this argument does not apply.
Since these economists generally write about finance and the economy in both their academic publications and their media articles, interviews and testimony, we did not make case-by-case judgments on whether the piece in question constituted a conflict of interest. In other words, we can identify a potential conflict of interest across the board without trying to pinpoint the severity of the problem in each case. The overwhelming evidence is that the economists rarely, if ever, disclosed these financial affiliations in their academic or media papers during 2005–09. We can calculate the portion of their writings in which these economists disclosed private financial affiliations. In the case of the media, we looked primarily at their articles, such as op-eds, as well as reviewing relevant interviews and testimonies. We can also evaluate a subset of their academic papers. One can assess media op-eds, interviews, testimonies and academic publications from a particular time line for each economist. One can identify the quantity of media articles and academic publications for each person and the number of times in which s/he acknowledged a relationship with the financial sector.

Finally, one can create an aggregate statistic representing the times in which the economist identified her/himself in both media and academic publications. Again, a researcher can find that economists most often identify themselves with their academic position and rarely with their roles in private financial institutions. This occurs even when they are proposing policies concerning the regulation of financial markets. The total number of media articles, interviews and testimonies for each person is the denominator in the process. The denominator varies since these economists write articles and appear in the media to different degrees. Researcher can be encountered both prolific authors as well as authors who write few media articles. This can be attempted to obtain a representative sample of media articles and appearances for each person over the period. One may try to find that most of the economists did not disclose private financial affiliations.

Financial economists’ opinions on financial reform

It is natural to ask whether these economists’ connections to private financial firms affected their views of financial reform. The short answer is that our sample is far too small to really address this question. More generally, it is undoubtedly the case that economists’ views on such matters reflect a complex interaction of ideology, ‘cognitive capture’ by dominant ideas and, as we suggest here, financial interest. In any case, an evaluation of these economists’ views on financial reform reveals some interesting patterns. Two factors became apparent in our study of financial economists’ views. First, the economists we surveyed had similar
opinions on financial reform. Perhaps such similarity of opinions can be partly traced to graduate school socialization—some call this ‘cognitive capture’—which influences how economists model and conceptualize problems.

This status quo is further rewarded beyond graduate schools: economists who hold preferred views are more likely to win accolades and entry into prestigious positions and journals. This socialization and reinforcement has almost certainly contributed to the creation of a professional norm that has rendered a cultural aversion to strict financial regulation within economics. Second, the economists’ proposals for financial reform had more limited calls for government intervention and regulation in financial markets compared with more progressive groups, such as the Economists’ Committee for Stable, Accountable, Fair and Efficient Financial Reform (SAFER).

Many prominent economists, including those in our sample, championed financial product innovation combined with the deregulation over the past decades. Such deregulation and increasing risk in financial markets, in part via complex financial products, contributed significantly to the financial crisis. The main response to the crisis has been one of austerity rather than strong financial reform. This is reflected in our study, where many of the economists advocate more market-based reforms and only limited government regulation of financial markets. It is an understatement to conjecture that such reforms may not be sufficient to ward off future crises.

To study these economists’ views on financial reform and to compare them with those of more ‘heterodox’ economists, we created a Financial Reform Index (FRI). By creating a FRI by looking at a range of proposals for the regulation of financial markets put forward by many economists and analysts during the financial reform debate, such as that put out by Paul Volcker and the Group of Thirty, as well as proposals by progressive groups, such as SAFER (Group of Thirty, 2009; SAFER, 2010).

Of course, we also studied the proposals put forward by the economists in the study. To understand and classify the economists’ views in the research study one can look through the publications each group published as well as a subset of their individual publications, both academic and media, over the period. Then took the economists’ recommendations for financial regulation and compared them with the index we created, to see the strength of their recommendations.

To summarize, the common perspectives of these groups and their stark differences regarding heterodox views of financial regulation are likely the result of a combination of ideological factors and subtle incentives created by
professional and material self-interest. As we mentioned above, there is strong evidence that in the case of pharmaceuticals, financial interests do affect research results. It seems prudent to consider this possibility in the case of academic economists.

Recent changes in disclosure norms

In 2011 economists began to pay more attention to the issue of ethics and disclosure in economics because of several events, some of which we discussed in the Introduction. First, the largest financial crisis since the Great Depression caused the public to question the economics profession for its failure to identify financial fragility. Second, the Academy Award-winning documentary Inside Job dramatically criticized the financial services industry and the connections between this industry and academic financial economists (Ferguson, 2011). This drew the intensive scrutiny of the media to the role economists played in the financial crisis. Third, in response to this chorus of criticism and concern, the AEA reluctantly decided to create a task force to study the issue of disclosure and ethics in economics.

This decision was influenced not only by the public outrage and the media attention just mentioned, but also by the actions of a group of 300 economists that sent a letter to the AEA leadership urging them to set up a committee to study a code of conduct for the economics profession. Around the same time, George DeMartino published his excellent book, The Economist’s Oath (2011), which pointed out the absence of a serious consideration of ethics by the economics profession. All of these events reinforced the argument that economics, which has long pushed aside the field of ethics, needs to consider the field of professional ethics and implement ethical guidelines for economists.

Conflicts of interest

The economics profession lost a measure of credibility during the past financial crisis. One step toward restoring professional credibility, but, more importantly, improving the transparency with which economists interact with the public in the realm of public policy would be to create a code of ethics regarding potential conflicts of interest.

In the USA, economics is unusual among the professions in that it does not have a code of ethics that provides guidelines for navigating possible conflicts of interest. George DeMartino writes, ‘virtually all other professions that matured during the same era [early twentieth century] adopted at least a code of conduct,
and some adopted a full-blown body of professional ethics’ (DeMartino, 2011:67).

Codes of ethics have been adopted in such academic fields as sociology, anthropology and physics. In the context of this paper we can see how useful a code of ethics would be, especially for academics that choose to navigate the difficulties of combining several roles—in particular the tension between that of objective academic expert and that of private financial agent. More importantly, perhaps, it will help the ‘consumers’ of economic analysis—the public and policy makers—better understand the bases for economic analysis and advice.

The AEA, formed in 1885, has never adopted a code of ethics, although the lack of a code has been questioned over time. For example, in the 1930s this issue came up repeatedly to the AEA’s secretary. Needless to say, the AEA had no such code [of ethics], nor had the officers any sanctions or means of enforcement, and the executive committee, when pressed, viewed the investigation of such matters as beyond the range of its proper functions.

Of course, some matters of professional behavior could not be ignored, but whenever possible these were dealt with on an individual basis, without involving the executive committee or the membership at large (Coats, 1985:1710–1). The reasons why the AEA has never developed a code of ethics, when so many other professions have, are unclear. Coats attributes it to the perception of proper professional behavior as being so obvious that no code was necessary, a history of ambivalence toward this topic and the difficulty of enforcing such a code (Coats, 1985: 1710–1, 1718–9; DeMartino, 2011:63–5).

With respect to the kinds of conflicts we have identified, some argue there is no need to disclose these private affiliations in the actual media or academic publications since their private financial affiliations are publicly available via CVs, biographies and now disclosure statements. We believe that this is not enough. Disclosure of affiliations is important and relevant information for the audience, few of whom will spend time searching out public CVs and biographies.

In the USA many critics of the adoption of a code of ethics by the AEA are troubled by the AEA’s weak ability to enforce such a code. Unlike in the law profession, economists are not licensed by their professional organization, the AEA. Thus, when economists violate the guidelines of a code of ethics, the AEA would have no legal means to punish transgressors. Since violating the code would not result in professional sanctions, some have termed it a code without teeth. The logic follows that because economists would not adhere to such a code it serves no purpose.
The historical absence of a code of ethics and discussion of professional ethics in economics may have resulted in ignorance regarding ethical conduct and may have itself played a role in economists’ failure to disclose private financial affiliations. Yet, as we discussed in the previous section, peer pressure has begun to establish a norm. As a result, at least some economists seem more open to a set of guidelines that prescribe ethical behavior. Guidelines would give well-meaning economists who may not have given the issue much thought a set of suggested rules for ethical conduct.

Enforcement may well become a social process in which disclosure of conflicts of interest becomes the norm. A widely acknowledged standard of ethical professional behavior would empower colleagues, journalists, students and the public to ask the question, ‘Do you have any conflicts of interest?’ The very internalization of a norm of clear rules for ethical conduct among both economists and the public could be a powerful deterrent to unethical practices, whether or not the AEA could punish transgressors.

Lastly, some have argued that the AEA is not responsible for monitoring ethical violations. Rather, they say, this is the responsibility of universities. A review of a sample of university guidelines for conflicts of interest and found that, while this also seems to be evolving because of the recent attention paid to these issues, for the most part they deal specifically with conflicts of interest between the economist’s private affiliations and their work with the university.

The university policies reviewed generally ignored conflicts of interest in the public sphere, such as those of an academic economist acting as a public expert advocating specific financial reforms while having private financial sector affiliations. A counter-example is Columbia University, which ‘requires individuals to disclose outside financial interests that relate to any of their research, including unfunded research, to peers and members of the public. These disclosures must be made in publications, reports, talks, or other presentations of research’ (Columbia University, 2009).

One can commend Columbia University’s approach. It is important for universities to expect the highest ethical conduct from their professors not only in regard to their work with the university, but also in representing themselves and the university to the public. Since university guidelines dealing with disclosure vary, the provision of a code of ethics by the AEA can create a standard for the field of economics and encourage all universities to include disclosure to public and peers in their own guidelines for ethics. In this way university guidelines for conflicts of interest would act as a complement to an AEA code of ethics rather than as a substitute.
In contrast to the AEA’s past behavior, the American Sociological Association (ASA) recognizes that sociologists have a responsibility to protect the public from sociologists’ conflicts of interest. The ASA states in the section of its code dealing with conflicts of interest, ‘Sociologists maintain the highest degree of integrity in their professional work and avoid conflicts of interest and the appearance of conflict’ (American Sociological Association, 1999:7).

Later the ASA goes on to state, ‘Sociologists disclose relevant sources of financial support and relevant personal or professional relationships that may have the appearance or potential for a conflict of interest to an employer or client, to the sponsors of their professional work, or in public speeches and writing’ (American Sociological Association, 1999:7; emphasis added). The ASA code recognizes that sociologists’ roles extend to their work as academic experts in the public realm where potential conflicts of interest can occur as well.

An obvious first step for economists is to create and adhere to a code of ethics. The language of the ASA’s code of ethics would be a useful starting point. In the context of this paper, such a code of ethics would prescribe that economists list their private affiliations in any appearance for the media or the government when there is a conflict of interest or the appearance of a conflict of interest. For example, if an economist were to write a journal article or an op-ed that has relevance to their private affiliations, they should describe themselves not only as a professor but also as a board member, an owner and/or a consultant.

These roles should also be reported when testifying in government positions or being interviewed by the media. Such actions would take one step toward ameliorating perverse incentives. Of course, the next question is: How far, though, would this really get us to improving economists’ analyses and advice. Would it lead a greater number of prominent voices in the economics profession to argue for stricter financial regulation or a sensible alternative to the austerity hysteria that seems to have gripped our economies?

Summary of the paper

Economics claims to be a science and therefore detached from value judgments. Its obsession is to be like the natural sciences, despite the fact that it is of a profoundly different nature. It asks us to remain objective and to avoid adding moral or subjective appreciations to the equation. Robbins (1920) reminds us that: “Economics deals with ascertainable facts; ethics with valuations and obligations. The two fields of inquiry are not on the same plane of discourse.”
Between the generalisations of positive and normative studies, there is a logical gulf fixed which no ingenuity can disguise and no juxtaposition in space or time bridge over.” However, while the optimization of resources is ultimately intended to provide a certain social wellbeing, the way the economy works does not need to be regulated through axiological criteria. Judging the means rather than the ends, economic theory is largely amoral.

Economic agents can disregard the moral or immoral nature of their business conduct. Economic relations are not based on respect for moral obligations. Many situations that appear as grossly unfair (absence of equal opportunities, birth-related inequality…) may prove to be drivers of economic dynamism. An economy cannot function properly without at least some moral values. Theory may reduce economics to ties between production and consumption, but in reality it is principally based on relationships between individuals.

We can challenge the notion that economic laws resemble the laws of physics (we need to emphasize the historic and moral dimension of human relations). Capitalism is based on the idea that anyone and everyone can grow rich. But once the potential to increase wealth is regulated, the conciliatory character no longer operates. If Jesus had told his disciples that places were reserved in advance, he would have had a lot less success! All morals are based on intangible principles, and we cannot separate them from economics unless we refuse to align the latter with all that is human. Respect for a certain number of basic values (keeping one’s word, honesty…) is necessary to ensure the smooth running of a country. In other words, the day that economics no longer has any form of moral basis will be the day that human beings are replaced by androids!

The concept of relativism, sometimes referred to as postmodernism (Kuhn, Feyerabend and Hübner), is very popular at present: values are uncertain, objectivity is an illusion, and collective beliefs can be put down to cultural traits. These relativist theories contradict basic sociological observations (Boudon, 1995): today, as yesterday, individuals have strong moral convictions. We must not abandon notions of truth. Theft and fraud go against the touchstone of reciprocity which prohibits pure appropriation of others’ goods. Theft is wrong because social order is based on the notion that all reward should, in theory, correspond to a contribution. It is imperative to strengthen the ethical values that we can all share. The use of ethical discourse as a set of moral principles presupposes that we are all bound by a mutual understanding of what they imply.

The norm for economists was to not identify their private financial affiliations, establishing the need for a code of ethics prescribing disclosure guidelines. These
same economists who mostly failed to warn of the increasing financial fragility and impending crisis also have developed a basic consensus view that favors more market based reforms and relatively less government regulation as a way of preventing future financial meltdowns. Many heterodox economists argue that relatively mild reforms are likely to be insufficient to prevent a future crisis. For example, economists associated with SAFER argue this with respect to reforms that do not bust up too big and too interconnected to fail institutions.

It was this crisis and similar ‘neoliberal’ understandings of economic theory, combined, in all likelihood, with continuing material conflicts of interest for some economists that led to loud, destructive voices for austerity. The voices of the rentier interests can be heard loud and clear in this call (Epstein and Jayadev, 2005). Will a code of conduct urging more transparency of these private affiliations solve these problems? Certainly not; but we believe it can help shift the balance of power, even if only slightly, between financial interests and the general populace, by stripping away some of the veneer of objectivity from those who wield academic economics to support the special interests of finance.
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Future of Economic Science: From Ethical Perspective

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**Abstract:** Economic Science is a branch of social science deals with production distribution and consumption of goods and services and their management. Ethics in production is a subset of business ethics ensuring that production function and activities are not damaging to the consumer or the society.

In future, economic science will affect the production value chain by 2018-20 for the use of AI and robotics in production sector and by 2030 it will affect the global economy because of the use of sophisticated technology in production sector like, 3D printing, Biotechnology, Genetic Engineering Technology, Nanotechnology, Computer and Internet Technology, to transform production system in a profitable way.

By and by, the use of RFID, Drones, Driverless Trucks, and Automated Warehouse will affect the product distribution system over the world.

The use of “Paradigm Shift” model upon the consumption habit of the peoples of different nation will divert the consumption trend of the world.

The developed nation, for their healthy economic growth can afford to use these above-mentioned technologies. But the developing nation are trying to use different types of innovation to maintain consistency with the global production value chain which will effect trade, global growth, unemployment, sustainability and environment over the world by 2030.

The United Nations has taken Agenda-2030 for sustainable development, which is targeted to balance social and environmental interests and sustainable growth over the world.

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To mitigate this global problem and to remain on track we should ensure Production System Integration for a Planned Surplus Production for the betterment of our society.

**Future of Economic Science**

Economic Science is a branch of social science that deals with production, distribution and consumption of goods and services and their management.

Ethics in production is a subset of business ethics ensuring that the production function and the activities are not harmful for the consumer or the society.

21st century is a revolutionary century for the industrial revolution which is called the age of 4th industrial revolution.

The industrialists are moving around the world for the sophistication of their production system to reduce their production cost to meet the challenge of 2030, which is the major factor for the production to remain competitive among the competitors. The integration of technological innovation and production system is the only way to be competitive in the global production market.

Future of economic science is relevant with the production value chain. To reduce production cost developed nations are using the technologies like Artificial Intelligence, Ultra intelligence, Next Generation Robotics, 3D Printing, Biotechnologies, Genetic Engineering Technologies, Nanotechnologies, Computer and Internet Technologies to transform manufacturing and production system to boost up production speed and lessen the production cost, which will impact the business model, economic growth, employment and sustainability over the world.

The United Nations has taken Agenda-2030 for sustainable development, which is targeted to balance social and environmental interests and sustainable growth over the world.

In future, the use of sophisticated technology in production sector will help the industrialists to diversify the raw materials according to the requirement of the production process which is another system to reduce production cost and to remain risk free in competitive market.

Ability to capture and store energy will be another advantage for the developed nations in future, and the availability of low cost energy would be a compound upon the advances in technology and diversified raw materials.
In the future distribution system the use of technology will impact upon the cost of good to reach the user and the technologies are: RFID, Drones, Driverless Trucks, Automated Warehouse etc.; all these sectors need very few skilled human labors who can affect employment situation.

The world consumer behavior has been changed. The information about the products are available and purchase of the products from anywhere of the world is now very easy. The companies directly involved with the global marketing are well informed about the customer demand and they know very well about how to do it.

So, a “New Paradigm Model” is very easy for the industrially developed nations to apply in the developing nations. This will be a new way of thinking about consumption. Moreover, in business, the idea is the same, a new way of looking at things.

For example, computer business spread over the globe for automation, E-business and almost all the countries of the world has made their infrastructure as their own, despite there are some flaws about their security issues.

But now the world is moving towards Cloud Computing and is going to be a big deal, because of its low cost service, at any time any place access via web browsing, rapid scalability, incremental cost and load sharing can forgot the need of local IT.

Some ethical questions have already aroused in the globe about the cloud computing issue. These may create dependency upon one another, which would limit the flexibility and innovation in this sector. Security issue can be a big issue; policy issue can be affected.

According to the report of World Economic Forum, the factors which will impact upon global business model by 2018-2020 are:

2. Artificial Intelligence and Machine Learning.
3. Advance material, Bio Technology and genomics.

World industrial leaders are looking for their profit maximization in industrial sector and emphasizing on new modern technologies, low cost energy, diversified raw materials for their expected goal. But here is a worry about employment and the new skilled labor for the technologically advanced production sector.

The developed nations are shifting the business paradigm for the new job opportunities and economic growth which is going to depend upon more
advanced technologies and skilled work force. In the future economic growth and job creation, the developed nations are emphasizing upon Space and Ocean economy.

The global space sector is dependant upon High-Tech and complex ecosystem. The trend towards globalization is having an impact upon space economy from R&D and design, manufacturing and services. There is a small market for space craft and launchers and the part is going to be a huge investment area. To expand the market and creating jobs, the incumbents are focusing on innovation in industrial process and development of small satellite, which require high skilled workforce. But the aerospace and electronic industrial Groups are addressing new national market, where fresh public investment are being made, can affect human resources.

To strengthen the global value chain in space sector the developed nations are influencing the world to invest more in space program. But the new comer in this sector are still thinking about their capabilities and return of investment. The incumbents and new comers are still thinking about the ethical model for space commercialization, and fair distribution of space resources.

The world is worried about space preservation, space conservation, and space stewardship.

The developed nations are trying to shift their economy towards Ocean economy for the growing trend in market growth, capacity and employment. Ocean is a wide source for energy and with growing concern over climate change and increasing global interest in renewable energy.

- Ocean Economy is attractive for the developed nations because Ocean based energy have a long term potentiality.
- Offshore and deep water extraction of marine mineral resources.
- Marine Aquaculture.
- Marine Bio-Technology.
- Medicine.
- Enzyme and Polymer for synthetic raw materials.
- Algae bio fuel production.

These sector would be highly potential for growth and job creation sectors. But it is to be specially realized about the ocean side environment and health over the world.

It is not avoidable the expenses in military sector for the both developing and developed nations. A huge amount of money are being expended here due to the
development of military strength. Stratocratisation will affect the production value chain in future. Because the developed nations are trying to expand their weapons market in the different areas of the world. Developed nations are also inspiring the developing countries for stratocratisation for the low cost military weapons from the developing countries for a sustainable growth in their military economy which will effect economic science in future.

Energy is a big factor for production. Acquiring and capturing of energy sources is a big issue in global political economy, where there is more military involvement. To strengthen the military power the developed nations are producing and testing the military weapons and other supporting equipments like, nuclear warhead, unmanned aircraft, fighters, tanks rockets, launchers etc.

The developed nations are selling these products within their block chain to strengthen themselves for the business and trade and to secure their energy and geography.

Here is a worry about the free access in energy resources for different nations.

Developed nations are now and in future will grow more competitive market in military sector like, Autonomous military weapons, to make themselves stronger by using this advanced technology. But the autonomous military weapons are not yet successful in operation because many civilian had died all over the world due to autonomous military operation.

In the global industrialization race both in military and civil industrial sectors, the developed nations are rapidly shifting their production, distribution, and consumption policy to stay at risk free position in the competitive market and to maximize their profit.

But here is a concern about the requirement of extra skilled labor, jobless condition for the less skilled labor and the question of affordability at the changed consumption trends and its expenses for their own.

On the other hand, developing nations depending upon different level of innovation to stay on the global production value chain.

Developed nations are trying to decentralizing their future production plant towards the developing nations because of their low cost work force. So developing nations will be the highest energy consuming countries in future. For the excessive use of different types of energy for the production process there will be an anxiety about the environmental effect upon the developing nations in different areas like, accelerated destruction of forest, destructive mining method, lack of clean fresh water, heat generating, air pollution.
Moreover, some of the countries in the Asian region are not behaving well upon the natural water flow within the region, which is a disquiet about heat generating, damage of agricultural and fisheries sectors, rising sea level, and ecological problem in the region. Because the environmental effect is not for a static area, it started from a specific area and spread over a wide area in future in different ways.

Cloud seeding in the world is very much unethical, because the clouds are gathered artificially for artificial raining which may affect the environment of another nation.

Testing of weaponry system and the proxy war for the developed nations around the world, a part of military production and consumption, is another presentiment about environmental pollution.

Despite these, the countries involved in global production value chain are trying to minimize the environmental problem by using more renewable energy production but the investment are very few. Developed nations are now trying to shift some part of their economy towards Green Economy to mitigate the environmental problem by establishing environment related projects, which are the another profit maximization area for the developed nations. And these modern technologies are far to reach by the developing nations due to their establishment cost.

From the above-mentioned discussions we can easily understand that the developed nations are trying to become uncompetitive by using sophisticated technology in production value chain and want to give some priorities to the developing nations to be relevant for their profit maximization policy which will be helpful for their sustainable growth and profit maximization.

To mitigate this situation of global production value chain, some developing nations are using frugal innovation process in their production sector, which is a process of reducing cost of goods and its production by removing nonessential features from durable goods. Some are using indigenous innovation, which is a process of investment upon science and innovation related projects which is self-driven unique scientific and technological capabilities, knowledge and intellectual properties. Some developing nations are using Psychedelic Business Mastermind along with their intended innovation process. Some countries are emphasizing upon contract theory which is a major portion of the system development effort that typically involves the integration of the existing system. All these prefer low cost and high intensity, asymmetric information and law and economics. Some countries has started calendar production for better products. Some countries are
adopting the policy of stratocratisation in their economic policy for economic dumping.

Here is an anxiety about one dimensional view of the world, for centralizing the production in a single country which can build up the uncertainties in production sector during the period of rising income and consumption trend in a lower labor cost and consumption trend area. We will lost the new possible areas from our global investment decision for one dimensional view of lower labor cost.

**Conclusion**

Bangladesh is a country where there are a good political-economic-social and military adjustment which have no negative influence upon the superpowers and have a non militaristic democracy. We have enough English speaking people, global transportation facilities, low cost workforce, available energy, tourism facilities, local and diversified raw materials, flexible business policy and advanced market as we are the transit to combine and connect the market of India. Shortly, we are connecting with one belt connectivity.

We have to find a new way to be relevant with the global production value chain for a sustainable development and growth of our nation in future. For a liberalized production value chain we should have to take a cooperative decision both in government and private sector for a future production policy to make a sustainable production circuit within the starter and with the intermediate and final producers, to achieve the production system integration for a planned surplus production for the betterment (socially and environmentally) of our country and the world.

**Recommendations**

1. National online marketing development initiative, showing the highest possible profit possibilities in Bangladesh.
2. Special views upon the products for investment decision who have the longer product life cycle and to reduce complex economic interdependency.
3. Government regulatory authority should act positive to inspire new innovation.
4. Government and private sectors should take responsibilities to inspire the Emerging Individuals and human ThinkPad to control BRAIN DRAIN.
5. We should establish a strong relationship between ethics, science,
economics, law and anthropology to acquaint our nation with the post modern society of the world.

6. National consumption trend should increase step by step according to the national guidance by using the marketing media and import controlling.

7. Government and Private sectors should take special responsibilities to upgrade the present skill set of our nation, through institutional development.

8. Small and medium size industries should be relevant with the global production value chain by upgrading their present production system.

9. Find new opportunities and market for our global production, available skilled and unskilled manpower and for our military for peace mission with their production around the world.

10. New technologies should pass our socio economic requirement like national priorities, goal oriented innovation, healthier and economically prosperous and socially approved.

11. From agricultural to space industrial production system we should be relevant by using our skilled and unskilled manpower, available energy for production, basic and diversified raw materials and new innovation knowledge of our talents.

12. Government and non government sector should take special responsibilities upon the innovation like reverse innovation which will be the turn back from the complicated technological business environment.

13. Our industrial leader should immediately start R&D more and more for new innovation for their particular products and production system to be competitive over the world.

14. Government should engage in cognitive infiltration not to develop any area of conspiracy theory at any institutional level except intelligence and concern areas to compete with the world.

15. UN, WTO, ILO and the World Environmental Authorities should take special responsibilities for the global unemployment, environmental and trade imbalance.

16. Campaign against global arms race should be raised by the politician, ethicist, scientists, university and college teachers to aware the society about the negative global effect of arms race.

17. Empirical technological innovation should be prioritized highly to fill the technological gap between developing and developed nations.
18. Recycling issue should be emphasized in different sectors of production for diversified raw material and renewable energy, which is the final disposal of production value chain.

19. ICT committee to meet the challenge of Y2K 2038 problem.

20. Initiatives to increase trade dynamism both in government and non-government sectors.

21. Initiatives to borrow new technologies without developing the developed technologies, to increase product value to attract new consumers.

22. Include more anthropological agencies in national economic development planning.

23. Global committee for a sustainable production value chain.
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Economics and Ethics: A Quick Inquiry

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Abstract: This paper is an outcome of a quick inquiry about economics and ethics. It covers mainly three aspects: Kautilyan view, post autistic economists’ view, and Sen’s view. People like to call neoclassical economics as ‘mainstream economics’ because most universities offer mainly neoclassical axiomatic courses. Over time, the neoclassical economists exercised “uncontrollable use” and treatment of mathematics as “an end in itself” due to which economics had become “an autistic science” that lost in “imaginary worlds” and hardly can explain the reality. This compilation concludes with an urge to develop skills of the scholars that are transferable to multiple fields of inquiry and that encourages a critical frame of mind help locate the big questions.

Keywords: Ethics, neoclassical economics, post autistic economics, Kautilyan economics, Sen’s view

Introduction

“Economics is about people and the society” is a popular statement about the subject matter of economics that emphasizes the direct goal of economics as a systematic accumulation of knowledge (Onyimadu, 2015). Basically, economics focuses ‘its analysis on the problems centering distribution and production in societies. Onyimadu (2015) further shares the process of addressing societal problems as follows:

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1. The work on this paper is still in progress; please do not copy, paste or refer.
Economics - economist and policy makers – subscribe to a preferred theoretical framework to form a base for such analysis and a method of study to elicit possible relationships and inferences that will aid in making postulates about the characteristics of the society and in specific, address societal problems.

Over time, the mainstream economics popularly referred to as neoclassical economics (synonymous with neoliberalism). It dictates that philosophy of science has dominated this systematic accumulation of knowledge. The dominance of the neoclassical economics methodology in the field of economics and the resulting monopoly of policy prescriptions has led to a rather precarious state of affairs in the course of achieving the original goal of economics – being a study about people and the society (Hodgsond, 2001).

**What is ethics?**

There are many ways to define what is meant by ethics. One working definition is: Ethics is the study of one’s proper interactions with others: it is the analysis of right and wrong (Wight, 2007).

Ethical beliefs and practices make up the formal and informal rules that generate trust, promote interdependencies, and spur work productivity in a myriad of ways. In everyday economic life there is a vast grey area in which economic behavior is shaped by these social instincts and unconscious moral constructs.

In this book *The Theory of Moral Sentiments* written in 1759, Adam Smith, the founder of modern economics, wrote (1759) to model the process by which instinctive human nature is socialized for cooperation. He also wrote in The Wealth of Nations (1776) about the ‘invisible hand’ of the market; few realize that trust and ethical norms—derived from moral sentiments—were essential components for making trade work without the heavy hand of government.2

The study of ethics in economics offers a ‘complementary understanding’ of hidden currents and tides that also move actors on the commercial stage—workers, suppliers, managers, and customers. Ethics provides the “institutional framework” within which economic activity unfolds. The biographies of great entrepreneurs show that they often hold complex motives and inspire others for a variety of reasons. Many technological breakthroughs of the 20th century, for example—relativity, computing, DNA, television, and the Internet – were driven

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by entrepreneurs with non-pecuniary motives. Non pecuniary motives may relate to internal intentions or they may relate to social rewards of esteem and fame. In either case, ethical behavior is intertwined with concepts of personal meaning and social acceptance.

Ethical considerations are often avoided by economists who are concerned about introducing ambiguity into the seemingly objective predictions and recommendations of economics. But again in the words of Amartya Sen:

An economic analyst ultimately has to juggle many balls, even if a little clumsily, rather than giving a superb display of virtuosity with one little ball [e.g., efficiency].

The complexities of ethics in markets cannot be introduced all at once. Rather, teaching about ethics in economics is analogous to making a sandwich (Bain, p. 126). Supply and demand are the bread that builds the foundation. Self-interest provides the meat. Human sociability, which gives rise to considerations of fairness and morals, is the mayonnaise that holds everything together. A dry sandwich without the spread is hard to swallow. Integrating ethics into economics enhances the critical thinking process and can presumably better prepare students for the complex world of life.

However, Galbraith (2001) gives reminder that the neoclassical economic theory which explains only a limited facet of economics and the society has been able to dominate theorizing in economics to the extent that other theories as well as ideologies have become rather limited and futile. The subject matter ‘Economics’ is now often interpreted and substituted for ‘Neoclassical economics’. This is a very serious problem because it limits critical thinking in the field of economics and forces the economist to view theorizing and policy prescriptions through the limited lens of the neoclassical economics’ concepts which represents an unrealistic fraction of today’s world reality (Galbraith, 2001). Before narrating this aspect, the next section deals with ethics-based Kautilyan economics.

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Kautilya’s ethics-based economics

Both Kautilya and his masterwork the Arthashastra are much misunderstood. Popularly known as Chanakya, he is maligned and often ridiculed as a teacher of unethical, not to say immoral, practices and as an advocate of the theory that ‘the ends justify the means.’ ‘Chanakyan’ has entered Indian vocabulary as the equivalent of ‘Machiavellian’.6

Kautilya was a learned, ethical, wise, experienced, secular, progressive, independent and original thinker (Shihag, 2017). His Arthashastra is considered as a ‘peaceful enjoyment of prosperity’ for everyone. He understood the economic system as an ‘organic whole’ with ‘interdependent parts’. He believed in the power of persuasion, moral and material incentives and not in coercion or force to elicit efforts. He relied on both the invisible hand (market) and direct hand (principle, policies and procedures) to enrich the people.

At the time of Kautilya, ‘genuine trust’ was an ‘ethics-incentive’ concept since non-violence, truthfulness, honesty, and benevolence were the foundation for trust. Kautilya accepted that insight wholeheartedly. In order to trust to have been flourished, it was believed that an ethical environment is required. For making sure that the children grow up to be ethical adults, Kautilya suggested teaching ethical values at an early age as he believed that dharmic (ethical) conduct paved the way to bliss and also to prosperity.

According to Kautilya, a society based on contracts alone is less productive and more anxiety-prone than the one based on conscience and compassion. If the social environment is predominantly ethical, less defensive measures are required to fight opportunism. He emphasized ethical lessons for the children to replace the ‘culture of suspicion’ with a harmonious and trusting one.

Shihag (2017) indicated that trust played a critical role in knowledge based economy: trust may be an intangible asset but has the most tangible role in creating and sustaining the social, economic, cultural and political structures. In an industrial economy, trust (a) reduces transaction costs by reducing opportunism, and enhances a feeling of wellness by reducing anxiety and (b) also might increase GDP by reducing the demand for lawyers and turning them into engineers.

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Trust is the most valuable asset in a knowledge-based economy. Both creation and sharing of ideas depend on trust. The distinguishing characteristic of a knowledge-based economy is a frequent sharing of ‘tacit’ knowledge and exchange of information among the cognitive labor. As soon as a person codifies his tacit knowledge everyone has access to it. Knowing this fact, a person will share ‘tacit’ knowledge only if s/he is sure of not getting fired. Creating ethical-based trust is the key to realizing all the potential gains from creating and sharing of knowledge.

Since mid-1990s, a considerable amount of intellectual effort has been devoted to study the nature of relationship between institutions, good governance, and economic growth. One group of economists argues that institutions are the most important determinant of economic growth. In fact these economists call institutions as the ‘deep determinants’ of growth. For example, Rodrik, Subramaniam and Trebbi (2004) claim, “This exercise yields some sharp and striking results. Most importantly, we find that the quality of institutions trumps everything else.

The other group of economists gives primary importance to good governance and only secondary to institutions. Glaeser et al. (2004, p298) conclude, “But institutional outcomes also get better as the society grows richer, because institutional opportunities improve. Importantly, in that framework, institutions have only a second order effect on economic performance. Importantly, in that framework, institutions have only a second order effect on economic performance. The first order effect human and social capital, which shape both institutional and productive capacities of a society.”

Kautilya considers that the state or government has a crucial role to play in maintaining the material well-being of the nation and its people. Therefore, an important part of Arthashastras is ‘the science of economics’, including starting productive enterprises, taxation, revenue collection, budget and accounts. The aim of pursuing successful economic policies, particularly through productive enterprises, is also to increase the revenues of the state and appropriate the surpluses for the state treasury. Kosha (treasury) is an essential constituent of the state, ‘A King with a depleted treasury eats into the very vitality of the citizens and the country’ says Kautilya. At the same time, a King who impoverishes his own people or angers them by unjust exactions will also lose their loyalty. A balance has to be maintained between the welfare of the people and augmenting the resources of the state.

Nowhere, this paper shares about the post autistic economists’ movement that was run against the monopolizing nature of neoclassical economics.
Post Autistic Economists’ (PAE) Movement

What is PAE movement?

The post-autistic economics movement or movement of students for the reform of economics teaching is a political movement, which criticizes neoclassical economics and advocates for pluralism in economics (Keen, 2001, Fullbrook, Undated).

The protesters found the lack of ‘realism’ in economics teaching (Fullbrook, 2004). They identified three, out of many, prominent factors that deserve protests against domination of this (neoclassical) school.

These are:

- Over-reliance on mathematics to explain the real world. In other words, they were more dependent on symbolization that led them deviate from reality.

- Instead of considering their theory as a tool in the pursuit of knowledge, the neo-classical economists considered that as the most essential viewpoint to explain all economic phenomenon.

- Over time, neoclassical economists contain more myopic view due to which the students remained in the dark as economic history and history of economics were eliminated from the curriculum that made them unable to deal with newly emerged economic reality such as, consumer societies, corporate globalization, economic induced environmental disasters and impending ecological ones, the accelerating gap between the rich and poor, and the movement for equal-opportunity economics etc.

More clearly, neoclassical economists exercised “uncontrollable use” and treatment of mathematics as “an end in itself” due to which economics had become “an autistic science” that lost in “imaginary worlds”. Over time, the university economics curriculum got submerged with the repressive domination of neoclassical theory and approaches (PAE Petition, 2000). As a result, these days people like to call neoclassical economics as ‘mainstream economics’ because most universities offer nothing else other than neoclassical axiomatic courses (PAE Network, Undated). More alarmingly, the “dogmatic teaching style” in economics leaves no place for “critical and reflective thought”.

Origin of neoclassical thought

The origin of neoclassical thoughts is not what an outsider might think. Although
today neoclassical economics cavorts with neoliberalism, it began as an honest intellectual and would-be scientific endeavor. Its patron saint was neither an ideologue nor a political philosopher nor even an economist, but Sir Isaac Newton. The founding fathers of neoclassical economics and their descendants living today hoped to achieve for the economic universe what Newton had achieved for the physical universe.

But this required the “treatment of human desires” as fundamental data, which, like the ‘masses of physical bodies in classical mechanics, are not affected by the relations being modeled’. Under this light, at the dead end of 19th century, Thorstein Veblen sums up the core metaphysic as follows:

The human material with which the inquiry is concerned is conceived in hedonistic terms; that is to say, in terms of a passive and substantially inert and immutably given human nature. . . The hedonistic conception of man is that of a lightning calculator of pleasure and pains, who oscillates like a homogeneous globule of desire of happiness under the impulse of stimuli that shift him about the area, but leave him intact. He has neither antecedent nor consequent. He is an isolated definitive human datum . . . 

With this understanding, the model to determine the economic universe came into being in the 1870s by William Stanley Jevons and, especially, by Leon Walras, both of whom had training on Physics. Known as the model of general equilibrium, this ‘elaborate mechanistic metaphor, proudly devoid of empirical content’, was remaining the “grand narrative” of economic theory for students and economists everywhere. The model was expressed ‘in a language so metaphorical’ with a set of axioms given below:

The economic universe is determinate.

It exists in a void rather than in an ecosystem.

All relations in an economy are self-regulating, in the sense that any disturbance sets in motion forces tending to restore the balance.

These forces result exclusively from the behavior of isolated individual agents.

The behavior of these agents conforms to certain mathematical properties (such as, transitivity, completeness and independence).

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Over time, the neoclassical economics concentrates to an economic model that follows Newtonian mechanics in which economic agents could be treated as if they were particles that obey mechanical laws, and the overall behavior could be described simultaneously through a solvable system of equations.

Because a ‘macro mass’ is in fact an additive function of its ‘micro masses’, neoclassical economics defines market demand as the additive function of the demands for any commodity (say, X) of individual agents. But this assumes that everyone’s demand for a product is independent of everyone else’s demand for that product. Without this independence (that is, the absence of all inter subjectively effects)

Market demand considered in the mainstream economics does not exist without this characteristic (i.e. independence). But all of us know that ‘strong inter subjective effects in markets are the rule rather than the exception in the consumer societies’.

Importance of this debate

The PA economists considered this debate as an important one because in their view the status quo is harmful in at least four respects.

Students are taught the ‘tools’ of mainstream economics without learning their domain of applicability; as a result, the source and evolution of these ideas remained ignored

Although economics is a social science with enormous potential for making a difference through its impact on policy debates, but in its present form its effectiveness in this arena is limited by the uncritical application of mainstream methods

Research in economics is being done based on one approach only that holds back deeper understanding of many important aspects of economic life that hampers the development of competing research programs is seriously hampered or prevented altogether

In the practical field, the economists who are not taught in the prescribed way finds it very difficult to get recognition for their research

PAE protesters identified that the most introductory economics textbooks present a “sanitized”, “uncritical rendition” of conventional economic theory, and the courses in which these textbooks are used do little to counter this “mendacious” presentation (Keen, 2001).
Nearly everyone thinks efficiency is a good idea and the neoclassical economists adore using this word to express positive trait. But the meaning of efficiency should differ with the ways it is looked at.

For example, suppose all five firms manage to lower by the same amounts the production cost and selling price of a standard product that they all produce (summarized in Table 1 below).

Table 1: Efficiency of producing goods by different firms

<table>
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<tr>
<th>SITUATION</th>
<th>FIRM</th>
<th>METHOD</th>
<th>CONCLUSION</th>
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<tbody>
<tr>
<td>Five firms all manage to lower by the same amounts the production cost and selling price of a standard product that they all produce</td>
<td>A</td>
<td>By cutting its workers pay</td>
<td>Efficient</td>
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<td></td>
<td>B</td>
<td>By working them longer hours</td>
<td>Efficient</td>
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<tr>
<td></td>
<td>C</td>
<td>By getting materials at lower prices from a poorer country</td>
<td>Efficient</td>
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<tr>
<td></td>
<td>D</td>
<td>By replacing some of its workers with robots</td>
<td>Efficient</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>By inventing machinery improvements that allow it to cut work hours with no loss of output, profit, jobs or pay</td>
<td>Efficient</td>
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Table 1 suggests each firms follows different method to arrive at the same destination (i.e. efficiency). Firm A does it by cutting its workers pay, firm B by working them longer hours, firm C by getting materials at lower prices from a poorer country, firm D by replacing some of its workers with robots, and finally, firm E by inventing machinery improvements that allow it to cut work hours with no loss of output, profit, jobs or pay. Now the question is: are all of these changes made to be considered equally efficient?

For a neoclassical economist, the answer is yes and for them that is all that matters. But surely the consequence should not be the same for each firm. In reality, hardly any ‘efficiency claim’ is ever based on an identification of all the consequences. Similarly, students are taught that “externalities” cause reduction in market efficiency but they do not learn that the ‘proof’ that the ‘markets are efficient’ is itself flawed.

Under any market system, the neoclassical economists deal with acutely ideological ‘economic man’ emphasizing some specific roles and relationships. As a result, it allows decisions based only on utility maximization, overruling
other forms of ethics. In reality, an economic agent or each individual performs not just the roles centering a market system but many other roles as her orientation may not be only on utilitarianism but on social or environmental ethics as well.

PA economists do not believe that economists have the right to select one ethics as the correct one for framing economic analysis. Basically, the neoclassical insistence upon the ‘utilitarian ideology’ legitimizes a kind of ‘market ideology’ and ‘consumerism’, which appears to be conflicting to a society that sidelines the debate about sustainable development.

All these indicate a flawed, self-centered economics education system being functional all over that have been producing ‘ill-informed’ scholars, many of whom used to get involved with as academic economists, and then repeat the process. As a result, the ignorance is perpetuated. This triggered the post autistic economists’ movement.

Brief History

In June 2000, a few economics students in Paris circulated a petition calling for the reform of their economics curriculum. Their petition was short, modest and restrained with the core message that they wished to ‘escape from imaginary worlds’. They made their position clear pointing out the fact that the curriculum dominated by neoclassical theory or approaches hardly could meet their expectation of studying economics in acquiring a deep understanding of the economic phenomena with which the citizens of today are confronted.

The influence of neoclassical economics had become so strong that from the 1960s onward, neoclassical economists increasingly managed to block the employment of non-neoclassical economists in university economics departments and to deny them opportunities to publish in professional journals. They also have narrowed the economics curriculum that universities offer students (Keen, 2001a). Satirically Hodgson (2001) wrote that Alfred Marshall, who established the first economics degrees in Britain at the University of Cambridge in 1903, would not get a job at the University of Cambridge or any other leading Department of Economics in the world today because of the growing mathematicisation of economics. He introduced much broader curriculum than is typical in the year 2001. Notably, there is very little mathematics in Marshall’s writings and he saw mathematics as no more than an auxiliary tool.

At the same time they (neoclassicists) have increasingly formalized their theory, making it progressively irrelevant to understand economic reality. And they even
started banishing economic history and the history of economic thought from the curriculum, these being places where the student might be exposed to non-neoclassical ideas (Keen, 2001b).

In their view, the empirical side (such as, historical facts, functioning of institutions, study of the behaviors and strategies of the agents . . . ) is almost nonexistent in the teaching that is offered. They were dead against of dogmatism. As a result, the students asked instead for a broad spectrum of analytical viewpoints that would replace the existing purely axiomatic process, and contain pluralist approaches, adapted to the complexity of the objects and to the uncertainty surrounding most of the big questions in economics (unemployment, inequalities, the place of financial markets, the advantages and disadvantages of free-trade, globalization, economic development, etc.).

These indicate the protesters were against the narrowness of their economics education and longing for a broadband approach to economics teaching that would ‘enable them to connect constructively and comprehensively with the complex economic realities’.

This plea of the French students found support from large numbers of economics students and economists in many countries. Almost exactly a year after French students had released their petition, a group of PhD scholars at Cambridge University in the UK raised their voice with the slogan ‘Opening up Economics’.

Stigliz (2002) found similarity in modern high-tech warfare and modern economic management as both of these are disconnected from reality. To him, the modern high-tech warfare was designed to remove physical contact. Even ‘dropping bombs from 50,000 feet ensures that one does not “feel” what one does’. Similarly, modern economic management imposes policies ‘callously’ from one’s luxury hotel and one would think twice if one knew the people whose lives one was putting at stake.

**Sen’s position on ethics and economics**

Sen (1987) restated certain strong links between ethics and economics in his ‘Royer Lectures’, entitled *On Ethics and Economics*. According to Quizilbash (2007), he noted the “contrast be evolution of modern economics largely as an off-shoot of ethics”. He concluded his lectures by suggesting that: ‘the case for bringing economics closer to ethics ... lies ... on the rewards of the exercise. ... the rewards can be expected to be rather large’ (Sen 1987, p. 89).
At least in part, both ethics and economics are concerned with ‘human well-being’ and about ‘how we ought to act’. Ethics deals with questions like: ‘what is the good life?’; ‘what ought I to do?’; and ‘what action is right or just?’ On the other hand, in economics, analysis of welfare and public policy engages with these issues (Sen, 1987; Qizilbash, Mozaffar (2007).

Benicourt (2002) argues that Sen’s capability approach remains “undeniably neoclassical”, and is “just a variation of standard microeconomics”. She also categorizes Sen as a traditional mainstream economist. In response, Robeyns (2002) explains why she believes that these views are fundamentally mistaken.

Referring Sen (1985, 1987), Robeyns reconsiders Sen’s capability approach. She reminds that this very approach has its roots both in welfare economics and in the philosophical literature on inequality (Sen, 1980). Robeyns further highlights that ‘instead of exclusively on their mental states (utilitarianism) or on the goods that they have at their disposal (resourcism), the capability approach advocates that in making evaluations of well-being or policies, he (Sen) focuses on what people can do and be’.

Over time, Sen and others have extended the scope of the capability approach to study such diverse issues. These include development and development ethics (Gasper 1997, Sen 1999), the evaluation of small-scale NGO-projects (Alkire 2002), eating disorders and famines (Lavaque-Manty 2001), unemployment and inactivity (Burchardt 2002), gender inequality in western societies (Robeyns 2002), to mention just a few. The capability framework is now being used to study topics such as well-being of disabled people, environmental law and climate change, and the impact of a financial crisis on people’s well-being.

The Human Development Report, which is currently (one of) the strongest alternative frameworks to the neoliberalist “Washington consensus”, is largely based on the normative foundations of Sen’s capability approach. All these indicate the capability approach has gradually developed into a paradigm, which ‘moves between and beyond existing disciplines, and which is applied in many more domains than only welfare economics or liberal philosophy’. The different works time to time in the capability paradigm strongly suggest that the capability approach make a difference with a standard mainstream economic analysis of these issues.

True that Sen used neoclassical mainstream tools time to time but at the same time he did bear a positive encouraging attitude towards non-neoclassical economists (Robeyns, 2002). Sen has done much to make economics
more inclusive for economists with non-traditional views, and has given much personal support to such economists and their organizations (Fine 2001).

**Kuatilya Again**

Apparently, economists, even now in 21st century, are debating about the relative importance of institutions versus that of good governance. *Kautilya* settled this debate two thousand years ago. He argued that good governance created opportunities and institutions allowed them to be availed of implying that both were essential to prosperity and it was futile to compare them. However, according to Kautilya, most important was the ethical environment, which improved the quality of both.

*Kautilya* believed that poverty was a ‘living death’ and also not conducive to the practicing of ethical values. He argued that maintenance of law and order was a pre-requisite to economic prosperity. He observed, “By maintaining order, the king can preserve what he already has, acquire new possessions, augment his wealth and power, and share the benefits”. The progress of this world depends on the maintenance of order and the [proper functioning of] government. *Kautilya* further argued that a king would either perform his ‘moral duty’ or follow his ‘enlightened self-interest’ if not exercise immorality. Exercising his moral duty, the king ‘wants’ to enrich the public whereas due to his enlightened self-interest, the king ‘has to’ enrich the public. *Kautilya* preferred an ethical king rather than a king motivated by his enlightened self-interest.

![Diagram](image)

**Table 1: Trade-off between moral duty and enlightened self-interest**

Shihag (2017) summarizes the relative consequences of exercising moral duty and enlightened self-interest in the following figure. Let us assume, AB is the income possibility frontier. Point M denotes the combination (high public income, low
king’s income) if the king follows his moral duty. Point F denotes the combination (very low public income, very high king’s income) when the king is immoral. Point S denotes the combination (somewhere in between points M and F) when the king follows his enlightened self-interest.

*Kautilya* specified three possibilities:

- His argument based on moral duty implied that a *rajarshi* (king, wise like a sage) would take a very modest amount for his own consumption, that is, point M would not be too far away from point A on the vertical axis. Such a king would promote ethical behavior, use almost all the tax revenue on the provision of public goods and welfare programmes and follow judicious policies to encourage economic growth. As a consequence there would be both spiritual and economic enrichment of his subjects. Over time income possibility frontier would shift outwards.

- According to *Kautilya*, a myopic and unethical king would try to grab almost all the resources for himself. This is indicated by point F on the income possibility frontier. Such a king, as *Kautilya* views, would ruin himself as well as the economy. This is comparable to Olson’s ‘roving bandit’. Since such a king would leave very little for the public, that is, point F would be very close to point B on the horizontal axis. Consequently, the future economic growth will be adversely affected due to this extortion and myopic behavior. Most likely, the income possibility frontier would shift inwards.

- A king is motivated by his enlightened self-interest would promote public interest to the extent that it promoted his own interest, that is, promotion of public interest was merely a means to the promotion of his own interest (whereas in the above-mentioned case 1 promotion of public interest was an end in itself). *Kautilya*’s argument based on enlightened self-interest implied that the king might choose a point like S.

Of these three possibilities, the first one is for a society/country as it ensures both spiritual and economic enrichment. *Kautilya* views that market failure is bad, government failure is worse but moral failure is the worst since moral failure is the true cause for other failures.

**Conclusions**

Philosophy should take a similarly general and prestigious position, in both the natural and the social sciences. Philosophy is a skill that is transferable to multiple
fields of inquiry. Hence it can enable communication between disciplines. It encourages a critical frame of mind and can help locate the big questions.

In sum, just as the requirement of mathematics is now virtually universal, so too should be some philosophy, ethics and relevant parts of the history of ideas. All three should be part of the compulsory core curriculum of economics.
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Ideas in Economics in Ancient, Medieval and Modern Times: Ethical Issues

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Abstract: Economics was traditionally viewed as part of a wider study of human things, including ethics. Ethics studies values and virtues. The objective of this study is to discuss ideas in economics in ancient, medieval and modern times in the context of ethical issues. The first attempt to analyze economic problems appears in the writings of the ancient Greeks. Plato recognized the economic basis of social life. Aristotle attributed great importance to economic security as the basis for social and political health. Roman writers such as Cicero, Vergil and Varro gave significant advice about the economic agriculture. The medieval period was marked by the disruption of the flourishing commerce of the ancient world, and its economic life was dominated by feudalism. Mercantile economic system of the major trading nations based on the premise that national wealth and power were best served by increasing exports and collecting precious metals in return. Physiocrats regarded agriculture as the sole productive economic activity and encouraged the improvement of cultivation. Adam Smith introduced ‘invisible hand’ and all societies’ benefits when the economy is free of regulation, ‘laissez faire’. Ricardo also concerned with the subject of international trade and for that he developed the theory of comparative advantage. Marx developed a materialistic theory of history as science, ultimately predicting that the triumph of the working class was inevitable. Keynes opened up a whole new range of investigation into business cycle. A principal result of Keynes’s teaching has been reflected in governmental attempts to control the business cycle by putting money directly into the

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economy. Monetarist such as Milton Friedman, believe that the money supply exerts a dominant influence on the economy. This earliest writings were not clearly separated from discussion of ethics, justice and morality. These Ancient Greek philosophers considered the study of economics as a subset of ethics. Ancient Greek ethics by focusing on the Cynics, the Cyrenaic, Aristotle virtue ethics, the Epicureans and the Stoics. Two leading modern ethical approaches are Kantianism and utilitarianism. Allocation of scarce resources was a moral issue to Aristotle. Aristotle discusses justice in distribution and exchange. Chanakya focuses on issues of welfare and the collective ethics that hold a society together. The Scholastics were particularly concerned with: property, justice in economic exchange, money and usury. The early Muslims generally based their economic analyses on the Qur’an and from Sunnah. In those early times and until the industrial revolution, economics was not a separate discipline but part of philosophy. Religious tenets and concern for morality and ethics played a significant role in the views of early theorists. Understood properly, economics is an ethical science, an important branch of applied moral philosophy.

*Key Words: Ancient, Medieval, Modern time, Ethics*

1. **Introduction**

Economics was traditionally viewed as part of a wider study of human things, including ethics. Ethics studies values and virtues. In the history of economic thought, early economic thought refers to ideas from before and during the Middle Ages. The earliest discussions of economics date back to ancient times, such as Chanakya’s Arthashastra or Xenophon’s Oeconomicus, and continues through the religious-based ideas of Jewish thought, the Scholastics, and medieval Islamic scholars. In those early times, and until the industrial revolution, economics was not a separate discipline but part of philosophy. Religious tenets and a concern for morality and ethics played a significant role in the views of early theorists.

The concerns of those early economists involved a number of issues which they held in common, the answers to which are the basis of the structure of well-functioning societies today as much as in those early times. These include how to make markets, taxation policies, and other monetary instruments transparent and free from corruption; when is profit permissible (and how much) based on the labors of others, such as in the case of merchants, the charging of interest and when does it become unacceptable usury; and other practices that would otherwise destroy the well-being of ordinary law-abiding people on which strong and unified states were built.
2. Ancient Ethics

Some scholars assert economic thought similar to the modern understanding occurred during the 18th century or the Enlightenment, as early economic thought was based on metaphysical principles which are incommensurate with contemporary dominant economic theories such as neo-classical economics.

Several ancient Greek and Roman thinkers made various economic observations, especially Aristotle and Xenophon. Many other Greek writings show understanding of sophisticated economic concepts. For instance, a form of Gresham’s Law is presented in Aristophanes’ *Frogs*, and beyond Plato’s application of sophisticated mathematical advances influenced by the Pythagoreans is his appreciation of fiat money in his Laws and in the pseudo-Platonic dialogue, *Eryxias*. Bryson of Heraclea was a neo-platonic who is cited as having heavily influenced early Muslim economic scholarship. Within the pre-Classical and Classical culture, horses and cattle were considered to be a measure of wealth.

**Hesiod**

In the opinion of the Austrian School of economics the first economist is thought to be Hesiod by the fact of his having written on the fundamental subject of the scarcity of resources, in *Works and Days*. His contribution to economic thought is at least in his relevancy to the practice of economic activity in the depositing and lending of grain, as his writings are “… the chief resource for details as to Grecian agriculture …” and that according to Loudon (1825) he provided “… directions for the whole business of family economy in the country”.

**Xenophon**

The influence of Babylonian and Persian thought on Greek administrative economics is present in the work of Greek historian Xenophon. Discussion of economic principles are especially present in his Oeconomicus, Cyropaedia, Hiero, and Ways and Means. Hiero is a minor work which includes discussion of leaders stimulating private production and technology through various means including public recognition and prizes. Ways and Means is a short treatise on economic development, and showed an understanding of the importance of taking advantage of economies of scale and advocated laws promoting foreign merchants. The Oeconomicus discusses the administration of agricultural land. In the work, subjective personal value of goods is analyzed and compared with
exchange value. Xenophon uses the example of a horse, which may be of no use to a person who does not know how to handle it, but still has exchange value.

**Aristotle**

Aristotle’s Politics (ca. 350 BCE) was mainly concerned to analyze different forms of a state (monarchy, aristocracy, constitutional government, tyranny, oligarchy, democracy) as a critique of Plato’s advocacy of a ruling class of philosopher-kings. In particular for economists, Plato had drawn a blueprint of society on the basis of common ownership of resources.

Allocation of scarce resources was a moral issue to Aristotle. He also wrote in *Politics* (book I), that consumption was the objective of production, and the surplus should be allocated to the rearing of children, and personal satiation ought to be the natural limit of consumption. (To Aristotle, the question was a moral one: in his era child mortality was high.) In transactions, Aristotle used the labels of “natural” and “unnatural”. Natural transactions were related to the satisfaction of needs and yielded wealth that was limited in quantity by the purpose it served. Un-natural transactions aimed at monetary gain and the wealth they yielded was potentially without limits. He explained the un-natural wealth had no limits because it became an end in itself rather than a means to another end—satisfaction of needs. This distinction is the basis for Aristotle’s moral rejection of usury.

Aristotle’s Nicomachean Ethics, particularly book V.v, has been called the most economically provocative analytic writing in ancient Greece. Therein, Aristotle discusses justice in distribution and exchange. Still considering isolated exchanges rather than markets, Aristotle sought to discuss just exchange prices between individuals with different subjective values for their goods. Aristotle suggested three different proportions to analyze distributive, corrective, and reciprocal or exchange transactions: the arithmetic, the geometric, and the harmonic. The harmonic proportion implies a strong commitment to the subjective values of the traders.

**Plato**

Plato’s works those considered the most important to study of economics are Nomoi, Politeia and Politikos (Backhaus). In his work Laws (dialogue) Plato writes on the three things as important to a person of these mind he stated as the most important, then body and lastly estate (Χρήματα). In Phaedo, Plato makes the first distinction between things which are thought necessary and those thought a luxury (Bonar).
Plato promoted the exercise of temperance in respect to the pursuit of material wealth such that by strengthening moderation a person thereby preserves the order of their psyche. In The Republic he gives an account of the manner by which a state is to be formed with the skills (techne) of individuals supporting economic sustainability. With respect to the identification of skill Plato’s writing in the Republic also deals with the specialization of skills as the concept of division of labour (Wagner 2007).

**Roman law**

Early Greek and Judaic law follow a voluntaristic principle of just exchange; a party was only held to an agreement after the point of sale. Roman law developed the contract recognizing that planning and commitments over time are necessary for efficient production and trade. The large body of law was unified as the Corpus Juris Civilis in the 530s by Justinian who was Emperor of the Eastern Roman Empire from 526-565. In Institutions, the principle of just trade is stated as “tantum bona valent, quantum vendi possunt” (“goods are worth as much as they can be sold for”).

**Ancient India**

Chulavamsa records that Parakramabahu I of Sri Lanka had debased the currency of ancient Sri Lanka in order to produce monies to support his large scale infrastructure projects. Parakramabahu I also pioneered free trade during his reign; a war was fought with Burma to defend free trade.

**Chanakya**

Chanakya (c. 350 BC-275 BC) considered economic issues. He was a professor of political science at the Takshashila University of ancient India, and later the Prime Minister of the Mauryan emperor Chandragupta Maurya. He wrote the Arthashastra (“Science of Material Gain” or “Science of political economy” in Sanskrit). Many of the topics discussed in the Arthashastra are still prevalent in modern economics, including its discussions on the management of an efficient and solid economy, and the ethics of economics. Chanakya also focuses on issues of welfare (for instance, redistribution of wealth during a famine) and the collective ethics that hold a society together.

The Arthashastra argues for an autocracy managing an efficient and solid economy. The qualities described is in effect that of a command economy. It discusses the ethics of economics and the duties and obligations of a king.
scope of Arthashastra is, however, far wider than statecraft, and it offers an outline of an entire civil and criminal code and bureaucratic framework for administering a kingdom, with a wealth of descriptive cultural detail on topics such as mineralogy, mining and metals, agriculture, animal husbandry and medicine. The Arthashastra also focuses on issues of welfare (for instance, redistribution of wealth during a famine) and the collective ethics that hold a society together.

Chanakya says that artha (sound economies) is the most important quality and discipline required for a Rajarshi, and that dharma & kama are both dependent on it.

According to Chanakya, a conducive atmosphere is necessary for the state’s economy to thrive. This requires that a state’s law and order be maintained. Arthashastra specifies fines and punishments to support strict enforcement of laws (the Dandaniti).

3. Medieval Islamic Economic Thought

The possible indebtedness of political economy to fourth-century Greek thinkers has been widely debated, the contribution of Islam, on the other hand, has been consistently forgotten. Islamic economic thought is as old as Islam itself, for the Qur’an and the Sunnah, the sayings and acts of Muhammad, contain economic teachings. However, their contents are considered divine, and thus it is only their interpretation that can be considered Islamic economic thought. The early Muslims generally based their economic analyses on the Qur’an (such as opposition to riba, meaning usury or interest), and from Sunnah. These efforts in Islamic economic thinking are thus ascribed to the writers who made these attempts, rather than to the Qur’an and the Sunnah.

Throughout its 14 centuries there are works in which economic issues are discussed in light of the Shari’ah. However, the vast literature on the exegesis of the Qur’an, commentaries on Hadith, principles of jurisprudence (usul al-fiqh), and law (fiqh) has greatly overshadowed the economic treatises. Nevertheless, a number of writings on economic thought are available.

Persian philosopher Nasir al-Din al-Tusi (1201-1274) presented an early definition of economics (what he called hekmat-e-madani, the science of city life) in his Ethics: the study of universal laws governing the public interest (welfare?) in so far as they are directed, through cooperation, toward the optimal (perfection) (Hosseini 2003: 39).
The concept of tadbîr is of significance in this context. There is a slightly different meaning of the tadbîr from that of Hellenic oikonomia. Tadbîr also includes God-determined harmony and rationally organized administration. Thus, it reflects an idealized model of enlightened yet authoritarian administration, rather than the building of an exact notion related to the economy.

Muslim economic thought enriched the Hellenic contribution to economic thought in the areas of government of the kingdom by the caliph, of the city, and the household organization. In rejecting profit, usury, egoism, and monopoly, and in preaching moderation, altruism, the practice of fair prices, and unselfishness, Islam inaugurated an “economic system” which has derived from that of the Greeks and which laid the basis for pre-capitalist thought (Essid 1995).

**Zaid bin ‘Ali**

Zaid bin ‘Ali (10-80 AH/699-738 C.E.), the grandson of Imam Husain, was one of the most eminent jurists of Medina, whom other eminent jurists like Abu Hanifa held in high esteem. Zaid permitted the sale of a commodity on credit at a price higher than its cash price. Muhammad Abu Zahra discussed a rationale of its permission at some length, which is worth quoting in view of the contemporary relevance of the issue:

Those who disallow the deferred price to be higher than the cash price argue that the difference is riba as it is an increase (in payment against time), and every increase against deferment (or payment) is riba. There is no difference between saying “Either you pay now or pay more in lieu of deferment,” and selling at a higher (than cash) price because of deferred payment. The essence is the same and it is riba (Hosseini 2003: 40).

**Abu Hanifa**

Abu Hanifa (80-150 AH/699-767 C.E.), was the founder of the Sunni Hanafi school of Islamic jurisprudence.

Abu Hanifa’s concern for the poor and the weak was well known, as was the human values in his juristic method (Hosseini 2003:36) A transaction which was becoming increasingly popular was salam or sale of commodity to be delivered in future against a price paid in cash at the time of contract. Abu Hanifa found confusion surrounding this type of contract often led to disputes. He tried to eliminate these disputes by specifying what must be known and stated clearly in the contract, such as the commodity, its kind, quality and quantity, and the date and place of delivery. He laid down a further condition that the commodity be
An emphasis on the economic responsibilities of the rulers has been a recurrent theme of Islamic economic thought since the earliest days. This was the focal point of Abu Yusuf (113-182 AH/731-798 C.E.), chief jurist for Abbasid Caliph Harun al-Rashid, for whom he wrote the Book of Taxation (Kitab al-Kharaj).

This book outlined Abu Yusuf’s ideas on taxation, public finance, and agricultural production. He discussed proportional tax on produce instead of fixed taxes on property as being superior as an incentive to bring more land into cultivation. He also advocated forgiving tax policies which favor the producer and a centralized tax administration to reduce corruption. Abu Yusuf favored the use of tax revenues for socioeconomic infrastructure, and included discussion of various types of taxes, including sales tax, death taxes, and import tariffs (Hosseini 2003: 34).

Abu Yusuf preferred the state taking a proportion of the agricultural produce from the cultivator rather than levy a fixed rent on agricultural land. This was more just and likely to yield a larger revenue by facilitating expansion of the area under cultivation. In discussing taxation, he laid down certain principles which anticipate those introduced many centuries later by the economists as “canons of taxation.” He suggested salaried staff to act as tax collectors, who should be under strict supervision in order to prevent corrupt and oppressive practices.

The main strength of Abu Yusuf’s thinking, however, lies in the area of public finance. Apart from the responsibilities of the Islamic state related to welfare of the people, he wrote detailed suggestions on how to meet long term development expenditures like those on building bridges and dams, and digging canals. They speak highly of his foresight, sagacity and concern for the well-being of the population (Hosseini 2003: 38).

Ibn Khaldun

Perhaps the most well-known Islamic scholar who wrote about economics was Ibn Khaldun (732-808 AH/1332-1404 C.E.) of Tunisia. Joseph Schumpeter (1954: 136) mentions his sociology, others, including Hosseini (2003) consider him a father of modern economics. It is his insight into the laws governing human behavior and socio-economic phenomena like division of labor, growth and decline of population, and rise and fall of prices, which distinguished him from
many other social thinkers. The focus of his attention was the various stages of growth and decline through which, according to his insight, every society must pass. This theory has been compared with John Hicks’ theory of trade cycles (Weiss 1995: 29-30).

Ibn Khaldun’s idea about the benefits of the division of labor relate to asabiyya, the greater the social cohesion, the more complex the successful division may be, the greater the economic growth. He noted that growth and development positively stimulate both supply and demand, and that the forces of supply and demand are what determine the prices of goods (Weiss 1995: 31). He also noted macroeconomic forces of population growth, human capital development, and technological developments effects on development. In fact, Ibn Khaldun thought that population growth was directly a function of wealth (Weiss 1995:33).

4. Modern Morality

The two main moral theories of modern virtue ethics (or neo-Aristotelianism) are Kant's deontological ethics and utilitarianism. Both theories have been adopted and modified by many scholars in recent history in order to make them (more) compatible with the latest demands in ethical reasoning and decision-making, in particular, by meeting the objections raised by modern virtue ethics. The following briefly depicts Kantianism in its original form and the main features of utilitarianism.

i. Kantianism

The German philosopher Immanuel Kant is the founder of deontological ethics. His ethics, which he mainly put forth in the *Groundwork of the Metaphysics of Morals* (1785), *Critique of Practical Reason* (1788), and *Metaphysics of Morals* (1797), is one of the most prominent and highly respected theories in modernity. Kant’s ethics is deontological in the sense that one has to obey the duties and obligations which derive from his supreme principle of morality, that is, the Categorical Imperative: “Act only according to that maxim whereby you can at the same time will that it should become a universal law” (Kant 1785). The Categorical Imperative is a test for maxims which, in turn, determine whether certain acts have moral worth or not. A maxim is an individual’s subjective principle or rule of the will (in German, *das subjektive Prinzip des Wollen*), which tells the individual what to do in a given particular situation. If the maxim can be universalized, then it is valid and one must act upon it. A maxim cannot be universalized when it faces two severe instances: (i.) the case of logical
inconsistency (the example of suicide, which is against the “perfect duty”); and,
(ii.) the case of impossibility to will the maxim to be universalized (failing to
cultivate one’s talents, which is against the “imperfect duty”). Perfect duties are
those duties that are blameworthy if they are not met by human beings (for
example the suicide example); imperfect duties allow for human desires and
hence they are not as strong as perfect duties but they are still morally binding and
people do not attract blame if they do not complete them (for example failing to
cultivate one’s talents).

Kant’s ethics is universal in the sense that the system of moral duties and
obligations point at all rational beings (not only human beings). Morality is not
based in interests (such as social contract theories), emotions and intuitions, or
conscience, but in reason alone. This is the reason why Kant’s ethics is not
heteronomous - by being a divine ethical theory in which God commands what
human beings should do (for example the Bible, the Ten Commandments) or
natural law conception in which nature itself commands what human beings
should do by providing human beings with the faculty of reason who, in turn,
detect what should be done in moral matters - but truly autonomous with regard
to rational beings, who make their moral decisions in the light of pure practical
reason. However, pure practical reason, in determining the moral law or
Categorical Imperative, determines what ought to be done without reference to
empirical contingent factors (that is, anthropology in the broad sense of the term
including the empirical sciences; see preface to Groundwork) such as one’s own
desires or any personal inclinations (in German Neigungen). The pure practical
reason is not limited to the particular nature of human reasoning but is the source
and the field of universal norms, which stem from a general notion of a rational
being as such (see, Eiser 2008: 577; Paton 1967; Timmermann 2010; Altman
2011).

ii. Utilitarianism

Historically speaking, Jeremy Bentham in his Introduction to the Principles of
Morals and Legislation (1789) and John Stuart Mill in Utilitarianism (1863) are
the founders of utilitarianism, while Francis Hutcheson (1755) and William Paley
(1785) could be seen as their legitimate predecessors by pointing out that utility
should be seen as an important standard of evaluation in ethical reasoning and
decision-making. Bentham claims that the duration and intensity of pleasure and
pain are of utmost importance and that it is even possible – according to Bentham
- to measure the right action by applying a hedonistic calculus which determines
the exact utility of the actions. The action with the best hedonistic outcome should
be put into practice. His position is called radical quantitative hedonism. Mill instead questions the very idea of a hedonistic calculus and argues that one must distinguish between mental and bodily pleasure by giving more weight to mental pleasures. His position is called qualitative hedonism. Mill’s basic formula of utilitarianism is as follows:

The creed which accepts as the foundation of morals, Utility, or the Greatest Happiness Principle, holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness. By happiness is intended pleasure, and the absence of pain; by unhappiness, pain and the privation of pleasure. (Mill’s Utilitarianism, chapter 2)

There is widespread agreement that there exist numerous different utilitarian theories in modern ethics; hence it would be impossible to provide an adequate depiction of all important major strands in this brief subsection. However, the following four main aspects are typical for each utilitarian theory. (1.) The consequence principle: Utilitarianism is not about actions but about the consequences of actions. This kind of theory is a form of consequentialism, which means that the moral worth of the particular action is determined by its outcome. (2.) Happiness: Utilitarianism is a teleological theory insofar as happiness (but, not in the ancient sense of the term) is the main goal that should be achieved. This particular goal can be identified with (i.) the promotion of pleasure, (ii.) the avoidance of pain or harm, (iii.) the fulfilment of desires or considered preferences, or (iv.) with meeting some objective criteria of well-being. (3.) Greatest Happiness Principle: Utilitarianism is not about mere happiness but about “the greatest happiness” attainable. Utilitarianism is a theory with one principle that judges the consequences of a given action regarding its utility, which is the general aim of actions. The moral rightness or wrongness of actions depends on the goal of achieving the greatest happiness for the greatest number of sentient beings, in short, “the greatest happiness for the greatest number”. (4.) Maximising: The collective amount of utility regarding sentient beings affected by the action should be maximized. This line of reasoning contains strong altruistic claims because, roughly speaking, one should only choose those actions which improve other sentient beings’ happiness.

5. Conclusion

It is notable that in virtually all early cultures economic thinking converged onto several basic items: How to make agricultural production more efficient; and how to make markets, taxation policies, and other monetary instruments transparent
and free from corruption, usury, and other practices that would otherwise destroy the well-being of ordinary law-abiding people on which strong and unified states were built.

It is worth remembering that the early economists and jurisprudence specialists, even though they strongly advocated the efficiency of productive sectors, were also much more sympathetic to the ordinary workers’ plight than, say, the later mercantilists. During the mercantilist period, industrial and agricultural workers lived on the brink of poverty with very little protection in the law statutes of the time, but the ancient philosophers, jurists, and economists always had the interest of these working classes in mind.

These early thinkers were concerned that their teachings in jurisprudence or economics reached the highest administrative levels of the country: emperors, kings, caliphs, and so on, and that those rulers would take care of enforcing the “canons of law.”
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Ethics, Rationality and Economics

MONISHANKAR SARKAR*

Abstract: The economic literature can be more enriched if it pays more attention to ethical issues. The ethics centered welfare economics, although the usual literature of economics is strongly guided by rational behavior of economic actors, has much to offer to mainstream economic analysis. Present study tries to figure out the core concepts and how it may play crucial role in more complex way. Present paper also argues that the effort of bringing economics more closely to ethics may notably be beneficial to the mainstream economic literature.

Introduction

The economic literature, developed over centuries since its inception, is much more motivated by the idea of rationality and related stimulation and, simultaneously, less guided by ethics and moral judgment. The assumption, perhaps, much more shaped by the idea of ‘ideal economic actor in long cherished economic thought. The actor, as economic literature tries to depict, behaves and takes economic choices rationally, as strict as possible, avoiding any possible ‘fault’.

Perhaps it is not hard enough to predict that whether the ‘ideal’ people will not be influenced by affection, emotional attachment or even the idea of self-examination. Though it is quite easy to trace the distance between the study of ethics and economic literature, the economics had a rich and closer connection with ethics for a long time since inception. The economics had been studied for long as a branch of ethics. Economics had been taught for long as a branch of

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moral philosophy at the Cambridge University. Adam Smith, the father of modern economics, was a professor of moral philosophy at the University of Glasgow.\textsuperscript{1} It is, therefore, evident clearly that the discipline maintained a closer connection with ethics for long from the beginning.

It is time to turn our attention to the way economics found new way and move on as a distinct discipline, as a separate from ethical studies. The dichotomies, which was born with the separation and embarking as distinct disciplines, can be named as: the rationality based view and the ethics based view of economics. The former view will be discussed first.

The rationality based view of economics has been developed with the functioning of economic actor as well as market.\textsuperscript{2} This view focuses on deliberate economic choice and actions so that the maximization of interest can be possible. In such analysis, the focus was clearly given to the promotion of rational behavior of the economic actor. There was almost no room for ethical consideration in such interest maximizing motivation and effort. The journey of this view is still prevailing.

The ethics based view of economics, on the other hand, has a long rich history. This view concentrates on the promotion of human behavior on the basis of morality and ethics. The connection of ethics with economics is found in the work of Aristotle.\textsuperscript{3} This view invites economics to pay more attention, not without rationality –rather along with rationality, to ethical judgment for the enrichment of economics itself.

**Self-interest and Rationality**

It is now important to concentrate on the issue of self-interest and the application through human behavior in the form of the maximization of self-interest. Self-interest plays one of the key motivational roles on the choice of people make in their salient economic decisions. It is hard to censure such choices made by self-interest with the view of rationality. Rather, the self interest view of rationality and thus make choices has a powerful logic to follow and has been a fundamental base in mainstream economic behavior for long time. It is hard even to criticize the deliberate steps it makes in many cases and makes decisions towards the maximization of self-interest.

Where the problem does lies, then? The exclusion can be, to answer the question, a fundamental issue to be considered. If the fulfillment of self-interest does not include the interests of others, or hurts or devalue the interests of others, that may
be a matter of ethical consideration. Pursuing one’s self-interest and excluding the consideration of others may create terrible problems in economic as well as social world we live.

It is remarkably evident that the self-interest based rationality has a popular tendency to decline the ethics-based view of economic choices and decision making. Whether the ‘inclusion’ can be a powerful decision to take—is a different question to be discussed elsewhere. When a person follows self-interest based decisions to maximize his or her self-interest that can firmly be a rational behavior to pursue. If the same behavior, however, excludes he self-interest of others (which may possibly conflict or destroyed by the persons self-interest maximizing decision), those decisions are not right actions to follow in the view of ethics based view of economic decision making.

The strategic decisions made by rationality will not be sufficient at all if the actual behavior is guided by the motivation of self-interest maximization. In the same way, actual behavior will not be accurate at all if it is guided by behavior that is focused on the maximization of self-interest. Inclusion of interest may be less practiced in everyday economic decisions but the inclusion is not absurd in economic sphere. The interplay between the concepts, though seemingly counterproductive, has much to offer in mainstream economic theorizing.

The ethical consideration has seemly a certain place where interest, rationality and actual behavior interplay. The ethical view has, in such cases of decision making, a greater importance to choose the pattern of actual behavior. The comprehensive understanding of the interplay among the concepts may lay down the foundation of actual economic choice in decision making.

Let us turn our attention to the pragmatic possibilities of the assumptions just have been made. It is a matter of fact that whether a person, motivated by self-interest maximization may consider ‘inclusion’ or ethics based view of economic decision. Indeed, a vast literature has been developed over the long period of economic theorizing towards behavior related to self-interest maximization.

**Welfare, Goals and Choice**

In general economic discussion, an individual is considered on the basis of his or her effort toward the maximization of self interest. The overall effort, in general economic literature, can be shown through few steps: own welfare condition of a person, his or her own goal setting, and the choices he or she makes to achieve those goal. A brief discussion may help to understand the process better.
The welfare of a person is largely dependent on his or her consumption pattern. This may include the pattern of environment the person likes to maintain, even the tasks he or she usually likes to pursue. The goal of a person is extensively influenced by the welfare condition he or she enjoys. The goal of a person, in general, is the maximization of welfare. To enhance the welfare condition, or desire fulfillment, person may try his or her best.

The choices, finally, individual makes are remarkably dependent on the set of goals the person has already made. A person, generally, seeks choices of actions that may best suit and help to achieve the goals at its best. The person may be influenced by others, or may be guided by his or her own thought, and, thus become, motivated to choice to pursue his or her own goal.

The process, which occur in a simultaneous manner, is very much common in most economic behavior. There are, however, other facets too. The welfare of a person may, solely, not dependent on his or her own consumptions, albeit the goal is to maximize his or her self-interest. The example from another direction, though the evidence is not much common is also evident. The welfare of an individual may solely dependent on his or her own consumption pattern but the goal of that individual may be different from that of maximization of welfare.

The actual difficulty arises while choosing the set of actions in maximizing individual welfare. The individual may have the freedom to change or to follow their desired goals, i.e. the maximization of welfare, but the problem arise when the goal of one person face conflict with the goal of others. Ethical consideration become, invariably, a matter of serious concern in the maximization of self-interest, to ensure enhanced welfare conflicts each other within a given social condition.

**Rationality and Economic Behavior**

It is important to discuss here about the importance of rationality and its intrinsic role in economic behavior. The concept of ‘rational behavior’, certainly, has a strong role in motivating key economic behavior of individuals. Individuals are assumed to conduct ‘rational behavior’ to maximize their self-interest. Putting this assumption in a central place, the difference of rational behavior with actual behavior will be discussed here.

There is, indeed, sharp distance between the two behavioral assumptions in economic literature as well as practical implication. Putting the concept of rationality at the central place, it can hardly be said that rationality is well
reflected in actual behavior of economic actors. Though the concept of rationality in economic decision and choice is considered as ‘best’, it does not mean that the economic actors always turn their conduct to the best, i.e., rationality, to actual behavior. The rational behavior, thus, differs completely from actual behavior. The implication of rationality, indeed, in all phases of action of economic actors is practically meager in real world.

**Economic Behavior and Ethics**

The economic behavior of individuals, on the basis of three basic components stated in the previous section, is very much common in usual economic literature. Any alternative effort, in general, is considered ‘unusual’ or ‘absurd’ in this context. Another fascinating feature of human behavior is that, advocacy has also been developed supporting any ‘deviation’ from standard economic behavior. There can be particular behavioral geography in mainline economic theorizing – which may together form a unique economic behavior – but there can be found little regions not to incorporate ethical matters in economic judgments and behavior. The behavior commitments, incorporated ethical judgments, have much to offer to the advancement of contemporary economic literature.

Dependency, therefore, rests upon ethical judgment and related standards of behavior. Maximization of welfare can be, invariably, given priority and set of actions can be drawn in line of expected goal, but the interests of others should be evaluated with greater care and sensitivity. Pursuing maximization of total welfare, that keeps consideration of the interest of others as well, has much to offer to the overall development and welfare in a given social context.

**Conclusion**

The usual economic literature, with its long cherished backdrop connection with rationality, is notably, and has a rich history of improvement. The ethical incorporation may produce fascinating progress in contemporary economic thought. It is argued that the economic literature, with ethical judgment has much to offer in the promotion of welfare. It is advocated that the shared effort has much to contribute to the economic literature, which is seemingly not possible for any single discipline.

It is analyzed that Individual in general economic discussion is considered on the basis of his or her effort toward the maximization of self interest. The effort is observed through three steps: own welfare condition of a person, his or her own
goal setting, and the choices he or she makes to achieve that goal. Problem arises when the goal of one person face conflict with the goal of others. Ethical consideration become a matter of serious concern to get the solution of such problem.

Finally, this is supported that ethical judgment and related standards of behavior have the possibility to offer much towards the solution. Maximization of welfare can be a matter of priority, but the interests of others should be evaluated with much care and sensitivity. If the maximization of total welfare can be entertained, a better future can be expected. This has much to offer to both the economic literature and overall development and welfare.

Notes:
1. On this see Sen (1999).
2. Some played key role in developing this view, such as Leon Waltras, Sir William Petty—among others.
5. On this, see Sen (1999)
7. For more discussion on this matter, see Akerlof (1983).
8. For details, see Sen (1999).
References


Economics as Social Science:  
Linkages of Ethics 

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Abstract: New Welfare Economics and Social Choice Theory have given rise to a group of problems which lie on the frontier between Economic Theory and Ethics. Economics is also an essential part of social science. There is a relationship between Economics and Ethics as social science. The analytical developments of concepts like utility, preferences or well-being and notions like meta-preferences, agency or commitment all connect directly to the ethical dimension that any Theory of Value presupposes. In relation with the Theory of Choice, concepts like rationality, consistent election and self-interest impede the accommodation of behaviours like altruism or others whose consequences do not affect directly to the acting agent. The perceived difficulty to link ethical aspects of actions with standard Economic Theory allows us to qualify the relationship between Economics and Ethics as one of mere juxtaposition. This paper will consider the simplification that is an inevitable aspect of research. A theme throughout the paper is that how ethics is related to economics. The main objective of this work is to show the linkages between ethics and economics in social science.

Key Words: Economic theory, Ethics, New welfare economics and Social choice theory.

1. Introduction

It is widely believed by economists and non-economists alike that knowing about and “doing” economics does not involve ethical and moral issues. Economics is

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sometimes called a science – indeed, the Nobel Prize in Economics is called the Nobel Prize in Economic Sciences– which is interpreted as being based purely on empirical observation and logical analysis for understanding the truth about how the economy works (just like natural scientists do with the natural world), and is sometimes thought of as a form of engineering – engineers learn about how to build bridges and have them built, while economists learn about how to intervene in the economy and then help design policies to actually intervene in it.

It is, of course, well understood that economic activity and policies may have some ethical consequences. For instance, the economy can experience high and growing levels of inequality of income between people, or economic policies may involve giving away money to those who do not work for it, both of which may be considered ethically unacceptable. However, it is believed that economists can only investigate whether inequality is high and growing and, if it is, explain why, and that they can analyse what giving money away to people will actually do, and politicians, other government officials, ethicists and people in general are the ones who will make ethical judgments about what is going on and what policies should be pursued. This is similar to the argument that scientists can do nuclear physics without deciding whether their country should develop nuclear weapons and nuclear energy, and engineers can build underground railroads without deciding whether a particular city should have it in the first place.

However, it is increasingly being recognized that ethics and economics cannot be kept separate and many economists and philosophers have begun examining their interaction. In economics within the Theory of Value, impossibility theorems, paradoxes and anomalies commonly analysed in the literature seem to show the limits of the analytic development of the classical concepts of utility, preferences or well-being. The attempts to overcome these limits, by means of notions like meta-preferences, agency or commitment (Sen), connect directly to the ethical dimension that any Theory of Value presupposes. Moreover, in the Theory of Choice, the identification of rationality, consistent choice and self-interest impedes a correct understanding of behaviours like altruism or others whose consequences do not directly affect the particular agent. The perceived difficulty to link the ethical aspects of human action with some standard Economic Theory issues, might allow us to qualify the relationship between Economics and Ethics as one of mere juxtaposition.

The main objective of this work is to show how economics is related with social science on ethical context. This paper does not pursue to establish the link for the integration of Ethics and Economics a rather difficult task but to specify some of
the main elements in the explanation of the prevalent link between Ethics and Economics in the literature.

2. Literature Review

The antecedents of the theoretical connection between Ethics and Economics go back, at least, to Aristotle who conceived Economics as a part of practical Philosophy together with Politics and Ethics. At the beginning of his Nicomachean Ethics, Aristotle places Economics in relation to human ends by referring to the specific purpose of Economics as a set of methods or skills oriented to the objective of increasing wealth. On the contrary, Politics is considered to be the main art that one should use for the rest of the sciences, including Economics, since Politics settles down what should and should not be done to reach the final objective of Politics, that is, the good for human happiness (Aristotle, Nicomachean Ethics, Book I).

From this tradition of thought, beginning with the Greek philosophers and continuing right up to the present, an entire history of diffusion of ideas has developed. Chafuen (1991) expresses the dissemination of these ideas in the western world by means of a genealogical tree in which late scholastic economics is at the root (Chafuen 1991, p. 33). It is broadly accepted (Beltrán, 1993, p. 38-44, chapter IV of Rothbard 1999, and Grice-Hutchinson, 1978) that the Hispanic Scholastic allowed the diffusion to work, thereby allowing us to identify the background from which the work of Adam Smith was born in 1776.

Notwithstanding these origins, Economics did not continue to wear the coat of Philosophy, in particular, of Moral Philosophy, but rather it was operating a division toward its autonomy as a scientific discipline. The discipline ceased to be Political Economy and became Economic Science. It was towards the end of the nineteenth century when we find the idea that the decisions of economic agents, and not the investigation on the nature and causes of wealth should be the central objective of this new science. This fact coincides with the widespread acceptance of a new Theory of Value that places the concept of utility as the keystone of the entire economic analysis, thus implying a redefinition and reorientation of the discipline.

At this foundational epoch of the new economic science, the so-called Marginalist Revolution, a new division takes place; a rupture that leads to the identification of at least two clearly different traditions. Firstly, the tradition that gave origin to the Neoclassical paradigm (headed by Walras and Jevons) which accentuates the scientific character of Economics by adopting the canon of Physics in particular,
rational mechanics at the price of radically separating the economic science from the Ethics. In this tradition, Robbins (1938) points out the impossibility of relating Economics and Ethics, outside of mere juxtaposition. The second tradition, also within marginalism, it is inaugurated by Menger and continued by his Austrian disciples. This tradition insists on human action and its entrepreneurial development as the kernel of Economics (Hayek, 1935). This tradition does not assume Physics as a scientific canon, nor does it take Mathematics as the language of the social sciences.

Of these two traditions, the first one has been preponderant to the point to which modern Economics is often identified with Neoclassical Marginalism. It is within this context, where, traditionally, the concern and subsequent reflection on the relationship between Ethics and Economics has arisen. In particular, it is worth mentioning the schools of thought that, in a first stage, can be recognized as Welfare Economics and from which derives, at a later stage, New Welfare Economics (Bergson, 1938, 1954; Hicks, 1939; Samuelson 1947, 1948; Scitovsky, 1941, 1942) and Social Choice Theory (Arrow, 1950, 1951). These schools were born as a consequence of the problems of social election that emerge in the western societies in which Public Sector increases its weight giving origin to important questions of justice, equity and redistribution.

Here we can verify what we believe constitutes a paradox: the necessity of considerations of an ethical kind is imposed, but from that tradition of Economic Theory whose antecedents had been focused on allocative aspects of human behaviour. Indeed, the conventional literature is developed mainly by authors that start from a concern for the technical aspects of the allocative processes such as social development of compensatory approaches, rules of collective choice, and relative theorems of impossibility. These authors finish at wondering about the sense of an Economic Theory that does not examine the content and hierarchy of the ends of the individuals. An excellent exponent of this analytical process is Sen.

As it has been shown, to proceed in this manner is coherent with a program that arises as one of the branches of Neoclassical Economics in its most modern version, that is, Social Choice Theory. The concern arises where this theory is not able to explain de facto situations. Thus, the attempt to solve a particular group of problems has focused attention on the relationship between the economics and ethics.

The orthodoxy of the discipline ostracizes ethics under the claim that it encompasses value judgments by which it removes the discipline from scientific criteria. When ethics finds itself in the agenda of the literature on economics, it is
met with doubt and contempt on the basis of the subjective evaluations and
dividual opinions that come to the forefront. For the modern economist involved
in the orthodoxy, ethics is an empty, meaningless concept devoid of any inherent
value. For this reason, it can be said that most attempts to place ethics into the
theory of economics had been unsuccessful, and that furthermore, the prevailing
orthodox theoretical approach to economics had no problem disregarding such
efforts until recently (Insel, 2000, p. 7).

Some elements of the debate on Ethics and Economics would deal with the way
in which personal interests and preferences together with rational choice, are
capable of laying the foundations for the moral action, understood as the action
that points out the good end, individually or socially considered (Sen 1993, p.4).

3. Ethics

Ethics refers to the study of what is morally good and bad, what is right and
wrong. It is concerned with questions like the meaning of the good life, what are
good and bad actions, who is a morally good person, and how society ought to be
structured. Sometimes three concepts central to the subject matter of ethics are
distinguished: good (which refers to the ideal, or the thing that is desired); right
(what is not wrong); and ought (which refers to obligation, duty, or responsibility,
both of the individual and of the society).

Ethics and moral philosophy are often considered to be synonymous in the study
of philosophy. For our purposes, however, we may take moral philosophy to be a
subset of ethics, where ethics also refers to religious ethics. Thus, moral
philosophy or ethical philosophy can be thought of as the study of ethics using
reason and arguments, whereas, at least in the Western traditions, religious ethics
refers to what is considered well in terms of religious faith, that is, due to divine
revelation. It is not necessary to have religious faith to study ethics. It is often
believed that ethics and morality are matters of opinion, that arguments about
ethics cannot be resolved, and that these issues are relative and subjective, rather
than absolute and objective. Thus, examining ethical questions may be useless. It
may even be harmful, because it may lead to some people intolerantly imposing
their ethical views on others. There may be some truth to these charges.

Ethical questions may be relative to what the facts are: for instance, it may be
considered ethical to lie to someone if telling them the truth would lead the person
to locate his victim and kill her. Well-reasoned debates about ethical issues may
lead good and ethical people to disagree with each other. Sometimes the “morality
police” can breed intolerance and oppression. But all of this does not make a valid
case for rejecting the study of ethics. It does not mean that whatever a person or society believes is right. The issue is not just what a person believes but, more importantly, why the person believes it. One can formulate arguments, examine premises on which people can agree on, and try to use logical reasoning to come to some conclusions about disputed issues. It even seems to be the case that there is more agreement regarding ethics than there is disagreement, even among people from different backgrounds and parts of the world. There seems to be general agreement that to kill and to torture is bad (especially for entertainment), that an ideal of good behaviour is to be kind and charitable to others even to the point of being selfless, that it is not good to be selfish, and that it is wrong to be intolerant of people with different views.

4. Economics

It is useful to define economics as studying some activities or some system. The activities definition is used by the British economist Alfred Marshall (1842–1924), who popularized the use of supply and demand curves for studying markets and was a major figure in the professionalization of economics (as a separate scholarly discipline). He defined economics as “a study of mankind in the ordinary business of life” (Marshall, 1920, Part I, Chap. 1). Marshall did not specify what he meant by the ordinary business of life, but we can presume that this business refers to activities such as consuming, producing, working, buying and selling, saving, investing (that is, installing new capital goods for future production), and holding assets such as financial assets.

The system definition is used by the American economist and Nobel laureate Paul Samuelson (1915–2009) in his extremely popular introductory economics text (Samuelson, 1948) which has gone into 18 editions at the time of this writing. He defines the economic system as one which answers the following questions about the production of goods and services: what, how, and for whom.

Economics is almost universally divided into two parts, microeconomics and macroeconomics. Microeconomics examines the behaviour of individual economic agents or actors (such as producers and consumers) and how they interact with each other, and studies the operation of individual markets (for instance, the market for coffee) and their interaction. Macroeconomics studies the behaviour of aggregates, aggregating over both economic actors and markets. Thus, while microeconomics is concerned with the level of production of a firm, and the consumption of apples by an individual consumer, macroeconomics is concerned with the level of aggregate production of goods and services of the
economy as a whole and the level of aggregate consumption of all people in an economy without necessarily examining individual actors or individual markets.

In addition to working on general aspects of microeconomics and macroeconomics, economists work in a number of subfields of economics which are concerned with the applications of these general ideas to particular aspects of the economy. We will call the study of these particular aspects applied economics. There are many such subfields of economics, of which we will mention only a few as illustrative examples. Development economics is concerned with the economic problems of economically less-developed countries which have low per capita incomes, and examines the problem of how economic growth can be increased in these countries and how well-being can be improved. International economics deals with issues concerning the interaction of economies with the rest of the world and with the global economy. It examines the implications of free trade without government restrictions on it, and whether government protection is bad for the economy. It also examines what effects foreign borrowing, foreign investment, and the exchange rate (the domestic price of foreign currency) have on the economy. It also explores the implications of the interaction between rich and poor countries, and what this implies about international inequality.

Environmental economics examines, for instance, how pollution can be controlled when it occurs due to externalities, how economic activity affects the environment, and how environmental degradation affects economic growth and well-being. Labor economics is concerned with wage determination, the determination of employment and unemployment, the role of labor unions, and the effects of education and minimum wages on unemployment and wages. This is just a small sample of subfields of economics, which also includes, among others, public economics (economics of government activity), economics of poverty and income distribution (the determinants of poverty, income distribution, and policies which affect them), and industrial economics (the economics of firms and industries, market structure, industry performance, and antitrust policy).

5. **Linkages between Economics and Ethics in Social Science**

Economics is a social science that seeks to analyse and describe the production, distribution, and consumption of wealth. The linkages between economics and ethics arises for at least three separate reasons.

First, when economists study the economy they necessarily make value judgments, that is, judgments which involve ethical or moral issues, whether they do so consciously or not. The distinction between scientific (or engineering)
economics and ethical issues is not as clear-cut as is usually thought, and ethical issues cannot be kept separate from the study of economies. The strict separation between positive economics and normative economics, and the claim that positive economics is value-neutral, does not withstand careful scrutiny.

Second, economics studies people and groups of people, how these people and groups interact, and institutions such as markets, firms, labor unions, and even religious organizations. The people and groups have ethical values which shape their activities and their institutions, and their economic activities and the outcomes that these activities produce in turn can affect their ethical values. Economists need to understand ethics if they are to understand better how individuals, groups, and institutions behave and operate.

Third, economists often have to make policy decisions, and their work influences policy decisions. It is in fact to evaluate what is going on, and what should be done about it, that many of them study the economy. Evaluating what is happening – that is, whether it is good or bad and devising appropriate policies for improving on what is happening obviously require ethical analysis. Given the close connection between economic analysis and policy evaluation, even those economists who do not directly make policy proposals or changes need to be aware of the ethical implications of their work.

According to Sen, economics is related to two origins, both of which are related to politics but which also come from two separate traditions themselves. One of these is “ethics” and the other is “engineering” (Sen, 2004). Ultimately, economics is related to ethics and political research, making it impossible to isolate economics from ethics and politics. It cannot be said that the engineering, the other origin of economics, is certainly related to ethics, dealing with such question as: “how should a human being live?” The engineering approach is related more with “logistics,” which can be described as the management, organization, and planning of the activities that provide goods and services. On the one hand, Sen expressed that ethical based explanations of human behaviour have a place in modern economics while on the other hand, he states that the engineering approach can also contribute to the discipline.

It is clear that, when its nature is taken into consideration, both origins of economics have been discussed by economics philosophers. While Adam Smith, John Stuart Mill, Karl Marx, and Francis Edgeworth’s works are related to ethical issues; William Petty, François Quesnay, David Ricardo, Augustine Cournot, and Leon Walras’s works are related to matters of logistics and engineering (Sen, 1990, pp. 2-6). Citing philosophers from the pioneers of these two traditions, Sen
says that he was influenced more by those who were interested in ethics (Klamer, 1989, p. 141).

It can be said that the science of economics, with its expansionist character, is directed at strengthening its attribute of being the “science of sciences” within the social sciences by including those areas the economics orthodoxy has thus far neglected while preserving its engineering aspect and becoming open to ethics, and even to philosophy. This expansion of economics, while protecting its engineering aspect, means that “economics as a science” encompasses the areas of interest of “economics as an art,” and that there is no subject not under the dominance of the orthodoxy.

It is possible to state that there are two types of “science philosophy” which have appeared since the last quarter of the 19th century. The first type of science philosophy is the positivist science philosophy, whose roots may be traced to Bacon, being nurtured by Locke, Hume, and Comte until reaching Mach, under whom they have come into fruition in the form of modern logical positivism (Schlick, Carnap, etc.). In the tradition of this scientific philosophy, only one science; that is, “the unity of science;” is dominant and this means the uniformity of the concepts of “science” and “natural science.” the roots of the second type of science philosophy trace themselves to the tradition of Ibn Khaldun and Vico, continuing under Herder and the German School of History (Ranke, W. Humboldt, Droysen, etc.) until they reached Dilthey via German Idealism (Schleirmacher), the New Kantian Heidelberg School (Ricket), and modern hermeneutic philosophy (Gadamer). This tradition is the historical science philosophy that discusses a second science next to “natural science,” working diligently both to establish it and build its credence (Özlem, 2008, pp. 40-50).

Both references to the origins of economics turn economics into a social science dependent on the natural sciences while invalidating the distinction between the spiritual sciences and the natural sciences, a distinction which Dilthey has diligently tried to assert, as mentioned above. As a result, after all the arguments continuing with political science and social theory, extended onto a philosophical plane (natural sciences-spiritual sciences) and have become a dependent variable of economics. Consequently, by stressing the two origins of economics, Sen’s proposal of economics strikes a balance between both approaches and is far from contributing to the above-mentioned arguments being carried out on a philosophical basis.

In pre-capitalist societies, society was viewed holistically, with religion and morality acting as the glue that held individuals and institutions together. Later,
due largely to secularization, politics replaced religion and morality as the principal factor in social cohesion. Economics grew progressively, reinforced by its method until it became an autonomous science. Today, after the long road of three centuries, it seems that we have found a new pact; the difference now is that economics has forced the issue of its hegemony upon the other social sciences. The current preponderance of economic analysis of social phenomena does not seem to be excessive; the process was motivated by the status of respectability that the discipline began to acquire along with its rising status.

6. Ethics in Applied Economics

There are numerous sub-divisions of economics. In this section, we examine the role of ethics a little more systematically in a number of applied areas of economics or what are sometimes called sub-disciplines of economics. We will have to be content with a sampling of some fields which we consider to be particularly important both because of the issues they are concerned with and because of their relation with ethics. We discuss, in turn, development ethics, international ethics, environmental ethics, the ethics of labour and employment, and business ethics.

7. Development and Ethics

Development economics is a field of economics which emerged after World War II to conduct the systematic and specialized study of the entire range of economic problems of less-developed countries (LDCs). On the other hand, development ethics is most closely connected with the meaning of development. Early development economics generally equated economic development with economic growth – that is, growth in per capita income and gross domestic product (GDP). Some development ethicists, such as Goulet (2006), have focused on religious traditions because of the strong hold they have on many societies, but he has advocated an enlightened and critical borrowing of these traditions, such as that espoused by Mahatma Gandhi, rather than a fundamentalist one.

More importantly, they recommend that development scholars and practitioners examine what people in developing societies, especially the poor who are not trapped by vested interests, want. Goulet and other development ethicists have stressed the importance of non-elite participation in development decision-making. As outside experts, development practitioners and scholars must take care not to impose their ethics on the subjects of development, and they should take pains to involve the poor in decision-making in a fundamental way at
different levels, including local, provincial, national, and global ones and do so at difference-making phases of decision-making in meaningful ways (Crocker, 2008). Development ethicists have examined empirical cases in which non-elite participation has been an important aspect of development projects and those in which it had not in order to show not only how the former have been effective in terms of traditional development indicators but to examine under what conditions they successfully give voice to the poor (see Goulet, 2006).

These and other aspects of development ethics have enormous relevance for development economics even if they only have implications for the meaning of development. But given the relationship between the meaning of development and the other dimensions of development economics, development ethics has even broader implications. Most directly, it has important implications for development strategies and policies.

In societies in which the government is expected to play a major role through direct activity and by indirectly affecting private decision-making, officials have to make choices among different strategies and policies. This involves judgments about the objectives of development, which not only have a bearing on the effects on growth, poverty, inequality (across income groups, social classes, ethnic groups, and genders), the environment, and meeting basic needs but also on the design of policies that take into account non-elite involvement. Moreover, development ethics may also be important for the strategies of nongovernment institutions and profit-making firms and how the government reacts to these strategies.

Development ethics also has a major role in terms of one’s view of the economy – that is, whether one considers income distribution, poverty, and the environment as important elements in the analysis of the economy and whether one takes into account ethical and religious values as major factors affecting individual and group behaviour.

8. International and Global Ethics

International and global economics raise many ethical issues of which two issues are most important. The first relates to trade policies and protectionism and the second concerns the inequality between rich and poor countries and whether rich countries should do anything to help poor countries.

There are many more specific ethical questions in international trade policy but we will analyze just one. Suppose at a point in time there are two countries, one
rich and one poor. The rich country has high tariffs against the importation of textiles and employs many low-wage workers in the industry. The poor country is starting a textile industry in hopes of employing its large unskilled work force. Because of its poverty the main market for its products must be exporting to the rich country but the high tariffs prevent this from happening.

The poor country appeals to an international “ethics board” that these tariff walls are an unfair trade practice. The rich country argues that it must protect its poor workers. The poor country argues that the rich country can afford to retrain those workers and move them to other industries while it, the poor country, has no alternative but to export. This case illustrates the complexities of the ethical issues of international trade policy.

Whether or not world inequality has actually been growing, there is no doubt that there is a wide disparity across both countries and people around the world. Another set of issues concerns whether rich countries should help reduce inequality between countries by transferring resources to poor countries. Unlike governments of individual countries, there is no world government which redistributes resources across countries to reduce regional inequality. However, individual rich countries and institutions do provide foreign development aid to poor countries, although the amount of this transfer has become less significant over the years.

9. Ethics of the Environment

Economists traditionally examine the environment in terms of production, growth, and utility. They typically view the problem of pollution and environmental degradation more generally as resulting from externalities: self-interested firms and people do things that result in pollution because these generally affect other people, not themselves directly, and do not reduce this damage because it is costly to do so – it lowers profits to reduce pollution because higher prices mean people consume less. Thus, they recommend remedies such as pollution taxes and standards to restrict the quantity of pollution, and introduce tradable pollution permits which allow firms to pollute according to the value of permits they hold.

Many economists show a preference for pollution taxes and especially pollution “cap and trade” markets over quantitative restrictions for the sake of efficiency: they provide the least cost method of reducing pollution. Firms which pollute have to pay fees for doing so, and those firms which can reduce their pollution cheaply can choose to do so, while those for which this is costlier can pay the fees.
Marketed permits introduce a market where none existed. The authorities can impose a cap on the total amount of pollution and distribute these to firms, who can then trade these permits depending on whether they can more cheaply reduce their pollution with cleaner technology (in which case they can sell their permits) or buy permits which allow them to pollute more.

One set of ethical issues arises from how to evaluate the environment. If pollution causes health problems such as respiratory problems due to air pollution, diseases due to water pollution, and cancer due to ozone layer depletion or even threatens our very survival, due to problems caused by global warming, clearly environmental problems have an adverse effect on our functioning and capabilities in terms of a healthy life. If pollution taxes and other government regulations are viewed as interfering with a person’s rights to do what they want with what they own, they can be criticized for infringing on people’s rights. If, however, we extend the notion of rights to deal with the right to enjoy one’s property or environment without infringement by others who pollute, we may justify government interventions which infringe on some rights to protect other rights. If we take a desert view we may find it acceptable to punish with fines those who impose a negative externality on others. If we take an egalitarian perspective we have to be particularly concerned about how pollution affects the rich and the poor.

It may be argued that poor people are often less able to reduce the adverse effects of pollution on their health than the rich do because, for instance, they often live in polluted neighbourhoods (because they cannot afford to live in more expensive and less-polluted regions), and they cannot afford suitable health care. Thus, we have additional reasons to control pollution, especially of the kinds that adversely affect the poor. However, we also need to be cognizant of how the livelihoods of poor people are affected by pollution control policies.

Indeed, the field of environmental ethics takes a variety of different approaches to the environment, including human-cantered, animal cantered, and life-cantered (which includes plants) ethics, even the ethics of inanimate objects (such as rocks), and ecological holism which stresses the conservation of the biosphere or ecosystems. The discussion of ethical issues in environmental economics is clearly human cantered in terms of these distinctions: there may be concerns for animals, plants, and the biosphere and ecosystems, even for land and the soil, but these concerns are due to the fact that these aspects of the natural environment are instrumentally important for human beings.
Another set of ethical issues arises from the motivations of people whose activities result in environmental degradation. Economists, who assume that individuals and firms are self-interested, typically view the problem of environmental degradation as an externality. However, people are not necessarily just self-interested, and often have ethical values and follow codes of conduct.

10. Ethics, Labour, and Employment

Ethical issues are particularly important in the field of labour economics because of the fact that it deals with not just a factor of production, but with human beings. There are numerous ways in which ethical issues enter labour economics. Thus, the fact that workers, as human beings, have ethical beliefs has implications for labour market outcomes, wage rigidity, and unemployment. Furthermore, labour markets have a crucial role to play in determining the overall personal distribution of income through its effects on the labour share of output, and thus have an important bearing on the question of distributive justice.

First, we discuss the ethics of the minimum wage. Standard micro principles textbooks usually stress the fact that introducing a binding minimum wage (that is one which is above the market clearing wage) reduces employment (by raising the cost of hiring workers for firms) and causes unemployment, making the economy less efficient. Thus, the standard story which makes some people critical of minimum wage legislation – argues that the minimum wage results in inefficiency. There may be additional problems which result from this. Firms who face higher wage costs may increase the prices of their products, which can make consumers worse off. Moreover, if profits are squeezed, business firms will experience a reduction in their cash flow, which could reduce their rate of expansion due to lower investment. The minimum wage reduces profits and prevents such growth from occurring.

With the efficiency and growth effects being inconclusive, evaluations of the minimum wage have turned to other ethical considerations. It has been defended on the egalitarian ground that it increases the wage of the lowest-paid workers and increases, overall, the wage share because it sets a floor to the wage, and given the relative wage concerns on account of fairness issues, pushes up wages for other jobs as well. Others argue that its distributional consequences are negative if one is interested in improving the position of the worst-off members of a society and the labour market (Wilkinson, 2004). Many poor people are in fact not minimum wage workers and sometimes outside the labour force, and employers sometimes blunt the effects of the minimum wage by making minimum wage jobs more
The minimum wage is criticized from the rights perspective because it adversely affects the freedom of contract.

Second, we consider the role of labour unions. There is a fairly widespread view among economists that labour unions are bad for the economy. The labour union is viewed as introducing a monopoly element in the labour market: when workers form unions they become in effect a single seller of labour, restricting their supply of labour to obtain a higher wage, so that, compared to the perfectly competitive situation. By raising wages unions squeeze profits and slow down growth, at least to the extent that profits drive investment, technological change, and growth. Paralleling the discussion of the minimum wage, the counterarguments are that unions do not create inefficiency, but merely correct it, since labour markets typically have monopolistic elements which make the wage low compared to the perfectly competitive one, and unions bring the wage closer to it.

Moreover, at the macroeconomic level, it is possible that the increase in the wage share expands markets (under the plausible assumption that workers have a higher propensity to consume than profit recipients), increases sales, and in fact increases profits, which in turn may increase investment, technological change, and growth, rather than reducing it. A higher wage share may also be considered good from an egalitarian view, if labour unions actually increase the wage and do not increase unemployment.

Third, unions can provide a check on unethical business practices, such as arbitrary dismissal and noncompliance with regulations about working conditions and safety. Labour unions can have a countervailing influence on the power of big business, not only at the firm level, improving efficiency, but also at the broader political level thereby making the political playing field more even and fair (Galbraith, 1952).

11. Business Ethics

Business ethics is not normally considered to be a part of applied economics, but rather an aspect of business management, concerned with the multiplicity of decisions business firms have to make about product development, research and marketing, especially advertising, pricing, investment and financial decisions, financial accounting and representation, hiring policies and compensation standards, conditions of employment and codes of ethics, effects on the natural environment, relations with the government, and managerial styles and corporate culture.
The traditional view of the firm is that it maximizes profits and does not have any other concerns. Nor should it, since by maximizing profits it promotes overall economic efficiency. Moreover, if they did not maximize profits, firms would be unable to compete with their competitors, and would soon be driven out of business. All of these claims are questionable. First, firms are constituted by people, and as we have seen, people have ethical values and act ethically. Thus, it is likely that firms would reflect some of these ethical values, even though there are many instances of unethical and illegal behaviour by firms and their leaders. Indeed, firms do seem to do things which are ethical: for instance, they recall products which are problematic even when they are not legally required to do so, and they make charitable contributions. Although it may be argued that firms do these good things because it helps them maximize their profits, the motives behind such behaviour are worth examining more carefully. Second, in a complex business environment, it is not obvious that there is a unique and known way to maximize profits and compete successfully with other firms. Firms may choose among different possible ways by pursuing more ethical practices which, may, indeed, be good for business as well. Third, we have seen that the single-minded pursuit of profits by firms need not produce efficient outcomes. Even if markets are perfectly competitive, externalities and imperfect information, among other things, can result in inefficiency. Firms with market power can also result in social inefficiency. Breaking laws can result in problems in markets.

Moreover, efficiency is not the only ethical issue that societies are concerned with, since they may value fairness and the protection of rights, which are concerns separate from efficiency which itself may be questioned as a good. The first two issues raise questions on whether firms actually do behave ethically and whether doing so is good for business. However, it should be noted that if firms appear to behave ethically, for instance, by pursuing environment-friendly practices, paying ethically fair wages, and by not breaking contracts and other laws, questions arise about what precisely it means for firms to be acting ethically and being ethical, toward whom and about their motivations for such behaviour.

12. Conclusion

Social science is a major category of academic disciplines, concerned with society and the relationships among individuals within a society. It in turn has many branches, each of which is considered a “social science”. Economics is one of the major branches of social science. The reflection on Ethics and Economics is not new but recurrent in the economic discipline. However, it continues to be an open
question what is the relationship between the two terms. As a social science economics must concern the ethical ground of its theory and application as well as sub-branches of economics.

When economists try to evaluate what happens in the economy and what policies to adopt, they often do so by examining individual utility and satisfaction, and by examining income, output, and economic growth. These approaches are often used in the conduct of government policy interventions in the economy and in evaluating the implications of policies, using notions of efficiency and equality, cost-benefit analysis, and macroeconomic policy.

These approaches, however, are limited in the amount of attention they give to ethical issues. Many important issues are relevant in discussing whether and to what extent markets and other economic institutions are moral, whether efficiency based on individual utility, and income and output and their distribution among people are appropriate ways of evaluating outcomes. Since most economic policies affect different people in different ways, it is particularly important to evaluate the distributional consequences of policy changes, and economists need to do so much more carefully by incorporating ethical issues, than they usually do.

In this article we have analysed how one can interpret this renewed interest in ethics within the field of economics as the natural end of a process of mutual relationships that was severed when economics became a social science. We analysed the core relationship between economics and ethics and then we discussed ethics in applied economics which are sub-branches of economics study.

Nevertheless, the conclusion of this article is that it is impossible to speak in these terms for two reasons: First, the character and content of the old ethics has little to do these days with moral behaviour. Furthermore, the roles have changed: Economics is now the social science with the greatest academic and cultural prestige, while it was ethics that once had priority during the first stage of the process. Ethics exercised its control with a holistic view of society, whereas the focus has now changed to analyse why individuals from different cultural backgrounds adopt similar ethical and cultural norms with respect to moral behaviour.
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Poverty Reduction and Ethics

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Abstract: This article examines the relevance of ethics to poverty reduction. The analysis starts by distinguishing and discussing three issues important for an ethical reflection on poverty reduction: the definitions of poverty and poverty reduction, the normative background theories of poverty reduction and results of institutional activities for poverty reduction. Then present a brief overview of ethical perspectives which are relevant to poverty reduction is presented.

Keywords: Poverty • Poverty reduction • Human rights • Distributive Justice • Humanitarian action • Institutions.

1. Introduction

In today’s world, poverty is one of the most pressing social problems that has gained significant and increasing attention from economists over the last years. Whilst most of them agree that global poverty is morally wrong and unjust, one can find large disagreement on how to solve this.

This article aims to focus on ethical issues concerning the conceptualization, design and implementation of poverty reduction measures from the local to the global level. Here we want to explore three issues that are closely connected with such an ethical exploration of poverty reduction: the definitions of poverty and poverty reduction, the normative background theories of poverty reduction and the results of activities of institutions for poverty reduction.

The objective is not to provide a comprehensive overview of ethical theories, but rather to focus on describing the relevant link between ethics and poverty reduction.

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2. Poverty and Poverty Reduction: Issues of Multidimensionality and Ethics

The first issue is that of defining poverty and poverty reduction. Unfortunately, there is no consensus on both questions, but it is clear that they are somehow connected, in a way that every concept of poverty reduction includes a concept of poverty but not the other way around.

Hence, we will begin with the question of what poverty is. In poverty research the distinction between absolute and relative concepts of poverty is sometimes used. Absolute poverty assumes capturing a minimum standard, while relative poverty is measured against the welfare or income level of a particular social context like a particular state. There has been some dispute among poverty researchers about this distinction and which approach is best suited to capture poverty (Sen 1983; Townsend 1985).

One absolute concept that is often used in debates about global poverty is the measure of the World Bank, may be most famously the poverty line of 1.25$ per day (World Bank 2011; see for a critique: Pogge 2009). Using this poverty line around 1.2 billion people were living in severe poverty in 2011. The main idea behind such absolute poverty lines is to capture the minimum income that is necessary to survive.

But also other poverty measures have been developed, that goes beyond the measurement of income and try to capture the multidimensionality of poverty. For example Sabina Alkire of the Oxford Poverty and Human Development Initiative has developed a Multidimensional Poverty Index (MPI), based on the capability approach, which covers the three dimensions of health, education and standard of living (Alkire 2008).

This poverty measures produces different results, like on the one hand in the Democratic Republic of Congo around 87 % of the population lives of less than 1.25$ a day with around 75 % of the population being poor according to the MPI. In Chad on the other hand only 35 % have less than 1.25$ a day but the MPI counts 87 % as poor. Two different examples of so-called relative poverty measures would be the relative income poverty threshold and the concept of material deprivation that are both used by the official statistics office of the European Union (Guio et al. 2012).

Relative income poverty describes a person who has less than 60% of the equalized median income of the country in which he or she resides. And a person is severely materially deprived according to that indicator if he cannot afford four
out of nine goods or services, which are deemed necessary for a decent living. As of today these nine goods and services are defined by people who cannot afford to (1) pay their rent or utility bills; (2) keep their home adequately warm; (3) face unexpected expenses; (4) eat meat, fish or a protein equivalent every second day; (5) enjoy a week’s holiday away from home once a year; (6) have a car; (7) have a washing machine; (8) have a colour TV; or (9) have a telephone. Currently about 48.7 million people in the European Union are severely materially deprived according to this measure, and about 84.1 million live in relative income poverty. (Deen K., 2016)

What is to be done with the ethical issues in poverty reduction? In this regard, at least three points are important to make.

Firstly, it is necessary to define and measure poverty in order to know what poverty reduction is in the first place. If poverty is confined to income poverty like the 1.25$ a day line of the World Bank, then the most effective, may be the only possible, measure of poverty reduction would be to raise the daily income of these people. This would be effective regardless if that income raise comes from state benefits, development aid or labour. If one agrees that poverty is not only about income but a multidimensional phenomenon that also has something to do with health, housing, education or participation then poverty reduction would also be more complex. An increase in income will affect some of these areas but not all. A child who has no opportunity to go to school or is not allowed to go because she is a girl would still be poor – at least in that dimension – even if the income of her parents rises.

Secondly, and closely connected to the first point, the ethical issues do not begin with poverty reduction and how the poor should be helped and who should do it. The ethical issues are present in the definition and measurement of poverty itself. There is no neutral poverty definition, which does not rest on certain assumptions about what a decent minimum or a good life or a just society is. Every poverty measure tries to capture something that is of the utmost importance for a decent human life, whether it focuses merely on biological survival, material well-being or social inclusion. This means that the ethical questions begin here. What should be deemed part of such a decent life? How can we define what a human being needs to live a life of a minimum standard? What role should choice and autonomy play in our measures of poverty?

Thirdly, also within this distinction of absolute and relative poverty, ethical issues are present. Sometimes it seems that absolute poverty, especially if it is used to identify the bottom billion, the most deprived people in this world, is by definition
morally worse than relative poverty. Although one do not want to disagree with such a statement, it says something about the entanglement of ethical judgements and poverty research and poverty reduction. If one form of poverty is morally worse or more unjust than another this certainly affects how we should design poverty reduction and what kinds of poverty one should target with higher priority. But there is also another issue present in the distinction between absolute and relative poverty, namely the differentiation between sufficiency and inequality. Both are terms that are very important in ethical debates about justice and morality.

So what is then poverty reduction? Poverty eradication, or poverty alleviation, is a set of measures, both economic and humanitarian, that are intended to permanently lift people out of poverty. Poverty occurs in both developing countries and developed countries. While poverty is much more widespread in developing countries, both types of countries undertake poverty reduction measures.

Poverty reduction also involves improving the living conditions of people who are already poor. Aid, particularly in medical and scientific areas, is essential in providing better lives, such as the Green Revolution and the eradication of smallpox. (Newsweek, 2012)

Broadly speaking, it is every effort to alleviate the effects of poverty or to help people to escape poverty. Obviously this can be done in many different ways and there is no agreement within poverty research which ways work best. At least three aspects need to be considered in any poverty reduction measure.

(a) What is the target group? The answer to this question is closely tied to the conception of poverty that is used. If only income poverty is deemed relevant, then those who live above the income threshold but are deprived in other areas will not be targeted by poverty reduction measures. Other restrictions – or decisions that need to be made – are relevant as well: what about illegal migrants? Does the state also provide for these or can and should it restrict its poverty reduction measures to the regular citizens? It is also an important difference whether poverty reduction aims to prioritize those who are worst off or if it aims at those who are not so far below the threshold and hence can be helped most effectively to escape poverty.

(b) What are the intended effects? Poverty reduction measures can have multiple intended effects. The aim can be just to push those below above the income threshold regardless of how that is achieved. Or the main goal may not be to
increase income but to help them to find employment and to become independent from state money. Poverty reduction measures that are based on a multidimensional understanding of deprivation will have to acknowledge that it is very difficult to tackle all deprivation simultaneously. Should education, employment, housing or health be prioritized and supported?

(c) What is known about the side-effects? Every poverty reduction measure affects many dimensions of a single life, the local community and if it is a large scale measure maybe even the global community. A good example is the increase in productivity and hence consumption of poor people that affect the environment and may add to ongoing climate changes. On a smaller scale it is possible that well intentioned humanitarian actions of poverty reduction have a negative impact in the long run. The provision of second-hand clothes for free can destroy local clothing industries.

As one can see in all these three aspects of poverty reduction we encounter ethical issues that need to be addressed. Under circumstances of scarcity very difficult questions of trade-offs and prioritizing have to be answered. These are present at all levels where poverty reduction takes place or is supported. An individual in the rich west can only give a certain amount of money but has more than enough options about what to give it for: the beggar on the streets in his neighbourhood, the NGO (Non government organization) that supports street children in Bangladesh or UNICEF that supports children in a refugee camp in Somalia. All those poor people are obviously in need. Similar decisions have to be made by the state in regard to poverty within its own borders and in regard to global poverty. Compared to what the western states invest in local poverty reduction within their countries the sum they give for global poverty reduction is tiny but is that unjust?

4. Normative Background Theories of Poverty reduction

Having said that every conceptualization of poverty and poverty reduction brings forward normative questions of ethics, it becomes clear that we face the task of identifying a normative background theory that guides the analyzation and criticism of poverty as well as poverty reduction measures. Philosophy has many possibilities to offer in that respect and we cannot hope to discuss or even name all of them. We chose to focus on three concepts – one might also call them approaches: human rights, distributive justice and humanitarian aid.

4.1 What are the characteristics of human rights?

Human rights are internationally agreed standards which apply to all human
beings. They encompass the civil, cultural, economic, political and social rights set out in the Universal Declaration of Human Rights (UDHR 1948).

The key international human rights treaties – the International Covenant on Economic, Social and Cultural Rights (ICESCR 1966) and the International Covenant on Civil and Political Rights (ICCPR 1966) – further elaborate the content of the rights set out in the UDHR and contain legally binding obligations for the Governments that become parties to them.

Building upon these core documents, other international human rights treaties have focused on groups and categories of populations, such as racial minorities, women, children, migrants, and persons with disabilities, or on specific issues such as enforced disappearance or torture.

Human rights law recognizes the severe constraints that poor countries face and allows for the fact that it may not be possible to realize all economic, social and cultural rights for everyone immediately.

However, Governments are obliged to provide a long-term plan that will lead to the progressive realization of human rights. They should also take immediate concrete steps, including financial measures and political commitments in accordance with available resources, targeted deliberately towards the full

1. international Convention on the elimination of all Forms of racial Discrimination www.ohchr.org
4. international Convention on the Protection of the rights of all migrant Workers and members of their Families www.ohchr.org
6. international Convention for the Protection of all Persons from enforced Disappearance www.ohchr.org
7. Convention against torture and Other Cruel, inhuman or Degrading treatment or Punishment www.ohchr.org

Human Rights Are:
- universal, the birthright of every human being;
- aimed at safeguarding the inherent dignity and equal worth of everyone;
- inalienable (they cannot be waived or taken away);
- interdependent and interrelated (every human right is closely related to and often dependent upon the realization of other human rights);
- articulated as entitlements of individuals (and groups) generating obligations of action and omission, particularly on States;
- internationally guaranteed and legally protected;
realization of all human rights. In situations where a significant number of people are deprived of human rights, the State has the duty to show that all its available resources – including through requests for international assistance, as needed – are being called upon to fulfil these rights.

4.2 What are the links between human rights and poverty?

Poverty has conventionally been defined in economic terms, focusing on individual and household, relative or absolute financial capacity. It is now generally recognized that poverty is multidimensional and not only defined by a lack of material goods and opportunities. The UN Committee on Economic, Social and Cultural Rights has defined poverty as:

“a human condition characterized by sustained or chronic deprivation of the resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living and other civil, cultural, economic, political and social rights.” (United Nations, 2001)

Human rights standards set out the different objectives of development that have to be achieved in order to eliminate poverty, including health, education, freedom from violence, the ability to exert political influence and the ability to live a life with respect and dignity. Human rights principle sunner pin all civil, cultural, economic, political and social rights and provide the foundation for building interventions to achieve the realization of human rights and the elimination of poverty. Some human rights principles, including participation and non-discrimination, are also standards. This means that they should be incorporated into both the processes and objectives of development. Human rights principles include:

Indivisibility: Indivisibility means that civil, cultural, economic, political and social rights are all necessary for the dignity of the human person and are interlinked. The principle of indivisibility implies that responses to poverty should be cross-sectional and include economic, social and political interventions.

Equality and non-discrimination: Human rights standards and principles define all individuals as equal and entitled to their human rights without discrimination of any kind, such as race, colour, sex, ethnicity, age, language, religion, political or other opinion, national or social origin, disability, property, birth, physical or

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mental disability, health status (including HIV/AIDS), sexual orientation or any other status as interpreted under international law. Inequality and discrimination can slow down economic growth, create inefficiencies in public institutions and reduce capacity to address poverty. (World Bank, 2005)

Human rights law and jurisprudence recognize the importance of both formal and substantive equality. Formal equality prohibits the use of distinctions, or discrimination, in law and policy. Substantive equality considers laws and policies discriminatory if they have a disproportionate negative impact on any group of people. Substantive equality requires Governments to achieve equality of results. (Elson, 2007) This implies that the principle of equality and non-discrimination requires poverty reduction strategies to address discrimination in laws, policies and the distribution and delivery of resources and services.

**Participation and inclusion:** The human rights principle of participation and inclusion means that every person and all peoples are entitled to active, free and meaningful participation in, contribution to, and enjoyment of civil, economic, social, cultural and political development in which human rights and fundamental freedoms can be realized. It implies that people who are poor are entitled to participate in decisions about the design, implementation and monitoring of poverty interventions. This requires access to information, and clarity and transparency about decision making processes. It also means that all people are entitled to share the benefits of the resultant policies and programmes.

**Accountability, transparency and the rule of law:** Processes of accountability determine what is working, so that it can be repeated, and what is not, so that it can be adjusted. (Hunt, 2007)

Accountability plays a key role in empowering poor people to challenge the status quo, without which poverty reduction is unlikely to succeed. It is generally recognized that both the State and private sector are insufficiently accountable to support effective and equitable service provision. (Gauri, 2003)

Accountability has two elements: answerability and redress. Answerability requires Governments and other decision makers to be transparent about processes and actions and to justify their choices. Redress requires institutions to address grievances when individuals or organizations fail to meet their obligations. There are many forms of accountability. Judicial processes are one form of accountability used to support the implementation of human rights. Human rights law means that States and other duty-bearers are answerable for the observance of human rights. Where they fail to comply with the legal norms and standards enshrined in human rights instruments, rights-holders are entitled to
institute proceedings for appropriate redress before a competent court or other adjudicator in accordance with the rules and procedures provided by law.

Some processes of accountability are specific to human rights, for example inquiries by national human rights institutions and reporting to the UN human rights treaty-monitoring bodies. Others are general, including administrative systems for monitoring service provision, fair elections, a free press, parliamentary commissions and civil society monitoring. (Paul, 2007)

The principle of accountability requires that PRS processes of design, implementation and monitoring should be transparent and decision makers should answer for policy process and choices. In order to achieve this, the PRS should build on, and strengthen links to, those institutions and processes that enable people who are excluded to hold policymakers to account.

Now try to flesh out the relationship between poverty reduction and human rights and what the human rights agenda has to offer in terms of a normative and not merely political background theory. The first important point is that many scholars argue that poverty, at least in its most severe forms, is a violation of human rights and that it should be alleviated for that reason. The human rights agenda is obviously broader than the problem of poverty but to tie poverty and human rights together has significant normative force. Human rights are universal and must not be violated under any circumstances and – at least as many scholar argue – they are binding for each and every individual as well as institutions and states. No one is allowed to violate the human rights of another person and if poverty is such a violation the claims of the poor to being helped and supported are very strong. Thomas Pogge is one of the most prominent philosophers who have argued in this direction (Pogge, 2008). He aims to show that global poverty is a human rights violation because it is based on a violation of the negative duties of rich countries not to harm others. Trade agreements and other international institutions are all set-up and work in the favor of rich countries while they produce and sustain global poverty, especially in the poorer countries. Poverty reduction is hence not a demand of charity or benevolence.

4.3 Distributive justice

This refers to what society owes to its individual members i.e. the just allocation of resources. Distributive justice is closely linked to the concepts of human dignity, the common good, and human rights. Considered as an ethical principle, distributive justice refers to what society or a larger group owes its individual members in proportion to:
The principle of distributive justice implies that the society has a duty to the individual in serious need and that all individuals have duties to others in serious need.

There are three interrelated and distinct ethical variables approaches to distributive justice. These are: libertarian, utilitarian and egalitarian influences. They have influenced the economic, political and moral values as well as relationships regarding distribution of social and economic benefits and related costs in any given society.

The libertarian explanations for poverty, (explained as unequal distribution of wealth and income), are varied but all focus on “rights”. For instance, Nozick’s libertarian theory of economic distribution asserts that individuals possess what he describes as “Lockean rights (1974). According to McEwan (2001:274-275), acknowledgement of these rights imposes ‘side constraints’ on how individuals may behave towards other persons, so that each individual remains responsible for his/her own unique life without coercion from others.

Utilitarianism, another popular theory of distributive justice, is concerned with the maximization of personal happiness, which should ultimately determine what is just, or unjust behavior. However, it is not easy to identify which activities will promote human happiness for want of a reliable standard of utility. Ultimately, the attainment of justice is a matter of pursuing social well being which is tied to the question of promoting happiness through economic distribution. This reasoning supports the utilitarian view of Brandt (1979:312-13) that a more equal distribution of income from those with more to those with less is likely to increase the overall happiness of a society.

Another theory of distributive justice, which explains why poverty exists in society, is egalitarian. This approach is associated with the views of John Rawls (1971:11-15).Egalitarian doctrines maintain that all humans are equal in fundamental worth or social status, according to the Stanford Encyclopedia of Philosophy. (Arneson, 2002)

These are the distributive justice theories, which explain why poverty exists in society. Their respective explanations differ in terms of their varying, yet competing standpoints.
4.4 Humanitarian action or charity

The third normative background theory that might be employed is that of humanitarian action or charity (Langlois, 2008). Those theorists argue that there is no duty of justice towards the poor to help them and that neither richer individuals nor states or global institutions are obliged as a matter of justice of poverty reduction. Still they argue that it would be good to help the poor. Two important points should be made here: firstly, it is possible to differentiate between different groups of poor people. For some scholars who are particularists – for example David Miller (2007) – important differences exist between duties we have towards fellow citizens and towards foreign people living in other countries. Such an approach argues that because of the particular relationship that citizens have – a shared identity, interest in the common good etc. – duties of justice exist between them while such duties do not exist on a global and international level. For poverty alleviation this has interesting and important consequences.

Particularisms can bring forward important and strong arguments for why poverty reduction within a state is a matter of justice and why the set-up of a functioning welfare state is necessary but they will deny that international development aid or other duties towards the global poor exist for the same reason or can claim the same normative force. Secondly, charity often only refers to individuals or institutions – for example companies etc. – to give to the poor but they seldom call for a change of rules and institutions themselves. Furthermore charity, as we have said, is not a duty of morality or justice, it is something that should be done but the poor have no claim or right to be helped. That also influences the relationship between those who give and those who receive.

Human rights, theories of distributive justice and approaches to humanitarian aid based on moral duties are just three examples of normative background theories to poverty reduction. They also can have significant overlap.

5. Institutions of Poverty Reduction: Results of their activities

There are some Institutions (Govt. & Non-Govt.) who work for poverty reduction, simply we mark them MFI (Non-Govt.). Most of the literature on microfinance benefits deals only with the borrowing effects of microfinance programs. However, microfinance programs provide a variety of services including awareness building among the poor, especially women, skill-based training, marketing support for products, extension services for inputs, plus mobilizing savings in small amounts and of course, lending. That is, MFI provide both
financial and non-financial services. While mobilizing savings and extending credit are the financial services which account for the highest shares of services provided, training and extension services constitute non-financial services, which also explains a prominent visible product of MFIs in many countries.

Microfinance and poverty reduction have become the two sides of a coin. The role of microfinance on poverty reduction is well accepted in the arena of economic development. My research (Rahman, 2017) analysed the impact of microfinance on poverty reduction of poor households of Fatikchari Upazilla of Chittagong district and Ashugonj of B.Baria district. Field survey was conducted on the rural part of these two Upazillas. Data have been collected through a well-structured questionnaire from 299 microcredit borrowers of BRAC and GB (Grameen Bank) -two giant microcredit providers of Bangladesh and from 199 non-borrowers from the sample area. Respondents were selected by cluster sampling. Tabular method was used to describe the data. Hypothetically the findings are found significant resulted from chi-square test, regression and ANOVA. The study revealed that microcredit disbursed through BRAC and GB play a dynamic role to reduce poverty in the study area by income generating activities of the women borrower. It was found that microcredit has a positive impact on expenditure, consumption, condition of house, education, health and decision making ability of the women borrowers household who spent five years in BRAC and GB comparing with the non-borrower who are not facilitated through any microcredit program.

6. Understanding poverty: A proposal

The way forward lies in recognizing and accepting the influences and impacts of human rights, humanitarian aid and distributive justice on the redistribution of wealth in society. This shows the powerful influence of ethical values on distribution of wealth and income in society. It follows that to deal with poverty, ethical values are of paramount importance. This is so because they influence people’s attitudes and perceptions – behavior. So to address poverty in society, attention must also be paid to ethical values. By so doing, efforts towards eliminating vast inequality in incomes, in assets (including education and health status), in control over public resources, and in access to essential services, as well as pervasive insecurity can be realized. In addition, macroeconomic and structural policies that encourage growth and employment require ethical fertilization for them to become essential for any poverty reduction strategy. In fact, poverty challenges today require ethical considerations to be key ingredients of any poverty reduction strategy in society.
7. Concluding remarks

In this article, I have attempted to show that poverty reduction is the ethical problem in society. Efforts to address poverty will be inadequate without taking on board ethical imperatives. This situation calls for, rethinking about understanding and explaining poverty. In this connection, it has been argued that ethical values have an important role to play. The analysis of poverty calls for ethical issues. As a result, human rights, humanitarian aid and distributive justice becomes a starting point for exploring the appropriate distribution of social and economic benefits and related costs in any given society. On the other hand the activities of institutions of poverty reduction play a dynamic role to reduce poverty by income generating activities of the women without harming others. This type of program contains many elements of an ethical response to poverty reduction.

Therefore, in my conclusion, I will say that we are morally required to help the poor people. If we do not take serious consideration and do something about the issue, we are acting wrongly. We have to give away our money to a certain extent in order to help relieve the worldwide poverty.
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Economics Science and Technology: Some Ethical Issues

MD. ANISUR RAHMAN*

Abstract: Science is a collection of knowledge or facts about a particular subject. Technology materialize the requirements of science and meet some non-materialized requirements. Ethics directed the individuals as how he will behave with the society, and Economics studies about the allocation of resources within the society, nation and globally too.

Ethics and morality are the central theme of 21st century for the development of science and technology, which relates with the economics. The world economy is driven by technology. So, technology is not just for the technologists but for the economists also.

There is a wide technological gap between developing and developed countries. The developed countries are now using AI (Artificial Intelligence) technology, which has some overlapping with almost all fields in sense that it offer the potential for wide application. Application has already proven in the areas are Medicine, law, Manufacturing, Economics, Banking, Biology, Chemistry, Defense, Civil Engineering and Aerospace Which may create more technological gap between developing and developed nations.

In a study at The University of Johannesburg, they saw that AI has already affected some economic theory; these are, Bounded Rationality, Efficient market hypothesis and Prospect theory.

“Technological Frauds” are making “Technological Trap” for us by using “False Paradigm Model”. They are sometimes misleading us by the biased and complex technological information, which may lead us to take inappropriate policies to meet the customers demand for new technological products.

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Nationally, we are using or trying to use the technologies to meet the demand of our country for globalization, where many ethical questions may arise. They can create more and more ethical debate in future like Electricity, Computer Technology Nanotechnology, Cognitive Technology, Biotechnology, Genetic Technology, Robotic, Satellite Imaging etc.

Globally, there are many ethical affects upon national security and humanity for many countries, for the use of highly advanced military and intelligence technological products, such as Nuclear Weapons Technology, Undefined Flying Objects, Unmanned Aircrafts, Lesser technology, Drones etc.

Science and technology is not capable itself to possess the ethical qualities. The ethics involved in the new development of technologies, always it cannot remember, whether it is fit for the society or not, because of its profit maximization and market competition concepts.

So, with very many recommendations from different authorities, we should emphasize upon techno-ethical concerns both in Government and Non-Government sectors cooperatively, to ensure the ethical issues for our nation in respect of technology dependent economic development of our country, which is now a demand of globalization in the 21st century.

“Economics, Science and Technology”–Ethical Issue

Science is a collection of knowledge or facts about a particular subject. Technology materializes the requirements of science and meet some non-materialized requirements. Ethics directed the individuals as how he will behave in the society, and Economics studies about the allocation of resources within the society, nation and globally too.

Ethics and morality are the central theme of 21st century for the development of science and technology, which relates with the economics. The world economy is driven by technology. So, technology is not just for the technologists but for the economists also. It is impossible to separate economics, science and technology.

Technology is now rapidly changing the economic directions of the world. The market condition is very unrest for the regular launching of new technological products to meet the customers demand. As an effect, the products we are thinking latest today, but it is going backdated tomorrow.

Technology itself has no value until it is commercialized. To commercialize the technology it should be complicated to maintain its secrecy. Technology commercialization can create several new technological sectors or sub sectors upon technology, thus one technology depends upon another and sometimes need
new technologies, where the innovation and new invention take place. Technological innovation and invention is strongly related the economics.

Technological gap between developing and developed nation is very wide. As we know, the 21st century is the revolutionary century for science and technology, to maintain the superiority upon technology the developed nations are investing large amount of money for the innovation and invention for the new technologies, which is targeted to meet the present and future technological demand. But the developing nations like us we are not strong enough to do the same.

There are two major part for the technologies, Technologies for Common use and the Military Technology. The economists can make policy according to their resource and expenditure information, but if the economists are not well informed about the military technologies and their expenditure information, economic policy making for the nation may not be targeted to achieve expected growth for the sustainable development for our nation. This may lead us towards technological gap for both military and common use technologies.

Though, there are a wide technological gap between developing and developed countries. The developed countries are now using AI (Artificial Intelligence) technology, which has some overlapping with almost all fields in that it offer the potential for wide application. Application has already proven in the areas are Medicine, law, Manufacturing, Economics, Banking, Biology, Chemistry, Defense, Civil Engineering and Aerospace. This may create more technological gap between developing and developed nations. The artificial intelligence may create unemployment situation and can affect humanity.

In a study at The University of Johannesburg, they saw that AI has already affected some economic theory, these are, Bounded Rationality, Efficient market hypothesis and Prospect theory.

In the 21st century, technological development is a race and cooperation. The developed nations are advancing upon technology. On the other hand, developing nation is not likely advancing. But, to meet the demand of globalization and technology dependent economic development, developing countries like us are mainly dependent upon imported technological products. In some areas we are trying to invent and innovate the new technologies, where we should emphasize more and more to maintain the ethical issues for our humanity.

Nationally, we are using or trying to use some of the technologies to meet the demand of our nation for globalization where many ethical questions may arise. They can create more and more ethical debate in future like Electricity, Cellular
Technology, Computer Technology, Nanotechnology, Biotechnology, Medical Technology, Robotic, Satellite Imaging, Lubrication Technology etc.

**Rup Pur Nuclear Power Plant**: lower cost electricity is one of the fundamental demand for industrial development. To meet the demand, our government and Russia as a joint venture project started this nuclear power plant, but the waste disposal process should be well observed, as we have an example about Chernobyl Nuclear Disaster.

**Ram Pal Power Plant**: Is a giant project for coal based electricity production as a joint venture project with India. We should revise again and again before final establishment of the project, about the future of Sunderban, which is our national pride.

**Computer Technology**: Office automation and E-business is a global environment, from where we could not hide ourselves, to adopt ourselves we are using internet technology, but before started this technology we were not efficient about its security system. As a result, we are suffering like Bangladesh Bank hacking.

Economics and Ethics can explain the reality of internet security. The security system are not always installed for their effectiveness but because of the economic pressure, which drive the companies or organizations to install them.

**Nanotechnology**: Use of Nanotechnology for the intelligence and security purpose is an advancement in this sector to prevent suspected crime preparation. But sometimes, we see that, some unauthorized Nano-technological products are coming to our country through improper channel. We are very much afraid if these products will be used as civilian use, may hamper our privacy and humanity will be threatened.

**Mobile/Cellular Technology**: The technology has a huge users in our country, though government of our country has already started the biometric SIM card registration, is a very good initiative, but many of their using social communication media software and apps for which the users do not have to pay. Through these media crimes are increasing and the teen aged population is spending maximum of their valuable time in these network. For the excessive dependency upon these technology, one may be a psychic patient, which may effect upon our society, nation and economy.

**Medical Technology**: Globally, the Medical Technology and Health Science is moving towards Gentrification of medicine. Here is a worry that the role of social
and environmental factors are increasingly receives insufficient attention, leading to one dimensional view of diseases and disabilities.

So, we should be well observed upon imported medical and diagnostic products, to prevent the unexpected health hazards of our people in future, which may cause economic disorder in this sector.

**Educational Technology**: In the recent years, it is seen in the Education Technology has changed students value and behavior, including access to inappropriate materials in school and colleges, online plagiarism using material copied directly from the internet, students are staying ahead from the students own works.

**Robotics**: Which is decreasing the use of manpower increasing the profits in industrial sectors. So, the owner of the high tech industries are interested to use robots and programmable machines in their production sectors. Here is a worry about that future unemployment may affect our economy in the long run.

**Satellite Imaging**: Is a very modern concept and economical also. But if we have not the fundamental control upon the technology and the authority, can affect our national security and economy.

**Lubrication Technology**: Lubrication Technology for automobile and industries is a major part of this sector to prolong machineries life. But about 80% of our national lubrication demand are meet by the imported lubricants. There are some local recycled lubricants and some imported synthetic grade lubricants can shorten the machineries life. Which is an affect upon our economy both in private and government sectors.

**Food Technology**: Excessive use of pesticides, artificial flavor in food, food additives use, and the use of preservatives in food, are making the people of our country, sick. In recent years in our country, diabetes, cancer, liver disease, heart disease are increasing remarkably. The people of our country are spending a lot of money in abroad for the better treatment which has a great effect upon our economy.

Globally, there are many ethical affects upon national security, economy and humanity for many countries, for the use of highly advanced military and intelligence technological products, these are Nuclear Weapons Technology, Undefined Flying Objects, Unmanned Aircrafts, Lesser technology, Drones, Cognitive Technology, Hybrid Communication technology etc.
Nuclear Weapons Technology: As we know, the Nuclear Weapons is not a conventional weapon but the political weapons for the world leaders to line up different nations behind them for the politico-military-economic purposes.

Undefined Flying Objects: These technologies are very much unethical for the world; they can move through the world very fast for spying over the intended country, which is a threat for national security for those, who have not the sufficient radar capacity.

Unmanned Aircraft: Is a part of autonomous military technology. The autonomous weapons and the use of unmanned aircrafts in different areas of the world for bombing and spying, raising the question about ethics and law. Because these technology is controlled by cognitive computing, is not yet successful to maintain the law and ethics of war. Many civilians had died at the autonomous military operation around the world.

Lesser Technology: Which is now a most powerful technology for geographic, military and astronomical purposes, for sending and receiving the images and information from long distance. The inappropriate use of these technology can arise many ethical debate.

Drones: The unauthorized use of drone is dangerous, which can disclose confidential information of our military, commercial and industrial sectors.

Cognitive Technology: Artificial Intelligence and Cognitive Science has developed a model of human thinking. AI involves the study of cognitive phenomena in machines. Computational modeling uses simulations to study how human intelligence may be structured. The technology may lead the researchers towards a higher invention. But the unauthorized human target, and by diverting their intelligence, the interest group may lead them to do unlawful activities like terrorism, which has a great effect upon national humanity and economy.

Hybrid Communication Technology: The developed nations are using hybrid communication technology for faster communication within their nations. They can also use these technology as military communication at any moment for their nations. But if the procedure can cross the border, can affect other nations.

The unbelievable modern services of these above mentioned technology is always shown to us in many different ways to increase our demands and dependency upon these technology, and their protective technology, to buy them or to afraid of them. This is very complicated and expensive for us and for the poor countries, so that the external power can interfere in our policy to protect us. We would have to expend money as per their recommendation as they are the technology
suppliers, which has a great impact upon our economy both for military and civil sectors.

“Technological Frauds” are making “Technological Trap” for us by using “False Paradigm Model”. They are sometimes misleading us by the biased and complex technological information, which may lead us to take inappropriate policies to meet the customers demand for new technological products.

Science and technology is not capable itself to possess the ethical qualities. The ethics involve in the new development of technologies, always it cannot remember, whether it is fit for the society or not, because of its profit maximization and market competition concepts.

So, with very many recommendations from different authorities, we should emphasize upon techno. Ethical concerns both in Government and Non-Government sectors cooperatively, to ensure the ethical issues for our nation in respect of technology dependent economic development of our country, which is now a demand of globalization in the 21st century.

**Recommendations**

1. Both Military and our civil economists and technological concerns should have a strong cooperation for our future techno. Ethical development for sustainable economic development.

2. Intelligence technology should be most sophisticated and world standard to monitor over all technological products of our country. Because, the terrorist know that modern culture how much vulnerable the because of its excessive dependency upon technology.

3. Scientist cannot always control their findings, so to make absorbable for the nation scientific journalism should be more active about to approach to the people.

4. Government should enact regulations to prevent the “Tragedy of the Commons”.

5. Both in the government and in private sectors, we should invest more in technological research and development to inspire the new inventions and innovation of technologies.

6. The purchasing authorities both in government and non-government sectors should be ethically developed to purchase technologies for our nation.
7. Unauthorized import of modern technological products should be strongly monitored to prevent crimes.

8. A conversation should be continued between Scientist, Ethicist, Policymakers, Military, Industry Leaders, Politicians and the General Public.

9. Governments of different nations should have strong cooperation regarding techno-ethical matter, for the present and future technological culture of the world.

10. United Nations should take responsibility to involve the governments of all countries to promote integrated responses to global problems.
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Abstract: Ethical behavior appears to be largely influenced by a range of factors including the law, government regulation, social pressure, industry sector, ethical codes and personal standards. Banking, despite being a highly regulated industry in most countries, has not gone untouched by ethical crises. The process of business, domestically and internationally, should be guided by appropriate norms of ethical conduct. Appropriate regulatory structures and processes cognizant of the nature of organizations and considering the perspective of the country where the business process occurs should be developed, and be properly implemented if acceptable ethical standards in business are to be achieved. In this article it has been stated to build & nurture an institutional culture that believes that the long term net worth of a firm is maximized not by driving short term profits but by driving enduring contribution to societal welfare. Good ethics militate profitability is wrong & must be demolished. Rather the opposite is true. If an institution target societal welfare, profits automatically roll in.

Introduction

Ethics, perhaps the much known word in our society and is relevant to every action in our personal, social, national and international sphere. Ethics also draw significant attention while it is neglected or not matched with a certain standards set according to the culture of a particular society. Banking is certainly a business with one difference “much highly regulated than other business”. Like other
business banking involves a number of objectives including profit maximization within a framework of social and other obligations.

**Ethics in business**

Ethics in business is related to national factors as well as global perspectives, varies from country to country, and potentially it is affected by many factors including the strength of legal, business regulation and human characteristics such as ethnicity, gender, level of education and socio-cultural environment. There is often a conflict between the pursuit of profit and the exercise of ethical conduct in business as business managers pursue profit to maximize returns to investors and often to maximize their own self-interest. Trevino and Nelson (1995) define ethics as the principles, norms and standards of conduct governing an individual or group. They also comment that two types of factors influence ethical behavior: characteristics of the individual and the characteristics of the organization. England (2006) suggests that ethical decisions are made by business people, based on the following considerations: 1) how employees can feel contentment professionally; 2) how customers can be satisfied; 3) how profit be assured for the stakeholders or shareholders; and 4) how the community can be served. Under competitive conditions when a free market economy prevails, business managers make choices to maximize short-run profit, but to be sustainable in the long-run business organizations must usually satisfy both profit expectations and acceptable norms of ethical business practice. Fraedrich and Ferrell (2004) suggest that business ethics comprises moral principles and standard that guide behavior in the world of business. Whether a specific behavior is right or wrong, ethical or unethical is often determined by the public as embodied in the mass media, interest group, and business organizations as well as through individuals, personal morals and values. Thus ethics in business is directly related to social values, norms and global business trend and is negatively related to corruption in society. A business may achieve a sustainable growth if nurtured and operated more professionally. Ethical business practices are essential ingredients of professionalism what we expect to get strongly in our businesses.

**Ethics in Finance & Banking**

The core function of the financial sector is to secure the most efficient allocation of financial capital across the productive economy, but its most significant achievement over the past 30 years has been the large scale extraction of financial resources from that economy. Even in the wake of the financial crisis, financial practitioners have not only been getting richer than anyone else but also getting
richer at the expense of everyone else. All businesses deal with money, but finance is concerned exclusively with money and monetary products, and money and morality always have been, and always will be, uneasy bed fellows.

Despite stronger regulations & the best efforts of all concerned, the financial sectors continues to have a bad reputation for illegal and unethical behavior and to be more prone to ethical lapses than other business sectors. Plenty of scams can be pointed out very shortly related to finance and banking & these scams are not only familiar in South Asia rather it has been observed in the big economies around the globe. Amitai Etzioni, professor of sociology at George Washington University, recently concluded that in the last ten years, roughly two-thirds of America’s 500 largest corporations have been involved, in varying degrees, in some form of illegal behavior. U.S. Attorney General Loretta Lynch announced on May 20, 2015 in Washington DC settlements with five of the world’s biggest international banks, including Swiss bank UBS which will pay $545 million to U.S. authorities to end an investigation into alleged manipulation of currency rates. There are plenty of perceptions about those in our minds and other scams and there may be a problem of perception too. Besides, there is a real problem and it is a problem that refuses to go away, despite the best efforts of firms and regulators to address it.

Now, what is ethical and what is unethical for banking? Utilitarian approach argues that a business (banking) or an institution has to be based on the proof that it provides greatest good for the greatest number of people. Great economist Adam Smith and Milton Friedman modifies the argument with modern economy “free competitive market is based on the argument that maximization of profit in an ethical society is coterminous with maximum benefit of the people”. In country like ours the proponents of free market economy wants all the rights to do anything they intend and forget their obligations. Professor Muzaffer Ahmad advocates that this has given rise to concentration of extractive rights in the name of business without any countervailing force to check their unethical adventures.

Rather, the people of influence has created cronies within the banking and financial institutions and manage their protection through financing of political organizations, arranging delays in legal actions and promoting nonprofessional acts in the financial system itself. As a result, the business and banking in our country cannot be defended on the basis of the classical utilitarian theory; both the visible hand of the law and invisible hand of the competitive market have failed to yield the greatest good for common people of the country. This is why all concerned are vocal enough to put banking on ethical stand. Banking is more than
a business organization that does not provide only private goods/services but in developing country like Bangladesh it is required to make provision for social goods as well and an imperfect market like ours fails to create appropriate balance in the absence of proper ethical moorings.

Unethical behavior is not desirable in any business including banking. In most of the cases unethical behavior-be it corruption, fraud- in banking or financial sector always get more attention in newspaper headlines than others. That does not necessarily mean that people in the financial sector are inherently no more or no less ethical than larger society they are drawn from. It is the environment in the financial sector-pressure and opportunity to bend the rules, high rewards for the pay off and low risk of getting caught-that encourages ethical compromises (Dr. Subbarao, Ex Governor of RBI).

Usually, we think that unethical behavior is the result of poor character-bad people do bad things. Most humans are capable of behaving in profoundly unethical ways. Not only they are capable of it, but without realizing it, they do it all the time (Kelaris et al, 1991). A business frame cognitively activates one set of goals-to be competent, to be successful, while ethical frames triggers other goals (Tenbrunsel and Messic, 2004). Once one is in the frame of mind, they become focused on meeting these goals, and the other goals can completely fade from view. That some goals take the forefront and others become suppressed highlight that we are not aware of our unethical behavior (Spiegel, 2012). So, it is not only the character that makes one unethical, but in addition and most importantly the situation and frame of mind contribute significantly for unethical behavior. In this context, it is beneficial for banking or financial institutions to make aware their people of the factors that lead to unethical behavior so that they can prevent environments that lead to unethical behavior.

**Factors influencing unethical behavior in business (banking)**

The ancient Greeks already recognized money as the unique object of unlimited desire. The greed of the glutton or libertine is inherently self-limiting and its immorality painfully visible, but the greed for money knows no limits. As behavioral economists like Bruno Frey have shown, money also displaces or crowds out emotions and moral values. And as the anthropologist David Graeber has recently argued, it de-moralizes personal debts and obligations. Our moral obligations are, in a very important sense, non-measurable. Whatever may be paid or repaid, they can never be squared off and closed. As soon as debts become monetarised, however, the values and obligations associated with human
exchanges are lost, and because morals are always associated with values and with personal obligations or commitments, they are lost too.

Cooper and Frank (1991), and O’Fallon & Butterfield (2012), identified the following factors influencing unethical behavior:

a) One’s personal values and standards,
b) Family and friends who provide support and insight in resolving ethical issues,
c) Boss who controls the pressure employees have to compromise ethical standards,
d) Company environment/culture which controls the pressure to compromise employee’s ethical values to achieve organizational goals,
e) Company management philosophy that emphasizes ethics in operations,
f) Professional codes of ethics in the company and society at large,
g) Peer influence demonstrates a major role in influencing ethical decision making—the more the individuals observe peers engaging in unethical behavior, the more likely they are to engage in the same or similar activities.

Saul W. Gellerman, an industrial psychologist in his Harvard Business Review, July 1986 - had pointed out four commonly held rationalizations that can lead to misconduct:

1. A belief that the activity is within reasonable ethical and legal limits—that is, that it is not “really” illegal or immoral.
2. A belief that the activity is in the individual’s or the corporation’s best interests—that the individual would somehow be expected to undertake the activity.
3. A belief that the activity is “safe” because it will never be found out or publicized; the classic crime-and-punishment issue of discovery.
4. A belief that because the activity helps the company the company will condone it and even protect the person who engages in it.

How far is too far – Managers’ tale?

Concentration on short term goals (profit maximization) pulls the management and the boards of the organization to set targets crazily and put the employees/managers in intense competition. Striving to achieve targets under intense competition also puts Bank Officers under pressure which could lead to malpractices and illegalities. Recently, a joint study had been conducted by PwC
(Price Water House Coopers) & London Business School where 2,431 managers from UK financial services organizations representing banking, insurance and wealth management.

It reveals that when presented with situations where the negative consequences or punishment for poor performance were highlighted, managers were 15% more anxious than excited, leading them to be more than twice as likely to behave unethically. When presented with the same situations, but with the positive outcomes of success highlighted, they were more excited: leading them to be “more than twice as likely to demonstrate innovative behavior” says the report. It suggests that regulators and leadership teams in financial services can change behavior by shifting the emphasis to the positive outcomes of good performance rather than solely on the negative outcomes of the bad behavior they wish to stamp out.

Top executives seldom ask their subordinates to do things that both of them know are against the law or imprudent. But company leaders sometimes leave things unsaid or give the impression that there are things they don’t want to know about. In other words, they can seem, whether deliberately or otherwise, to be distancing themselves from their subordinates’ tactical decisions in order to keep their own hands clean if things go awry. Often they lure ambitious lower level managers by implying that rich rewards await those who can produce certain results—and that the methods for achieving them will not be examined too closely. Meanwhile some managers have overstepped it only when they have gone too far. They have no reliable guidelines about what will be overlooked or tolerated or what will be condemned or attacked. When managers must operate in murky borderlands, their most reliable guideline is an old principle: when in doubt, don’t.

Ambitious business managers look for ways to attract favorable attention, something to distinguish them from other people. So they try to outperform their peers. Some may see that it is not difficult to look remarkably good in the short run by avoiding things that pay off only in the long run. The sad truth is that many managers have been promoted on the basis of “great” results obtained in just those ways, leaving unfortunate successors to inherit the inevitable whirlwind. Since this is not necessarily a just world, the problems that such people create are not always traced back to them. Companies cannot afford to be hoodwinked in this way. They must be concerned with more than just results. They have to look very hard at how results are obtained.

The difference between becoming a success and becoming a statistic lies in knowledge—including self-knowledge—not daring. Contrary to popular
mythology, managers are not paid to take risks; they are paid to know which risks are worth taking. Also, maximizing profits is a company’s second priority, not its first. The first is ensuring its survival.

What to do for ethical practice in banking

Dr. Subbarao, Ex-Governor of Reserve Bank of India argued what could be the role of the individual firms, finance industry and the regulators to set it up the ethical standard and he sort out that building financial business (banking) on ethical standard must begin at firm level and they firstly build and nurture an institutional culture that believes that the long term net worth of a firm is maximized, not by driving short term profits but by driving enduring contribution to social welfare. In recent history the most notable failure to achieve common welfare has been the failure of regulators, allocators and users of resources to develop ethical standards of decisions.

According to famous economist Professor Muzaffer Ahmad, the standard needs the following conditions: (a) it must be general and not situation or person-specific, (b) it must be known to all and be part of general practice, (c) it must be understandable, (d) it must not be made self-contradictory through use of discretion, (e) it must be within the consensual norms respected by the citizens, (f) it must not be time-specific i.e. be stable through time, (g) its evolution should not be contrary to basic universalism i.e. relativism should not form any part of the standards, and (h) the actual administration must act to uphold it and make no compromise about it.

These conditions enunciated in terms of ethical basis of law equally apply to the conduct of all transactions including business and banking. It is evident that ethics in banking is of supreme importance for the economy and the society. In his judgment, Mirza Azizul Islam emphasizes, ethics in banking must be firmly anchored on four pillars. First, banks must comply with all laws, rules and regulations that are usually framed in any country to ensure soundness of operations and to enhance confidence of the society. Second, banks must ensure fair and equitable treatment of all stakeholders. Third, the banks must ensure full, truthful and transparent disclosure of their financial health. Fourth, banks must behave as socially responsible corporate citizens.

Milton Friedman, a Nobel-laureate economist and an ardent proponent of free market economy wrote in 1970 that there is one and only one social responsibility of business to use its resources and engage in activities designed to increase its profit so long as it stays within the rules of the game. One may interpret this
statement to mean that business is simply about maximizing profit without violating laws and regulations. This is obviously an untenable position. It may be observed here that banks did not apparently violate any prevailing laws and regulations, yet their activities inflicted severe negative externalities upon the society, as noted earlier. In this context, it may be mentioned that many of our corporate entities, including banks, gloat with satisfaction about fulfillment of social responsibility by offering a few scholarships, making donation to some clinics or offering some support for some charitable activities. While such initiatives are welcome, these touch only the fringe. Social responsibility must be viewed from a wider perspective, taking into account the impact of banks’ activities on growth, employment and emphatically in our case, poverty alleviation as well.

**Why and how to ensure ethics in banking**

Banking in particular rest on trust and inconsistent and discriminatory relation strike at the root of this trust. There is something to do with the goals set about by the company. Intense competition in the industry, which forces employees to focus on the bottom line and not on business ethics, causes more unethical behavior. Also, measuring employee performance on the basis of end results without considering how ethical the means were to achieve these results promote unethical behavior (Haron, Ishmail, Hamzah & Razak, 2011).

At individual firm level, it is important to tailor human resources policies to reflect the ethical values of the institution and implement an rewarding incentive structure for ethical conduct rather than concentrating on legal behavior (everything legal is not necessarily ethical). There are people in every institution who conform to strict ethical standards but they are seldom recognized much less rewards. It is pertinent to discuss how to promote ethical behavior in banking. The three promoters are strong will, fear of punishment and societal pressure exerted through peers (Muzaffer Ahmad). For the 2nd and 3rd promoters, we must have to depend on judiciary and social actors those have their own shortcomings too. So, concerted efforts form the individual firms and industry, other externalities will be required to get the benefits by putting people in a situation to behave ethically. One of the most effective ways of developing ethical principles in banking is by developing code of ethics and setting the rules that are to be followed. The codes of ethics, developed by not only for bank professional, but also developed by chambers, business associations, are may be useful devices to assist individuals to behaveethically.
Eduardo Arbizu, Head of Legal & Compliance at BBVA, a multinational Spanish Banking Group, argues an effective implementation of the process-oriented regulation which ensures ethical values needs to be: (I) easily perceptible (II) sufficiently disseminated and (III) effectively applied through remuneration, recognition and sanctioning mechanisms. He told that if the mere statement of values is not enough than we would need to deepen into the factors that determine the success of some organizational cultures compared to other. This organizational corporate culture is critical to ensure honesty and integrity in employee behavior. Its effectiveness depends on a series of factors:

1. The top management’s commitment and example. If those who bear the highest responsibility behave inadequately, they can neither expect nor require their collaborators to apply different integrity standards.

2. Integral involvement of the company: Commitment with the integrity values has to affect all the people that integrate company, and all the activities that the company develop.

3. The rollout of a compliance program, through the approval of policies and procedures aimed specifically at the effective application of the values.

Wise, Mahboob & D. Wise (2010) recommended the followings to ensure ethics in Banking business-

1. Ethical practices and processes within business organizations should be encouraged. This can be achieved in a variety of ways, including improving, reporting, transparency and strengthening business controls such as audit and internal management information systems.

2. Codes of ethics should be developed and utilized to motivate personnel, increase their capability, judgment power, and effective managerial skill. Personnel subject to professional and ethical codes of conduct of their respective organization should be encouraged to adhere to those codes.

3. Social prestige of ethical business personnel should be improved to so that they are motivated to continue the work in an ethical way for the organization.

4. Appropriate business regulations should be established and monitored so that organizations can operate free from political interference. Undue pressure from business owners, corporate boards and management should be discouraged. The audit/oversight function has a significant role in ensuring that ethical business conduct occurs from the top-down.
5. Services provided by business organizations should be improved. Customers should get proper and due services at a reasonable cost.

6. Multinational organizations should be reminded of their ethical responsibilities and they should be discouraged from engaging in unethical practices.

7. Appropriate recruitment and training policies within organizations can have a positive impact on the ethical profile of a business and its human resources and should be used in this manner.

Overall, much can be done to improve ethical business norms and practices around the globe. As long as sectors within business and society are unwilling to discourage unethical behavior, including law, order forces and political unfairness, it will remain difficult to establish ethical behavior in the business/financial/banking sector. The business and banks can exist in the long run only if they benefit the society and the economy and thus they must serve public purpose and be mindful of social good. They have a duty as the government and controlling authority to create and sustain an operational environment that is creative and promotional of ethical standards. In order to repair the damage and mistrust cultivated in the years leading up to the crash, the banking industry as a whole must reform. Now is the time for all banks to rise to the occasion and consider a more sustainable approach to banking. If we all viewed money as a tool for enhancing society rather than purely for maximizing profit, it would go a long way to restoring the industry’s image.
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Raising Ethics regarding Fake Notes: 
Impact on our Economy

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Birendra Chandra Das*

Abstract: Not only in Bangladesh, rather counterfeiting of the Bank Note is a common threat all over the world. This threat is mainly strong in developing country than the developed and always the high denomination of the notes is attacked than the low denomination because of the financial gain. We are always fighting against the counterfeiting and the counterfeiters always follow us in high speed. It is harmful for equilibrium in socio-economic structure. It as well as is an alarming threat especially for economy like ours. For this reason, raising awareness public against fake notes is an important factor for us. A fake note always claims a high level of technology, and, uses finest materials and need great skills and competent marketing of their notes. So, we should highly take care of these in such a way that these materials may not use in a mala fide way.

1. Introduction

From the news published or showed in print/electronic media we could see such instances every now and then - the police nabbed (a number) people and recovered fake currency notes amounting to BDT (amount) from their possession in separate drives in (place of the country). The law enforcers usually seized lap top, printer and materials used in currency making; produces the culprits before a press briefing and informs that the gang had been making forged notes. This is a good example and needs to be multiplied to contain the menace of fake notes. Not

* Authors are Executive Director (on PRL), Joint Director and Deputy Director of Bangladesh Bank respectively. Opinions expressed in this paper are their own, and in no way reflect the official position of Bangladesh Bank.
only in Bangladesh, rather counterfeiting of the Bank Note is a common threat all over the world. This threat is mainly strong in developing country than the developed and always the high denomination of the notes is attacked than the low denomination because of the financial gain. We are always fighting against the counterfeiting and the counterfeiteers always follow us in high speed. For this reason, raising awareness of public against fake notes is an important factor.

2. Definition of Counterfeit/Fake Note

Counterfeiting is generally perceived by society as a victimless crime with ‘fakes’ simply constituting a cheap alternative purchase and seen by criminals as having a low risk of prosecution with light penalties relative to the large profits to be made.  

A counterfeit/fake notes is -

- An imitation that is made with intent to deceptively represent its content originals.
- Imitation currency produced without the legal sanction of the state or government. Producing or using counterfeit money is a form of fraud or forgery. Counterfeiting is almost as old as money itself.
- Substandard note with lack of basic quality of a genuine note.

Bangladesh Bank has the sole right to issue bank notes under Article 23(1) of Bangladesh bank Order, 1972. According to the Article 27, of Bangladesh bank Order, 1972 the Bank Notes made and issued by the Bangladesh Bank shall be in such denominations and of such design, form and material as may be approved by the Government on the recommendations of the Board of Directors of Bangladesh Bank. At present Bank notes are of the denominational values of Tk. 5, 10, 20, 50, 100, 500 and 1000.

3. Counterfeit/Fake Note: A Threat

The Economist (2001) cites one forensic analyst who claims that as much as two to three percent of the former Eurocurrencies and 30 percent of US Dollars circulating in Russia, Eastern Europe, Africa, and elsewhere may be counterfeit. Counterfeits are a threat to the circulation of genuine currency. Security features in currency notes act as a deterrent and safeguard to minimize the risk of

2. Independent, the (2016) : ‘New Tk. 5 bank note to be issued from June 5’, 31 May 2016.
counterfeiting. We encourage the public to be aware of the available security features incorporated in genuine currency notes and to be able to distinguish between genuine and fake notes. Each genuine banknote incorporates a number of security features which makes the counterfeiting of the currency notes extremely difficult. The Security features in bank notes can be classified into four categories:-

**Overt security features:** We may call general public features. Through naked eyes or touching, it can be easily identified whether the notes are real or fake. Without using any device or instrument this security feature can be recognized. The mass people mostly depend on this security features. So overt security features should be dependable and reliable.

**Covert security features:** These security features are mainly for bank tellers, cash handlers, super marketers etc. These type of security features are unable to see through naked eye or by feeling. Through some small device or instruments like magnifying glass ultra violet light, it can be seen to identify the genuine notes. Therefore, covert security features is a very important feature to keep the notes free from forgery.

**Machine-readable features:** This feature is designed for the use of the cash handling machine like note sorting machine, vending machine. The security feature like INFRA-RED, MAGNETIC and METALIC features help the machine to identify the fake and genuine notes.

**Forensic features:** This feature is designed for the laboratory analysis purpose. Mainly at the laboratories of note printing industries and the research institutions handle the forensic security features.

4. **General Security Features of Bank Note**

These include Holographic Thread, Water mark, Logo of Bangladesh Bank, Intaglio print, OVI (Optically Variable Ink), Micro print, Blind dots, Latent image, Bank note security features can be identified by ‘Feel’ ‘Look,’ ‘Check’ and ‘Light image’. As we know that the higher denomination bank notes (i.e. Tk.100, 500 & 1000) in our country may counterfeited. Some of the main security features of a 100 Taka notes are:

- The Governor, Bangladesh Bank duly signs the size of this note.
- This note is printed on highly durable paper containing synthetic fiber.
- This note contains certain watermarks.
- This note contains certain things in intaglio ink which are felt rough when rubbed by finger.
• The colour of the denomination ‘100’ printed with Optically Variable Ink (OVI) in certain side and location of the note.

5. **Negative Effects of Counterfeit Notes on Ethics and Economy**

Counterfeit money creates some bad effects such as:

• Widespread circulation of fake notes encourages unethical, illegal activities, boosts up black economy.
• Reduction in the value of real money.
• Increase in prices (inflation) due to more money getting circulated in the economy.
• Confidence over paper money decreases.
• Social instability (Crime, Corruption, and Addiction) increases.
• Losses for traders, individuals occur when counterfeit notes are confiscated but the victims are not compensated.
• Decrease in the acceptability (satisfactoriness) of money.
• Companies are not reimbursed for counterfeits. This forces them to increase prices of commodities.

Fake note/counterfeit is a menace for a country like us as:

• There is always an attempt to counterfeit higher denomination notes.
• Several groups with international connection are active and sometimes use a country as transit route.
• Circulation of fake notes increases during social and religious festivals like Eid, Puja, fair etc., when people are in buying spree.
• Note counterfeiting increases during social unrest.
• Counterfeiters infiltrate fake note mainly in border areas and busy market places.

6. **Punishment/Legal Provisions for Counterfeiting Currency**

6.1 **SPECIAL POWER ACT-1974 (SECTION 25-A)**

• Life Imprisonment or up to 14 Years Rigorous Imprisonment including fine for the following offences:
• Forging Note or Govt. Stamp or participating in any such activity intentionally.
  • Knowingly selling or using forged/fake notes as genuine note.
  • Producing/Selling/Distributing/Holding machines knowing that it might be used for making Fake/Forged Notes or stamps.
6.2 PENAL CODE-1860

- **489 A:** Imprisonment for life, or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine for making or participating in the process of making fake notes.

- **Section 489 B:** Imprisonment for life, or with imprisonment of either description for a term which may extend to ten years, and shall be liable to fine for knowingly buying, selling, using or transacting fake currency or banknotes.

- **Section 489 C:** Imprisonment of either description for a term which may extend to seven years, or with fine, or with both for knowingly holding fake notes for the purpose of transacting as genuine note.

- **Section 489 D:** Imprisonment for life, or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine for manufacturing or participating in the process of manufacturing, buying, selling, holding or distributing machines that may be used for making fake notes.

- **Section 489E:** (1) Whoever makes, or causes to be made, or uses for any purpose whatsoever, or delivers to any person, any document purporting to be, or in any way resembling, or so nearly resembling as to be calculated to deceive, any currency-note or bank-note shall be punished with fine which may extend to one hundred taka. (2) If any person, whose name appears on a document the making of which is an offence under sub-section (1), refuses, without lawful excuse, to disclose to a police-officer on being so required the name and address of the person by whom it was printed or otherwise made, he shall be punished with fine which may extend to two hundred taka. (3) Where the name of any person appears on any document in respect of which any person is charged with an offence under sub-section (1) or on any other document used or distributed in connection with that document it may, until the contrary is proved, be presumed that, that person caused the document to be made.

7. **Responsibility of Banker’s**

- According to Treasury Rule, Part-III, and Chapter-IV: In the event of forged note presentation, the forged note presenter and the note should be hand-over the police. If the Bankers are convinced that the presenter has presented the forged note in good faith, then impound the note, take
his name, his father’s name and his address and send to the police for further enquiry. After the enquiry, police will send it to Currency officer.

- Notes disfigured by oil or other substances should be scrutinized by Bankers with carefully.
- Bank managers will send forged notes to the police who will send them to Currency officer.

8. Situation Regarding Fake Notes in Bangladesh

There may be big syndicates engaged in the business of fake notes. Foreign agents are sometimes also connected with this business. This indicates the non-practice of ethics. The presence of fake notes in economy is very harmful and threatening for socio-economical equilibrium. People who are not aware of the severity of the fact find themselves in problem, raised by counterfeiting, in most of the cases not the actual culprits.

The range of punishment provided in recent years is as given below:

The National Task Force is holding regular meetings for checking circulation of fake notes. Bangladesh Bank has cautioned the head offices of the commercial banks. All banks have been advised to use machines for detection of forged notes.

<table>
<thead>
<tr>
<th>Highest Punishment applied</th>
<th>Lowest Punishment applied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life-long rigorous Imprisonment with 25,000 taka penalty or both</td>
<td>6 months Imprisonments with 1000 taka penalty or both</td>
</tr>
<tr>
<td>14 years rigorous Imprisonment with 25,000 taka penalty or both</td>
<td>1 year Imprisonments with 1000 taka penalty or both</td>
</tr>
<tr>
<td>Life term imprisonment</td>
<td>1-month imprisonment with 500-taka penalty or both</td>
</tr>
</tbody>
</table>

The suppliers of forged notes are not only busy in the shopping malls but have also reached the ATM booths of commercial banks. Designs of new notes reach the cheats before the new notes are introduced in the market.

A simple survey, conducted at Narayanganj City in 2016, about the fake notes on randomly selected various ages and professions of 2000 peoples with some questionnaires. This survey gave emphasis on two sections:

1. How many people aware about fake notes?
2. How many people familiar about the features of genuine notes?
The results are as follows:

Comments:

<table>
<thead>
<tr>
<th>Question</th>
<th>Positive Response</th>
<th>Negatives Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have any idea about fake notes?</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>Are you able to make difference between Fake and Genuine notes?</td>
<td>60%</td>
<td>40%</td>
</tr>
</tbody>
</table>

a) It is necessary to arrange awareness program about fake notes for the people because 10% people have no idea about fake notes.

b) Through the awareness program we have to make the people aware how to identify the fake and genuine notes.

9. Preventive Measures: Taken and to be Taken

The law-enforcement agencies are always alert of combating counterfeiting (mentioned in this paper earlier). Even Bangladesh Bank, the money market regulator, has taken the following steps:

- Size, design and security features of notes have been changed.
- Central Committee & Regional Committees are working to monitor the overall Forged Notes situation and make recommendations.
- Showing videos to recognize genuine notes in training sessions, public places and electronic media.
- Directed commercial banks to supply Fake Note Detection (FND) machines to all branches; Distributed FND machines to law enforcing agencies.
- Publicity through print & electronic media by Bangladesh Bank.
- Poster in bank branches and public places.
- Special Arrangements like opening of booth at Korbani Hat with FND machine.
- Regular training for Bangladesh Bank & Commercial Bank officials.

The stakeholders, responsible to combat counterfeiting, may perform the following responsibilities.
10. Limitation

- Time constraint was the main factor causing limitation in this study. We got least time to collect primary data.

<table>
<thead>
<tr>
<th>Stakeholders Responsibilities</th>
<th>Bangladesh Bank</th>
<th>Commercial Banks</th>
<th>Law Enforcement Agencies</th>
<th>Concerned ministries</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ To improve security features of notes.</td>
<td>➢ To comply with the instructions of Bangladesh Bank to prevent the intrusion of fake notes in banking transaction.</td>
<td>➢ To root out the counterfeiters by nabbing and bringing them before court.</td>
<td>➢ To make the existing laws stronger wherever required.</td>
<td></td>
</tr>
<tr>
<td>➢ To create public awareness.</td>
<td>➢ To create awareness about fake notes among the customers by displaying posters, showing videos.</td>
<td>➢ To frame charge sheet strongly so that the criminals do not get any chance to get out from punishment.</td>
<td>➢ To take necessary measures such as making the note counterfeiting offense non-bail able.</td>
<td></td>
</tr>
<tr>
<td>➢ To coordinate with the concerned ministries, law enforcing agencies for thwarting the mal practice of the counterfeiters.</td>
<td>➢ To increase over seeing activities.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Recommendations

A fake note always claims a high level of technology, and, uses finest materials and need great skills and competent marketing of their notes. So we should highly take care of these in such a way that these materials may not use in a mala fide way. We may not be able to fully stop the activities of fake notes creators but we may able to limit their activities through strengthening supervision and monitoring.

- We can minimize the access of the fraud circle into the high level of technology.
- We can check and trigger the movement of related materials.
- We can monitor and control the social and criminal life of the nefarious character of the section.
- Inter-governmental bodies can make fresh and smooth the information channel among them.
• Update the technology with time and creating more awareness among the people.
• Researching and developing new notes with innovative security features that are both easy to check and hard to counterfeit.
• Working with related Ministries, police and intelligence agencies, prosecutors and other related parties to monitor and respond to counterfeiting activity.
• Teaching Peoples—especially those who handle cash on the job—how to quickly check their bank notes.
• Ensuring secured mode of payment so that people can use with confidence.
• Formulating consistent policies regarding Inks and Papers used for Bank notes.
• Giving instruction to banks to install ATMs with built-in fake-note detectors.
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Ethics in Trade Financing: Practices and Uses
In Banking System of Bangladesh

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Abstract: banks play an important role in trade financing in Bangladesh. Historically, trade finance market was considered liquid and well functioning and accordingly did not attract much attention from policymakers (BIS, 2014). In the banking system of Bangladesh, in recent past, the sector has experienced periods of stress, most notably since 2011. Banking sector experienced a stress in terms of liquidity shortage along with increase of term loan, NPL and interest rate during 2011-2013. Malpractices in trade financing were the major causes of stress faced banks during the period. The paper explores the trade financing and uses of loan during the period. Banks in Bangladesh disbursed a lion share of credit in trade financing. It depends on the level of ethics for using of rules and regulations. The main objectives of the paper are to analyze the extent of loan against trade financing and practice & uses in banking industry of Bangladesh from 2009-2015. The paper also tries to examine the malpractices in Trade financing if any. It is believed that the findings will be very helpful for policy makers both in commercial banks and central bank in terms of NPL and Stress of Bank.

JEL Classification: F10, F34, G21

Key words: Ethics, Trade financing, LTR, L/C, NPL and Term loan.

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1. Introduction

Banks play an important role in trade financing in Bangladesh. Banks in Bangladesh disbursed a lion share of credit in trade financing. Data shows that about 38 percent of total private sector credit on average went to trade and commerce financing during the five years (2009-2013). Of this, about 15 percent on average is foreign trade financing and rest of domestic trade financing. Historically, trade finance market was considered liquid and well functioning and accordingly did not attract much attention from policymakers (BIS, 2014). In the banking system of Bangladesh, in recent past, the sector has experienced a periods of stress, most notably since 2011. Banking sector experienced a stress in term of liquidity shortage along with increase of term loan, NPL and interest rate during 2011-2013. Malpractices/unethical practice in trade financing were the major causes of stress faced banks during the period. The paper explores the trade financing and uses of loan during the period.

Foreign trade financing constituted mainly import and export financing in banking system of Bangladesh. Banks support trade financing through a wide range of products that help their customers manage their international payments and associated risks, and provide needed working capital. The term “trade finance” is generally reserved for bank products that are specifically linked to underlying international trade transactions (exports or imports). As such, a working capital loan not specifically tied to trade is generally not included in this definition. Trade finance products typically carry short-term maturities, though trade in capital goods may be supported by longer-term credits. The focus of this report is on short-term trade finance, both because it funds a much larger volume of trade and because of its interactions with bank funding conditions.

BIS (2014) reported that “...one of the most common and standardized forms of bank-intermediated trade finance is a letter of credit (L/C). L/Cs reduce payment risk by providing a framework under which a bank makes (or guarantees) the payment to an exporter on behalf of an importer once delivery of goods is confirmed through the presentation of the appropriate documents. For the most part, L/Cs represent off-balance sheet commitments, though they may at times be associated with an extension of credit. This can occur, for example, if an import L/C is structured to allow the importer a period of time (known as “usance”) before repaying the bank for the payment it made on the importer’s behalf”.

Banks in Bangladesh help to meet working capital needs by providing trade finance loans to exporters and importers. The common loan documentations are
loan against import merchandise (LIM), loan against trust receipts (LTR) and pre-shipment credit (PC) which are linked either to an L/C or to other forms of documentation related to the underlying trade transaction.

Trade financing through L/C and LTR increased sharply during 2010-2013 in Bangladesh. Banks prefer LTR loan due to higher earning of revenue and the self liquidating nature (Ali & Howlader, 2005). Proper documentation, market condition and overall ethics in trade financing are the crucial factors for recovering trade financing loan. Data on L/C and LTR show that banks disbursed huge loan through LTR during 2009-2013 and these loan stacked up. As results, amount of NPL increased sharply to BDT 427 billion in 2012 from BDT 226.5 billion in 2011. Banks suffered from liquidity problem, reflecting in call money rate. Call money rate jumped to 15 percent in FY12 from 6.6 percent in FY10 (BB, 2014-2015). Banks converted some LTR loan to term loan and term loan also increased during that time. The outstanding LTR loan stood at BDT 320.75 billion in 2015. Of this amount, BTD 20.63 billion was NPL which is about 4 percent in total NPL (BB, 2015a).

In this backdrop, the objectives of the paper are given below:

- To analyze the extent of Loan against Trust Receipts (LTR) facility given by the commercial banks to their clients against Letter of Credit (L/C) and to identify the malpractices of LTR facility
- To analyze causes of conversion of LTR to term loan
- To identify whether conversion of LTR to term loan creates any problem in the banking system.
- Loan diversion
- Liquidity problem due to stuck up huge amount of LTR among few business group
- Conversion of non funded liability to funded liability

The reminder of the paper is structured as follows. Following introduction, section II describes the methodology and data. Section III analyses results and findings. Finally, section IV gives conclusion and policy implications.

2. Methodology and Data

A. Data

Both primary and secondary data are used in the paper. Secondary data are collected from Bangladesh Bank’s publication, i.e., Annual Report, Scheduled
Bank Statistics, and Financial Stability Report. Consolidated data on L/C and LTR are collected from respective banks head office. Some information, views and primary data are collected from manager of banks branch and entrepreneurs/ importers/ clients through interview with structured questionnaire.

B. Sample Survey

A sample domain of banks, branch location and entrepreneur clients was prepared based on number of L/C and LTR loan in respective banks. A study team constituted of officials of Research Department select banks and branches by location through discussion with banks officials. The paper uses data based on 18 banks, 64 bank branches and 146 clients/entrepreneurs. The detailed sample distribution is given in Table 1.

<table>
<thead>
<tr>
<th>Serial no.</th>
<th>Description</th>
<th>January, 2017</th>
<th>January, 2016</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No. of Banks Launched the Services</td>
<td>19</td>
<td>20</td>
<td>-5</td>
</tr>
<tr>
<td>2</td>
<td>No. of Banks started to convey the service</td>
<td>17</td>
<td>18</td>
<td>-5.56</td>
</tr>
<tr>
<td>3</td>
<td>No. of agents</td>
<td>723,112</td>
<td>569,656</td>
<td>26.94</td>
</tr>
<tr>
<td>4</td>
<td>No. of registered clients in Lac</td>
<td>419.33</td>
<td>331.38</td>
<td>26.54</td>
</tr>
<tr>
<td>5</td>
<td>No. of active accounts in Lac</td>
<td>165.04</td>
<td>136.33</td>
<td>21.06</td>
</tr>
<tr>
<td>6</td>
<td>No. of total transaction</td>
<td>139,833,55</td>
<td>118,832,401</td>
<td>17.67</td>
</tr>
<tr>
<td>7</td>
<td>Total transaction in taka (in crore BDT)</td>
<td>25,205.87</td>
<td>16,745.27</td>
<td>50.53</td>
</tr>
<tr>
<td>8</td>
<td>No. of daily average transaction</td>
<td>4661118</td>
<td>3,961,080</td>
<td>17.67</td>
</tr>
</tbody>
</table>

Source: Reserve Bank of Bangladesh, 2013

3. Analysis of Results and Findings

Trade financing including export and import financing by type of banks is given in table 2. Private commercial bank including foreign banks allocated major portion of fund in trade financing followed by state own commercial bank. Import financing was dominant over export financing.

Importer / entrepreneurs opened both foreign and local L/C for industrial raw material, industrial goods, essential item and other item in different banks. Consolidated data on L/C collected from 40 commercial bank show that outstanding foreign L/C increased to BTD 1537.14 billion in 2013(up to
Chart 1: Trends in L/C Opening, in Billion BRD

Against this L/C amount banks disbursed huge amount of loan to importers /entrepreneurs. The outstanding amount of LTR loan sharply increased to BDT 1025.59 billion in 2012 from BDT 631.07 billion in 2009 (Chart 2). Many clients/entrepreneurs/importers did not settle their LTR loan against L/C generally within 90 days. Banks gave an opportunity to convert LTR loan to term loan. As a result, off-balance sheet asset of banks decreased but balance sheet asset increased. Total LTR stood at Tk. 483.12 billion at the end of September 2013 which is 32.82 percent of outstanding Trade financing of FY13 (Chart 3).
At the end of September 2013, outstanding term loan stood at Tk. 93.52 billion which about 19.36 % of outstanding LTR. This outstanding term loan is about 11.76 percent of total outstanding term loan of the banking system.

The possibility of recovering this term loan is apparently very low due to lack of adequate mortgage/security, absence of goods in the banks go-down and the fluctuation of prices of unsold goods. In many cases, importers / clients divert the fund to purchase land, to invest in stock market, to establish new industries / business etc.
The survey data show that ownership of respondents who opened L/C and took loan against L/C is private limited company (47 percent), proprietorship (46 percent), and rest of public limited company, autonomous, and partnership. Some of these borrowers are very influential due to close link with political party and top management of banks (Chart 4).

As an importer, about 76 respondents are industrial commodity importers, 28 respondents are essential item importers, and the rest are trading and other item importers (Chart 4). The survey team collects information and discusses with these importers to find out the causes of conversion of LTR to term loan instead of paying back loan.

The causes/reasons as per respondents are given in Chart 5. The results show about 48.1 percent of respondents opined that price fluctuation of commodities in both international and domestic is the main reason for LTR loan default. Some importers about 16.3 percent respondents held their imported goods for a long time for higher profit and did not pay back loan.

The LTR loan defaulters of importers due to exchange rate fluctuation and fund diversion are 8.7 percent and 4.8 percent, respectively. The rest of importers (about 22 percent) did not specify the reason for not paying LTR loan.

### 4. Analysis of Major Findings

The paper uses both primary and secondary data/info formation regarding trade financing especially LTR loan, its usages and malpractices in the banking system.
during 2009-2013. The paper highlights some major findings based on survey data, information collection from branch managers of respective banks, and selected importers/entrepreneurs. The findings are as follows:

- Total LTR stood at Tk. 483.12 billion at the end of September 2013 which is 32.82 percent of outstanding Trade financing of FY13.
- At the end of September 2013, outstanding term loan stood at Tk. 93.52 billion which is about 19.36 % of outstanding LTR.
- This outstanding term loan is about 11.76 percent of total outstanding term loan of the banking system.
The possibility of recovering this term loan is apparently very low due to lack of adequate mortgage/security, absence of goods in the banks godown and the fluctuation of prices of unsold goods.

In many cases, importers / clients divert the fund to purchase land, to invest in stock market, to establish new industries / business etc.

It is observed that interest rate and L/C commission charge are much higher (Interest rate: 13-22 % per annum and Commission: 0.25 -0.50 % per quarter).

One kind of evil competition has been observed among different banks branches in case of LC opening and providing LTR facilities against large groups in order to meet their profit target at branch level.

Sometimes bank branches often open L/C and provide LTR facility as instructed by banks head office which creates a problem for branch manager to assess the clients. As a result, those LTRs are not adjusted and at a stage those LTR converted to term loan.

It has been observed clearly that same borrower/ group is availing LTR facility from different banks due to Single Borrower Exposure Limit. But the banks have no information on loan amount from other bank, as a result borrower/ importers are repaying loan to one bank by taking loan from another bank.

The survey team observed that the large importers (mostly defaulters) are taking stay order from the court. As results, they get clean CIB report for eligible for further trade financing. This is a great obstacle for recovering outstanding LTR and term loan in banking sector.

Considering the above situation, the survey team clearly found that, ethics in trade financing was not maintained properly.

5. Conclusion and policy implication

Ethics in trade financing specially in export and import financing by banks is very important for real economic activities in Bangladesh. The importers/ entrepreneurs avail of trade financing through L/C and LTR due to meet short term financing need. Banks disbursed huge amount in trade finance during 2009-2013 for higher revenue income. The paper reviewed the malpractices of LTR loan of banks which is very important for policy makers of both Bangladesh bank
and commercial banks. Because, a bulk of amount of LTR loan was converted to term loan and a major portion of term loan turned into NLP unethically.

Although the LTR loan was not policy concern in Bangladesh for a long time, it has been raising a major concern in the banking system since 2011. The non funded liability of banks has been converted into funded liability through LTR loan. Besides, the risk of LTR which is originated by the borrower was also shifted to Banks. Banks should take proper steps to minimize malpractices of trade financing.
References


Abstract: It is said that energy is the lifeblood of modern economies around the world. Almost every economic activity is backed by energy. Energy is also a factor which accelerates the socio-economic progress of a nation. Bangladesh is one of the fastest growing economies of the world. With the recent attribute of “New Asian Tiger” and the aim to become a middle-income nation by 2021, the country is also enlisted in the “Next Eleven” economies. To boost up the economic development energy can play a vital role in Bangladesh. Bangladesh has set forth ambitious plans for new energy architectures. However, there are some ethical issues regarding energy consumption as well as production process which are needed to be examined carefully to increase the development speed. To the best of our knowledge, no studies have been conducted on ethical issues regarding energy in Bangladesh. The aim of this paper is to discuss ethical problems concerning energy consumption and production in Bangladesh. In addition, we would emphasize on probable solutions to overcome the problems so that the development progress of the economy of Bangladesh can be accelerated in upcoming decades.

1. Introduction

Energy is considered as the lifeblood of the economy. Energy demand and supply
nurture all aspects of life within the ecological world. The structure of energy is local as well as global issue, where nations need a deeper understanding of the broader implications of their actions. The recent landscape of the energy architecture is distant from how it was a decade ago and is expected to appear more distant and significantly different within the next ten years, with the emergence of new technologies to harness renewable energy.

There is no doubt that energy is vital for economic development, including Bangladesh, which has recently been attributed as the New Asian Tiger, with the target to become a middle-income nation by 2021. As of the case of Bangladesh, the country currently uses both renewable and fossil fuels for residential, commercial and industrial usage. Although there the modernistic policies globally prefer renewable energy over fossil fuel, the former and the latter both have negative effects on the society in the long run. Energy is an indispensable input for production and consumption of economic activities, which lead to economic development of the country.

However, an increase in Gross Domestic Product (GDP), trade, savings, etc. should not be at the cost of reduced food source, land entitlements, pollution or health issues. It is an ethical dilemma. With the frequent electricity shortages (especially during summer), coupled with high cost of electricity have historically lead to negative impacts on the economy and on the lives of people (especially rural people). Moreover, the fumes from car exhaust pipes, global warming have all lead people to start shifting to renewable energy.

However, renewable energy technologies like Photovoltaic Cells (PV), first generation biofuel and many others also have negative impacts and ethical issues to the society. Although many studies have been conducted on the nexus between the relationship of energy sources and economic development (Khalil 2016), (Masuduzzaman 2015), (Rezitis and Ahammad 2014) no work has been done on the grounds of ethical issues in Bangladesh. This paper sheds light on the research gap between the ethical issues of using different types of energy source, for both renewable and non-renewable. The aim of this paper is to evaluate ethical issues and bring about the effects of energy supplies for adequate energy policies. The aim of this paper is to evaluate ethical issues and bring about the effects of energy supplies for adequate energy policies.

The paper has the following structure. In section 2 we will discuss some of the literature. Overview of energy scenario of Bangladesh is discussed in section 3. In section 4 we widely discussed the ethical issues regarding energy consumption and production. Finally, section 5 presents the conclusion.
2. Literature Review

Dernbach and Brown (2010) argued that it is the ethical responsibility of the developed countries to reduce the energy consumption through energy efficiency and conservation as part of the global effort to reduce greenhouse gas emissions. Whereas this responsibility is borne by nations themselves, it has immense significance for the individuals living in those nations. On the other hand, they revealed that developing countries have different duties regarding energy consumption. Their responsibility to improve human quality of life will mean greater use of modern energy and also achieve efficiency in energy consumption. However having an immense impact on social life, ethical issues regarding energy consumption has received less response. Existing literature find that there are two principle ways of reducing energy consumption: energy efficiency and energy conservation. The earlier one refers doing the same amount of work or producing the same amount of goods or services with less energy and the later one refers using less energy regardless of whether energy efficiency has changed.

According to Šimelytė and Dudzevičiūtė (2017) Energy consumption, its efficiency is very often associated with country’s competitiveness in the international arena, especially industry. The implication of renewable energy is tremendously renowned all over the world. However, the impact of consuming renewable energy on the economy is very often disputable and controversial. Big wind power plants have reached a relative maturity; however, there is a lack of research on the profitability of medium wind turbines and their environmental perspective.

Bortolini et al. (2014) asserted that small and medium-size wind power plants require more investment compared to large ones. Thus, the cost of electricity made by small and medium-size wind power plant is usually higher than average. Indeed for sustainable development, renewable energy source is a good choice but some ethical issues are related to this matter. Renewable energy causes environmental degradation, such as land degradation, land use transformation, soil erosion and much more.

Yunus et al. (2012) highlighted that energy is central to sustainable development. On one hand it is the accelerator of socio-economic progress and economic productivity and on the other hand, it causes climate change, biodiversity loss, change in the ecosystem and human well-being. Thus it is very important to understand how to ensure the maximum amount of energy with efficiency and without hampering social and environmental aspects. They also indicated that introducing energy use cap would change the course of degradation. As a result,
fewer natural resources would be used across the globe, which would then ultimately lead to a rise in products and services with low energy and natural resource demand. Moreover, due to this process labor would become more competitive and more jobs would be created in the different sub-sectors of the economies around the world. Above all, this would lead to a good ecosystem.

Timmons et al. (2014) stated that the history of industrial civilization is a history of energy transitions. As economies develop and become more complex, energy consumption increased in a rapid speed. As a result, non-renewable energy sources became the dominating factor in energy production. As these fuels are affecting our environment with carbon emission, now focus is given to renewable energies.

However different ethical dilemmas are present in the context of using renewable energy sources. Such as how will renewable energy mixtures vary by location? What are the direct and external costs of the new renewable energy sources likely to be? How will renewable-energy realities change the way energy is used in the economy? What kind of engineering, economic, and policy adjustments will be needed to accommodate renewable energy sources, which are somewhat different from fossil fuels? Policy makers also face an ethical dilemma in terms creating policy framework as most of the capital stock and modern economic systems are based on fossil fuels and any transition can lead to disaster in the long run.

According to Gomerio et al. (2009), biofuels have lately been indicated as a promising source of cheap and sustainable energy. However large-scale conversion of crops, grasslands, the natural and semi-natural ecosystem may hinder social and ecological consequences. Different social concerns may arise such as, the problem of food security in developing countries which ultimately leads to higher food prices. Farm owners are establishing larger farm holdings for biofuel feedstock cultivation for extra profit. Ecologically biofuel can compete with grazing land for animals which is a great threat to concern. Moreover, soil fertility can decline by producing feedstock over and over again. Thus authors asserted that there is a need to conduct serious and deep analysis on the environmental and social impact of large-scale biofuels production before important energy policies are launched at the global level.

Ziegler (2013) argued against biofuels production because it directly contests with universal food production thus upsetting the global food security, as shown by the increase in food commodity prices alongside with increasing biofuels production. In addition, it will create a new demand for land use that ultimately leads to deforestation and causing additional environmental damages due to this practice.
Such case also being made against second-generation liquid biofuels by as the practice may increase land use and increases the current soil erosion occurred in arable lands. Another important finding by showed that introduction of biofuels into an agricultural economy does have an effect on food prices, even though changes in biofuels prices do not have a strong effect towards food prices

3. Overview of Energy Scenario in Bangladesh

Sustainable energy supply is needed for Bangladesh to prosper in the upcoming decades. As a result, if energy supply is not proliferated then there will be severe adverse consequences for the nation’s economic as well as social development. The government of Bangladesh (GOB) is giving best effort to develop the indigenous resources of energy. The current energy requirement is taken care of by different types of fossil fuel, natural gas, coal etc. and is dependent on imports, making the economy vulnerable to any shocks coming from the international market. Bangladesh imports about 1.3 million tons are crude oil, 1.45 million tons’ diesel, 380 tons’ kerosene, 215 tons jet fuel and 155,000 tons’ petrol and octane. (Wakil et al. 2012). It is worth to mention that importing such petroleum oils is a huge fiscal burden for the government.

After the oil shock of 1973 Bangladesh wanted to decrease import bill. As a consequence, the government of Bangladesh substituted to natural gas as a front-line energy source (Amin et al. 2012). In 2012, Bangladesh extracted about 772 million cubic feet natural gas and the whole amount was consumed by internal markets. Natural gas was started to be used in a different vehicle.

According to Petro Bangla (2015), recent reserve estimation, current gas production and consumption rates and future demand suggest that known recoverable reserves of gas will not be able to provide the growing needs of the country. Gas reserves are estimated to last till 2031. With this prediction, it is predicted that Bangladesh is on the critical stage or threshold level. At present, Petro Bangla is giving more focus on offshore gas well explorations with newer technology.

Moreover, expansion of Bibiyana gas field is also taken into the consideration. Petroleum is primarily used in the transportation sector as well as other sectors for economic activities. In Bangladesh, about 69% of the population currently has access to electricity. The remaining 31% represents the market yet to be brought under the national grid. According to Bangladesh Power Development Board (BPDB, 2017), present generation capacity is 15379 MW. However, this amount cannot be realized to its fullest due to the forced outage, maintenance activities
and above all fuel constraints i.e. gas supply shortage. According to Chowdhury et al. (2014) power outage in Bangladesh results in loss of $1 billion. In Order to increase the development process, electricity is considered as a key factor around the world (Ferguson 2000). Keeping this in mind, the government of Bangladesh has taken an initiative that by 2021 Bangladesh will have 100% electricity access. To achieve 100% electricity access just grid electricity is not enough. Government is now encouraging off-grid electricity production. Such as Solar Home Systems (SHS), micro-hydro power plants, biomass energy etc.

Diesel is used in the agricultural sector for irrigation pumps. On the other hand, kerosene is used in the rural areas for lighting. In the transportation sector, petroleum products dominate. However, the popularity of petroleum fuels is decreasing due to policies encouraging CNG as a substitute fuel. An important structural change has been seen in oil sector from the year of 2012.

Use of oil has increased in the electricity sector. The total share of oil used in electricity generation rapidly increased from 6-8% in 2011 and 19% in 2012 and after that a huge jump to 28.38% in 2015 (Bangladesh Petroleum Corporation 2015). The share of oil in electricity generation increased due to private quick rental power plants. These power plants use oil as input and as a result, oil consumption in this sector has increased. The coal sector of Bangladesh is relatively underdeveloped nonetheless substantial amounts of coal reserves in seven fields have been discovered in the north-western part of the country. Estimation says that almost 1.756 G-ton can be extracted from the located site.

<table>
<thead>
<tr>
<th>Products</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octane</td>
<td>90.02</td>
<td>78.26</td>
<td>85.54</td>
<td>97.26</td>
<td>107.15</td>
<td>110.85</td>
<td>117.45</td>
</tr>
<tr>
<td>Petrol</td>
<td>124.82</td>
<td>115.38</td>
<td>127.25</td>
<td>141.49</td>
<td>158.71</td>
<td>169.71</td>
<td>178.67</td>
</tr>
<tr>
<td>Kerosene</td>
<td>405.10</td>
<td>342.70</td>
<td>376.65</td>
<td>397.21</td>
<td>358.44</td>
<td>314.87</td>
<td>289.87</td>
</tr>
<tr>
<td>Diesel</td>
<td>2333.6</td>
<td>2301.3</td>
<td>2568.2</td>
<td>3239.3</td>
<td>3240.4</td>
<td>2964.60</td>
<td>3242.55</td>
</tr>
<tr>
<td>Furnace Oil</td>
<td>289.60</td>
<td>164.47</td>
<td>194.17</td>
<td>544.62</td>
<td>883.74</td>
<td>1076.42</td>
<td>1202.50</td>
</tr>
<tr>
<td>Lube</td>
<td>17.29</td>
<td>15.02</td>
<td>15.92</td>
<td>17.95</td>
<td>17.52</td>
<td>15.90</td>
<td>17.82</td>
</tr>
<tr>
<td>Other</td>
<td>366</td>
<td>310</td>
<td>390</td>
<td>430</td>
<td>448</td>
<td>443.65</td>
<td>435.09</td>
</tr>
<tr>
<td>Total</td>
<td>3626</td>
<td>3327</td>
<td>3257</td>
<td>4868</td>
<td>5214</td>
<td>5086</td>
<td>5484</td>
</tr>
</tbody>
</table>

Source: Bangladesh Petroleum Corporation 2015
At present due to lack of natural gas reserves and increase in the cost of importing petroleum fuels, considering the environmental and social cost of using coal Bangladesh is giving more focus on renewable energies. Such as solar, hydro, biomass, biofuel etc. Renewable energy generates 3.47% of total electricity demand globally. Renewable energy helps in plummeting poverty (World Bank 2013, Alam et al. 2011).

It is an aid to recover energy shortage and environmental degradation such as carbon emission, desertification, biodiversity depletion and climate change (Power Division 2015). At present, Bangladesh receives energy supply from both renewable and non-renewable sources. It is essential to preserve the environmental balance by increasing the use of renewable energy and lessening the dependency on non-renewable energy. The renewable energy policy passed in December 2008. According to this policy, 5% electricity generation will be done by 2015 and 10% by 2012.

4. Ethical Issues Regarding Energy Consumption and Production

The sophistication of energy sources has increased steadily over the past century but the fundamentals have changed little. Actually, we are living in a world where people are calling energy as a part of the universal right. At the same time, an analysis of the different sources of energy (fossil fuels, nuclear and renewable

<table>
<thead>
<tr>
<th>Table 3.2: Comparative data of Bangladesh Electricity Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
</tr>
<tr>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>Installed Generation Capacity</td>
</tr>
<tr>
<td>Derated Generation Capacity</td>
</tr>
<tr>
<td>Generation (MW)</td>
</tr>
<tr>
<td>Highest Generation</td>
</tr>
<tr>
<td>Electricity Demand (peak demand)</td>
</tr>
<tr>
<td>Access to Electricity</td>
</tr>
<tr>
<td>Per Capita Electricity Generation</td>
</tr>
</tbody>
</table>

Source: Power Division Bangladesh 2015
energy) demonstrates that each of them has undisputable weaknesses to which attention must be drawn.

Fossil fuels will remain the most widely used form of energy throughout the world for the next 100 years. They offer considerable advantages. The most obvious of which is ease of use as they are simple to process. We have shown in the earlier section that use of fossil fuels like diesel, petrol, octane etc. has increased in Bangladesh. The change in the consumption pattern is not neutral at all as it comes with some ethical dilemma. Fossil fuels are made of a carbon compound and when consumed or used in a production process, they release carbon dioxide and we all know CO₂ one of the responsible factor for increasing Green House Gas (GHG) Effect. Due to GHG effect, our climate is at risk.

The consequences of this are increasingly severe weather, such as storms, droughts, and floods. It also creates major impacts on human settlements, food production, disease patterns and natural ecosystems. The 1997 Kyoto Protocol, which set legally binding targets for reducing greenhouse gas emissions in industrialized countries but the result was not up to the mark. To overcome these problems, the idea is to slowly reduce the consumption of fossil fuels as well as bring efficiency in the use. Figure 4.1 shows the carbon emission in Bangladesh.

Figure 4.1: Carbon Emission (Kilo Ton per Year)

Source: World Development Indicator, WDI, 2015
On the other hand, Bangladesh is heavily depended on natural gas and extracts a huge amount of gas to fulfill the demand. As the reserve is decreasing, exploration new gas fields are in rapid speed. However, it can cause local detrimental impacts to soils, surface and groundwater’s, and ecosystems. These impacts emerge mostly from the improper disposal of some of the large volumes of saline water. When gas is extracted from the gourd, due to different hydrocarbon reaction, saline water is created. Impacts of ground-surface disturbance can also arise from related activities such as site clearance, construction of roads, brine pits and pipelines, and other land modifications and drilling. Stated environmental problems directly affect the human livelihood of that particular area where extraction takes place. Different hydrocarbon chemicals affect human health badly, lands become less fertile and agricultural productivity declines. In all the structure of the society completely changes. One of the remedies can be to explore offshore gas wells. However, there is a high cost associated with it.

There is no doubt that renewable energies are far more efficient than nonrenewable engines in terms of sustainability. Unlike orthodox energy sources which require millions of years for formation, renewable energy sources (RES) are sources that continually renew throughout the human lifecycle. Nowadays, RES is a term used for electricity or heat generated from solar, hydro, wind, geothermal, biomass or biogas energy (Vezmar et al. 2014). The main advantages of RES are inexhaustibility and an impact on the environment. On the other hand, there are indeed some problems which stay behind the scene.

### Table 4.1: Electricity Generation from Renewable Energy Sources Until 2014

<table>
<thead>
<tr>
<th>Classification</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar Home Systems (SHS)</td>
<td>150 MW</td>
</tr>
<tr>
<td>Solar Irrigation</td>
<td>1 MW</td>
</tr>
<tr>
<td>Biomass-based Electricity</td>
<td>&lt;1 MW</td>
</tr>
<tr>
<td>Biogas-based Electricity</td>
<td>5 MW</td>
</tr>
<tr>
<td>Hydro Power</td>
<td>230 MW</td>
</tr>
<tr>
<td>Wind Energy</td>
<td>2 MW</td>
</tr>
<tr>
<td>Roof Top solar PV</td>
<td>14 MW</td>
</tr>
<tr>
<td>Total</td>
<td>403 MW</td>
</tr>
</tbody>
</table>

*Source: Power Division 2015*

At present Bangladesh is getting energy from both nonrenewable and renewable sources. Hydropower and Solar Home System are the two main sources dominates in the renewable section. From these two sources, 230MW and
150MW electricity are generated respectively (Power Division 2015). Biogas, biomass, wind energy are some other sources from which small amount of energy is extracted. First of all the solar cells are not cheap in Bangladesh. On the other hand, the cells contain hazardous materials most of which are used in cleaning semi-conductors for example hydrogen fluoride and acetone.

The intensity of these chemicals depends on the size of the PV cell. Those who work on manufacturing site, as well as installation, faces major health problem in the long run. The consumers face risk inhaling silicon dust which can be dangerous. PV cells also contain some toxic materials. If not disposed properly then these materials can generate a major environmental and public health threat in the areas where solar energy is highly used. To mitigate these problems solar panel manufacturers must follow rules and regulations set by international laws and take proper steps to ensure consumers and workers safety. Moreover, incentives should be given so that firms recycle the toxic materials and reuse in the production process.

Hydroelectric power plants are plants used for electricity production from water power. This means that it uses the conversion of potential and kinetic energy of water into electricity. Bangladesh has only one hydropower plant situated in Kapatai. Though it is a very good source of energy with almost zero carbon emission, it affects the biodiversity. It is responsible for creating a flood in the area where water is not needed and also gave rise of drought. It also changed the water course of the Kaptai river and the movement of different wild lives. One of the biggest sociopolitical problems in relation to hydropower is displacement of people from flooded areas. (Vezmar et al. 2014) which is absolutely unethical. In this regard, government must create a strong legal framework so that unplanned dam cannot be created anywhere. Proper rigorous research should be done to save the biodiversity as well.

Large land areas are needed to grow biomass in any of the forms which have a direct impact on the land as we know that Bangladesh is facing land constraint. Producing biofuels also need a huge amount of land for producing the feedstock. From the consumer’s point of view, some ethical issues can be observed. For example, the noise of the generator and the smell of biogas and another organic compound can be very unpleasant to some people. Also if the by-products are not disposed of carefully, those can affect human health.

Another point which is worth mentioning is the disparity in access to energy between rural and urban areas. For instance, although 69% of Bangladesh is under electrification, the question is how much the rural people are getting? In the
rural areas of Bangladesh, load shedding is beyond imaginable. One of the main reasons behind the immense amount of load shedding the use of decade-old machinery in the power substations. These machinery fail to distribute the allocated amount of electricity in the rural households. It not only affects the livelihood the rural people but also affects the development speed. To ensure the parity off-grid electricity is highly considered and also the government has to improve the power station machinery so that the total amount is utilized. Lastly, a decisive shift to energy mix may lead to sustainable growth and minimized harm to the society.

5. Conclusion

Ethical issues regarding energy are more noticeable in developing countries, such as Bangladesh. Like leading nations, Bangladesh must look deeper into the short and long-term effects before adopting to any new energy source. The frequent load shedding due to inadequate energy supply, pollution from transports, harmful particles from luxury items like air condition, have negatively affected the economy and the lives of people.

Moreover, the awareness of global warming has lead people to reconsider the existing energy sources (i.e fossil fuel) and shift to renewable energy options to aggressively reduce emissions. On the downside, technologies linked to PV, nuclear power or first generation biofuel can also cause ethical problems to the society. Hence, there should be proper cost-benefit analysis on the short and long-term effects on the economy and community as a whole. Based on the ethical principles of utilitarianism, justice, disclosure, nonmaleficence, and autonomy, authorities need to take a sustainable approach to energy architecture to enhance risk management, transparency and open communication to the public.

Bangladesh, with the GDP growth rate of 7.24% has targeted to become a middle-income nation by 2021. Energy is closely connected to economic development and every aspect of human life. Bringing changes in human conduct and global economic system, distribution and production of energy wealth are extremely complex. In ensuring the need for energy sometimes gives birth to uncertainty and risk that lead to ethical problems. Problems persist in many cases because they are complex and connected to other questions. Thus, before addressing the questions we must need to revisit the different energy sources and their nature.

Bangladesh has set forth ambitious plans for new energy architectures. However, technological developments should be taken for advantages. By diversifying its composition of energy supplies, to meet existing and future energy demands, it
can increase its energy security as well as overcome the ethical issue. With the energy transition, co-designed policies will support the sustainability of energy policies.

Moreover, a credible commitment and motivation to this vision are critical towards creating a sustainable economic development. Furthermore, conceivable governance from government and support from private organizations would mean that the intent is in line with the vision in setting the country forward for progress. It also means that passing proper policies on to institutions that outlast government leaders. Stewarding investment to the most impactful areas will unlock and emphasize the capital required to fuel the transition.

This provides a clear and collaborative direction for all stakeholders and investors to work towards a common goal to improve the economic condition of the nation, without causing any ethical problem for the society. It is worth noting that ethics can’t be in divorce from social realities, even when rationality is the preferred methodology. Getting adequate and credible data on ethics is difficult to find in Bangladesh due to difficulty in assessing it. However, this paper provides a way forward to readers to analyze the ethical complexities by using other factors. This paper can be further extended by pooling ethical issues related to the energy of other South Asian countries for better understanding the sustainable energy options and economic development.
References


Ethics and Economics of Tobacco Farming: A Case Study of Rural Bangladesh

HABIBUR RAHMAN*
JANI PARVIN**

Abstract: Tobacco is being dealt as one of the major cash crops which are largely grown in Kushtia, Chittagong Hill, and northern regions of Bangladesh. Actually it is a non-food plant used as a basic raw material for products that is proved to be harmful for health, environment and society. Tobacco is both dangerous and addictive. Its production thus raises ethical questions. The study is aimed to estimate the factors affecting tobacco yield and investigate whether any ethical issues influence the production behavior of tobacco farmer in Lalmonirhat district. Both primary and secondary data are used in this paper. Primary data is collected from 100 farmers using simple random sampling method from Aditmari upazila of Lalmonirhat district. To estimate the influencing factors including ethics on the tobacco yield, both multiple linear and double log regression model are used. Tabular method is followed to describe the socio-economic profile and explore ethical consideration of tobacco farmers regarding its cultivation. The result shows that actually major farmers have no ethical concerns about tobacco farming. It also reveals that the majorities of tobacco farmers are reluctant to leave its production though they claim that tobacco production is unethical. The linear regression result of tobacco yield shows that the variables fertilizer, pesticides, seed, labors, support from the company, and land quality are positively significant to affect the tobacco yield. From the normative point of view, ethical concern of the farmers would
be negatively related with their tobacco yield. But the paper finds an insignificant relation between ethics and tobacco yield.

**Key words:** Ethics, tobacco farming, farmers, rural and tobacco yield.

**Introduction**

Bangladesh is predominantly an agricultural country with over 45% of its total labor force is employed in agriculture and about 17% of the national GDP is derived from this sector (BBS, 2016). Employment in tobacco farming is responsible for less than 0.5% of agricultural employment in Bangladesh. Tobacco is being dealt as one of the major cash crops which are grown throughout the country, with the largest tobacco growing areas including Rangpur, Lalmonirhat, Kushtia, and Chittagong Hill (Barkat et al., 2012).

Tobacco farming has been introduced since mid-sixties of the last century in this country into the fields where food crops were grown. Its production expanded widely after liberation of 1971 at Teesta silt in Rangpur area. Tobacco is grown in agricultural land, but actually it is not an agricultural crop. In the context of Bangladesh, agriculture means where farmers are involved in the decision for choosing the crops and its consumption and marketing. Where tobacco is a non-food plant and basic raw material for products such as cigarette, bidi and other smokeless tobacco that is proved to be harmful for health, environment and society (Akhter, 2011).

There are also many hazards of tobacco farming in terms of health, environment, and society. Health threats include the large amount of pesticides used on the crop, as well as illnesses relating to the handling of raw tobacco leaves. Continuous exposure to the smell of nicotine emanating from the fields leads to dizziness, nausea and vomiting. Dermal absorption of nicotine while harvesting the wet green leaves leads to an illness called “green tobacco sickness” or GTS (Nahar and Debra, 2007). Tobacco is the second major cause of death globally causing 5.4 million premature deaths each year out of which 1.2 million deaths occur in the South-East Asia region. It is predicted that within 21st century one billion people will die from tobacco use (WHO Report, 2008). Bangladesh has a double burden of tobacco production and consumption. Smoking causes about 25% of all deaths in Bangladeshi men aged 25 to 69 years and an average loss of seven years of life per smoker (Alam et al., 2012).

A huge quantity of fuel wood is needed for curing of tobacco leaves, which releases poisonous smoke in the environment. Consequently trees are logged
indiscriminately and the environment is polluted by the poisonous smoke (Geist, 1999). In Bangladesh, huge areas of forests in the Chittagong Hill Tract region have disappeared over the past few years, and a substantial portion has been tobacco-related deforestation (Nahar and Debra, 2007). Environmental degradation is also caused by the tobacco plant which leaches nutrients from the soil, as well as pollution from pesticides and fertilizers applied to tobacco fields (Geist, 1999). Tobacco farming is harmful for livestock, poultry, and biodiversity also.

It is also harmful for social environment. Due to its easy accessibility and social acceptability, there are now more young women and teenagers having access to cigarettes and hence getting addicted. Children get much information from early ages and being addicted with tobacco in various forms. Child labor often occurs in tobacco-growing areas. By taking children out of school to work in the fields, parents are reducing their children’s future opportunities for a better life (Geneva: ECLT report, 2011). In addition, tobacco competes for land suitable for food production. It is clear that tobacco is both dangerous and addictive. Its production and use thus might raise ethical questions from normative point of view.

Tobacco production has been expanded significantly in the country. According to BBS statistics, tobacco farming areas and its production has risen by 76% and 134% respectively during the period from 2007-08 to 2014-15 (BBS, 2012 & ’16). Lalmonirhat is a district of northern region of Bangladesh, is one of the hotspots where tobacco farming is popular. In recent years, a significant amount of cultivable land are been used for tobacco farming in this district. In this situation farming of non-food crops like tobacco by replacing food-crop land is a threat on our food security (The Daily Star). According to the Lalmonirhat Agriculture Extension Department (AED), Farmers’ tobacco cultivation in Lalmonirhat has been increased from 4 thousand hectares to 25 thousand hectares during 2002-2013. In this area, tobacco farming is also causing threat on health, environment and society. But they are producing tobacco because of various factors like high profitability, easy market access, fair price etc. The problem is to find out the factors contributing tobacco cultivation and to investigate the ethical issues of the tobacco growers in the area.

**Objectives of the Study**

The overall objective of the study isto estimate the factors influencing tobacco yield, and also investigate whether any ethical issues affect the production behavior of tobacco farmer in the study area. The specific objectives of the study
are:

i. To assess the socioeconomic characteristics of the tobacco farmers in the study area;
ii. To investigate whether tobacco producers are concerned about ethical issues of tobacco farming and its yield;
iii. To estimate the impact of contributing important variables on tobacco farming and yield; and
iv. To make some guidelines for the improvement of tobacco control policy in Bangladesh.

Literature Review

A considerable number of studies have been conducted in home and abroad regarding various issues of tobacco. “Tobacco means any Nicotianatabacum or Nicotianarustica plant or any other related plants or its leaf or crop, root, branch or any part of it. (Tobacco Products Usage Control Act, 2005)

Berry and Porter (1986) in their study argued that there is no essential difference between the use of alcohol and tobacco and the use of opium and cannabis. The use of tobacco is both dangerous and addictive. For these reasons its production, distribution and consumption raise ethical issues which merit examination. He concluded that it is morally unacceptable as tobacco farming jeopardizes not only one’s own well-being but also that of others.

Scollo et al., (2016) stated that the child labor in tobacco farming is an ethical issues. It is common in many underdeveloped regions in which tobacco is grown. Globally, 60% of all child laborers between the ages of five and 17 years work in agriculture, which includes tobacco farming.

Fox, B. J (2005) attempted to explore the importance of message framing and ethics in tobacco control. He concluded that some ethical principles are important for controlling tobacco farming.

Ali et al. (2015) showed the socio-economic scenario of tobacco farming and its impact on environment. They argued that tobacco causes some serious disruption on environment. Tobacco farming has too much negative impact on biodiversity, livestock and poultry, soil and air. To control they suggested some necessary steps including strict rules and regulations, awareness building etc.

Mahmud (1999) conducted a socioeconomic study on tobacco production in some selected areas of Rangpur district where he found that tobacco growing was a
profitable business, but the Virginia variety was more profitable than the Matihari. Likewise many researchers, Hassan et al.(2015), Moazzem et al.(2013), Sarkar and Farida (2013), found the tobacco farming as a profitable than other crops.

On the other hand, Nahar, F. and Efroymson, D., (2007) showed in their case study that the high profitability of tobacco is nothing but a myth. Profitability of tobacco is overestimated, and that there are various profitable and realistic alternatives to tobacco production. If the imputed value of own labor and that of their families’ labor is taken into account, tobacco loses much of its profit margin, as the high labor cost reduces the net return to labor.

According to UBING research work, there are several reasons including cash earning, perceived high profit, guarantee of inputs and market and also the involvement of farmers through company card plays a coercive role for continuing tobacco farming. She also showed that farming of non-food crops like tobacco by replacing food-crop land is a threat to our food security, soil fertility. For decades tobacco production has moved from one location to another, not due to the increased interest of farmers but rather due to the loss of soil fertility and destruction of sources of fuel wood in areas under production (Farida Akhter).

Khandaker (2012) designed her study with a view to assess the costs and returns as well as the profitability of growing tobacco. Tobacco production was highly profitable in the study areas. Production function model is estimated considering seven explanatory variables human labor, power tiller, seed, manure, fertilizer, insecticide and irrigation. It is found that most of the included variables of have significant impact on tobacco production.

Very few studies are found on the issues of tobacco farming behavior of farmers with reference to their ethical concern. Almost none of the Bangladeshi researchers tried to estimate effect of the various contributing factors including ethics on tobacco yield. Especially no empirical study is conducted in Lalmonirhat region about ethical concerns of tobacco farmers. On this backdrop, the present study has attempted to meet up this research gap.

**Methodology of the Study**

Research methodology is the process of systematically solving the research problems. Methodology of this study includes selection of study area and sampling procedure, prepare of questionnaire, collection of data and analytical techniques.
Selecting Study Area and Sampling Procedure

Lalmonirhat, located in the north-west part, is one of the hotspots of Bangladesh where tobacco is grown commercially, tobacco farming is popular and on increase. Among the sub-district of Lalmonirhat, in Aditmari upazila this practice is comparatively higher. Considering these reasonable factors Aditmari upazila of Lalmonirhat district has been selected purposively for our study. After preliminary visit, 5 villages named Velabari, Sarpukur, Pathantuli, Tiperbazar and Kisamat Chandapur from Aditmari sub-district are selected randomly. Both qualitative as well as quantitative methods have been used to carry out this study. This study is based on both primary and secondary data. To collect primary data, from the tobacco farmers of the above five villages, 100 tobacco farmers, are interviewed randomly during October-November, 2016. Among the various types of tobacco such as Virginia, Motihari, Jatietc, Virginia is the most popular among the farmers in the study area. Thus only Virginia tobacco farmers are considered for our survey. The sample size of 100 is selected purposively, A well designed and pre-tested questionnaire is used which includes both open and close ended questions. The samples are selected in such a way that it covers all necessary information to examine our study objectives. Secondary data is collected from Bangladesh Bureau of Statistics (BBS).

Analytical framework

In this study, tabular technique is followed to illustrate the overall socio-economic characteristics of tobacco farmers and to explore whether tobacco producers are concern about ethical and unethical issues of tobacco farming. Collected data are scrutinized, and summarized for the purpose of tabulation using the Statistical Package foe Social Science (SPSS) and Microsoft Excell-2010.

Here, ethics is assumed to being aware about various harmful short- run and long-run effects of tobacco cultivation on public health, environment and society and thus having tendency of tobacco farmers to leave or decrease tobacco cultivation to some extent at least and replacing tobacco cultivated land by food or others cash crops production.

Statistical analysis, an econometric regression model is used to estimate the factors (fertilizers, pesticides, seeds, labors, irrigation, and tobacco company support and land quality) particularly including ethics affecting tobacco yield. From the normative point of view, ethics of tobacco farmers is assumed as a factor of influencing tobacco production behavior.
Positive economics describes the world the way it is. It uses scientific principles to arrive at objective, testable conclusions based on facts. Positive economics of tobacco production includes its causes, determining factors’ of production, cost-benefit, profitability etc. Traditionally using positive economics approach, it is analyzed tobacco production behavior of the farmers.

Normative economics, on the other hand, is not factual rather as a subjective issue it incorporates the opinions and underlying morals, ethics and standards. Normative economics of tobacco production raises question about consumption, production and distribution of tobacco considering its wider negative effects. It is assumed from the normative point of view, tobacco farmers’ production behavior would be negatively related with their ethical concern towards their tobacco farming.

In our research, positive economic approach is used to determine the factors including ethics those are contributing in tobacco yield, and normative approach is used to investigate about ethical concerns of tobacco farmers in the study area. The following figure summarizes our analytical procedure:

![Analytical Procedure Diagram](image-url)

Source: Authors’ own formulation

**Empirical Modeling of Tobacco Yield Function**

To predict the quantitative impact of various variables including ethics on the tobacco yield, the following empirical generalized multiple regression model is estimated using the Ordinary Least Square (OLS) method.

\[
YIELD = \beta_0 + \beta_1 FRT + \beta_2 PST + \beta_3 LBR + \beta_4 IRR + \beta_5 LND_Q + \beta_6 SEED + \beta_7 S_COM + \beta_8 ETHICS +
\]
The model specified above also to be tested using double-log forms with a view to check functional form best fits the model. The double-log form of the model is specified by taking the natural log of dependent variable and continuous explanatory variables, leaving the dummy variables untransformed. The explicit form of double log form of the model is given as:

\[ \ln \text{YIELD} = \beta_0 + \beta_1 \ln \text{FRT} + \beta_2 \ln \text{PST} + \beta_3 \ln \text{LBR} + \beta_4 \ln \text{IRR} + \beta_5 \ln \text{LND}_Q + \beta_6 \ln \text{SEED} + \beta_7 \text{S}_\text{COM} + \beta_8 \text{ETHICS} + \]

Where: YIELD = Perbigha tobacco yield in kgs (Dependent variable)

Independent variables:

- FRT = Perbigha fertilizer nutrients in kgs (Urea/TSP/DAP/MAP/Others) applied.
- PST = Pesticides/insecticides in kgs (Theovita, Basudin, Ridomil, Singenta) applied per bigha.
- LBR = No. of day labors worked per bigha (Labor hours of all engaged in tobacco farming).
- IRR = No. of irrigations.
- LND\_Q = Level of land quality.
  (1 = Less fertile land, 2 = Medium fertile land, 3 = High fertile land).
- SEED = Perbigha seed used.
- S\_COM = Dummy variable for the support received (easy loan, free seed, fertilizers) from tobacco company, (Support received=1, Else=0).
- ETHICS = Dummy variable for ethics (1=tobacco farming is unethical, 0=Otherwise).

= Disturbance term, \ldots, are known as the parameters of the model or intercept and slope coefficients respectively.

Results and discussion

Socio-economic background of Tobacco farmers

The socio-economic characteristics and background of tobacco farmers influence their production to a great extent (Hassan et al.2015). In order to get vivid picture of socio-economic status of tobacco farmers, this paper includes age, education level, family size, main occupation status, types of farmers based on farm size, farming experience, tenurial status, and status of receiving any support from tobacco company.
Table: 1-Socio-economic characteristics of Tobacco farmers

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>No. of farmers (N= 100)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 20 years</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>21 to 30 years</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>31-40 years</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>41-50 years</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Above 50 years</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td><strong>Family size distribution</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small(1-3 members)</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Medium(4-6 members)</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Large(above 6 members)</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td><strong>Educational status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>37</td>
<td>37</td>
</tr>
<tr>
<td>Primary</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Secondary</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>SSC or above</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Main occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only farming</td>
<td>58</td>
<td>58</td>
</tr>
<tr>
<td>Business</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Service</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Types of farmer (based on farm size)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small(1-33 decimals)</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Medium(34-99 decimals)</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Large( Above 1.0 acre or 100 decimal)</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td><strong>Tobacco farming experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upto 5 years</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>6-10 years</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>11-15 years</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>16-20 years</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Above 20 years</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td><strong>Tenurial status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenant</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Owner</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Owner-cum-tenant</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>Received any support from the tobacco company,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>No</td>
<td>46</td>
<td>46</td>
</tr>
</tbody>
</table>

Source: Field Survey, 2016
**Age:** The socio-economic characteristics of the respondents surveyed on the selected tobacco farmer in the study area are in Table 1. The results revealed that among 100 respondents, age of the major (32% and 28%) tobacco farmers ranged from 31 to 50 years. In general most of the respondents fell within the most economically active age of 31 to 50 years. Only 2% of the farmers fell within the age range of below 20 years, and 16% of farmers are within 21 to 30 years age range. It therefore indicated that few youths of this area engaged in tobacco farming profession. Being tobacco farming is a laborious job; few old farmers (55%) are tobacco cultivator.

Source: Field Survey, 2016

**Family size:** It is observed from Table-1 that, majority (49%) of respondents have medium family(4-6 members) followed by 33% of tobacco farmers having small family(1-3 members) and only 18% family belongs to large family(more than 6 members). Since tobacco is a labor intensive non-crop, it is very helpful for tobacco farmers if family size is larger.

**Educational status:** Illiterate farmers or less educated farmers are generally more pursued in tobacco cultivation. Among the respondents, the maximum farmers (37 %) are illiterate while primary of 35% and secondary of 8% respondents. Farmers having SSC or above level education are 10.8 % only (Table-1). It implies that more educated farmers have less tendency of tobacco production in general.

**Main occupation status:** On the issue of main occupation status, only farming is the main source of earning for the majority (58%) of respondents in the study area. It is also observed that 31% and 8% of the tobacco farmers earn mainly from business and service respectively (Table-1).

**Types of farmers:** In the study area as shown in Table-1, 40% respondents are medium farmers (farm size 34-99 decimals) followed by 34% of respondents are large farmers (1 or more than 1 acre farm size). Only 26% of them are small farmers (farm size 1-33 decimals).

**Farming experience:** It is shown in Table 1 the farming experience of respondents. 32% of the farmers have been farming tobacco for between 11 - 15 years, while nearly 23 percent farmed for between 6 to 10 years. For between 16-20yeras, 18% farmers and for more than 20 years, 14% farmers have been farming. Only 12% farmers have experience of only below 5 years. This could be inferred that, most of the farmers are well experienced and known about various impact of tobacco cultivation.
Tenurial status: Table-1 shows that the highest numbers (49%) of the respondents are owners followed by owner-cum-tenants (39%) and tenant cultivators (12%).

Support from the tobacco company: In our study area, the most of tobacco farmers (54%) get various types of support from the company. Generally the tobacco Company supports the contracted farmers through advice, easy loan, free seeds, fertilizers, pesticides, and guarantee of buying tobacco leaves at about higher price level. Besides, the company also supports the contracted tobacco farmers technically. Rest of the respondents does not get any support from the company, they are non-contract tobacco farmers (Table-1).

Reasons for cultivating tobacco

The preference for farming tobacco is not merely an independent factor rather it is interlinked with many social, economic and individual factors. The study uncovers some of the causes (not mutually exclusive) that lead to preference of tobacco farming. Major causes of tobacco farming are more profitability than other crops, having much money at a time, having easier market access, uncertain market price of other crops, ancestral occupation, having incentives (in loan, seeds, fertilizers, pesticides etc.) and technical supports from the company, Land is less suitable for other crops, having guarantee of selling tobacco leaves at fair price, encouraging from the tobacco company, and neighboring land factors as described in figure-1.

Figure-1: Causes leading to the preference to tobacco farming

Source: Field Survey, 2016
Ethical and related concerns of Tobacco farmers

Ethics is a normative, and value judgment issue. The idea of ethics in tobacco farming differs from person to person. A tobacco farmer would consider not only personal cost-benefit but also social cost-benefit of it. He or she should consider the resulting short-run and long run negative impact on public health, society and environment. The tendency of farmers to cut or stop their tobacco farming considering its various negative issues on public health, society and environment is assumed as his/her ethics.

The nature of ethics would include awareness about tobacco causing individual health and public health hazards, decline of soil fertility, environmental pollution etc. and making decision about tobacco farming. To investigate whether farmers are known about harmfulness of tobacco farming and what is their comments about validity of tobacco farming from ethical ground, summary of the opinion of the respondents about tobacco farming and its ethical related issues are described in table-2. It is shown in the findings that 67% tobacco farmers of the study area say that it is harmful for health. Majority (73%) of the farmers think that they should not produce a crop that is harmful for others but beneficial for them (Table-2). It reflects their common morality. Around 58% reveals that tobacco cultivation pollutes environment and 65% respondents say that it leads to decline soil fertility gradually. Here it is implied that a significant number of farmers are not aware about tobacco related environmental hazards and fertility declining.

<table>
<thead>
<tr>
<th>Opinions of the respondents</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>Don’t know (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco production is harmful for health</td>
<td>67</td>
<td>28</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Farmers should leave farming a crop although it is beneficial for them but harmful for others</td>
<td>73</td>
<td>18</td>
<td>9</td>
<td>100</td>
</tr>
<tr>
<td>Tobacco cultivation pollutes environment</td>
<td>58</td>
<td>31</td>
<td>16</td>
<td>100</td>
</tr>
<tr>
<td>Tobacco cultivation decreases soil fertility gradually</td>
<td>65</td>
<td>24</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>So Tobacco cultivation is unethical</td>
<td>61</td>
<td>19</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>And Farmers should stop or cut their tobacco production</td>
<td>21</td>
<td>73</td>
<td>6</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Survey, 2016
Table 2 also shows that after successive queries about negative impact, tobacco farmers are asked whether tobacco farming is unethical or not. In response of this question majority (61%) of them claim that tobacco farming is unethical. But only 73% of them deny stopping or cutting their tobacco production (Table-2). This reflects their contradictory behavior with their claim. Therefore it is implied that majority farmers have no ethical concerns about tobacco farming.

Reasons for regarding tobacco farming as unethical are alluded in figure-2. The respondents who reported that tobacco farming is unethical (Table-2) those viewed about the causes of being it as unethical. Generally most of the tobacco farmers have no proper knowledge about ethical issues of tobacco farming and its motives. The study reveals some of the causes (not mutually exclusive) that lead them to term tobacco production as unethical. Figure-2 demonstrates that the dominant reported causes are being harmful for environment, for health of neighboring people and for children; religious restrictions; being tobacco as the main raw materials for cancer causing bidi or cigarette.

![Figure-2: Reasons of regarding tobacco farming as unethical](image)

Source: Field Survey, 2016

Figure-3 shows the moral or ethical satisfaction level of tobacco farming. It is clear from the figure that majority of tobacco farmers are not happy ethically for their tobacco farming. As they have some concerns about negative probable effects of tobacco farming. The result is conformity with the statement published in the Daily Star “Some farmers, who are aware about the harmful impact on soil fertility, want to stop tobacco cultivation (they don’t get expected output for other crops in the land where tobacco is cultivated later on), but they have no option but to continue to produce tobacco” Thus it can be said that although many of the tobacco farmers are not satisfied with it but they have to cultivate it for various reasons.
Determining the factors affecting tobacco yield

Regression model result shown in Table-3 is to measure the impact of the important factors on tobacco yield in the study area. Findings in the table indicates that output of the double-log regression gave the better result than that of linear regression model in terms coefficient of determination and number of significant parameters. Here, the coefficient of determination $R^2 = 0.76$ suggests that 76 percent variation in dependent variable tobacco yield has been explained by the independent variables. Out of the eight repressor, six namely fertilizer, labor, support from the company, land quality, seed, and pesticides are statically significant, while the rest two (irrigation, ethics) are not statistically significant at various level of significance ($\alpha=1\%, 5\% & 10\%$). With regards to the effect of individual variables, it is found out that fertilizer is significant at 1% level with positive impact; labor and support from company are significant at 5% level with positive impact on tobacco yield. In the same way, pesticides, land quality, and seeds have positive effect on tobacco yield at 10% level of significance.

The coefficient of this model represents the elasticity of tobacco yield with respect to independent variables. The coefficient of variable ethics is very small (0.000) and positive. It is clear from this result of double log model that there is no significant effect of ethics on tobacco yield in the study area (Table-3).

The result of linear regression model, shown in Table-3, reveals that 64% variation of dependent variable is explained by the eight independent variables. Here four variables namely fertilizer, labor, support from the company, and land quality, are statistically significant at 1% or 5% or 10% level of probability with positive impact on tobacco yield. But the rest four (irrigation, seed, pesticides, and ethics) are not statistically significant. Irrigation, seed and pesticides
three variables have insignificant positive effect on tobacco yield. In the same way ethics has some negative but no significant impact on tobacco yield. This is seen from the Table-3, although the linear regression model shows the negative relationship with tobacco yield as per priori expectation but both regression model results suggest that ethics has very insignificant relationship with tobacco yield.

Findings and Recommendation

The paper has made an attempt to assess the socio-economic background of tobacco farmers and estimate the factors including ethics influencing tobacco yield in the study area. The study shows that generally socio-economic situation of tobacco farmer’s is poor. Farming is the main means of livelihood for the majority (58%) of tobacco farmers’ family. A significant number of respondents

<table>
<thead>
<tr>
<th>Table-3: Result of the estimated factors influencing tobacco yield</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>Constant</td>
</tr>
<tr>
<td>FRT</td>
</tr>
<tr>
<td>PST</td>
</tr>
<tr>
<td>LBR</td>
</tr>
<tr>
<td>IRR</td>
</tr>
<tr>
<td>LND_Q</td>
</tr>
<tr>
<td>SEED</td>
</tr>
<tr>
<td>S_COM</td>
</tr>
<tr>
<td>ETHICS</td>
</tr>
</tbody>
</table>

Dependent variable: Tobacco yield
N.B.a) ***, **, * indicate significant at 1%, 5%, and 10% level respectively.
b) 0.000 indicates very small coefficient.

Source: Authors’ own calculation
(37%) are found illiterate. Illiterate or less educated farmers are generally more pursued in tobacco cultivation. 67% of them have family members not less than 4 members. The paper finds that most of the members of the family including children, females work in the various stages of tobacco farming in the study area.

A significant proportion of tobacco farmers (54%) are producing tobacco by attracting various incentives or support from the tobacco company. Most of the tobacco farmers (83%) termed tobacco farming is more profitable than other crops. The paper also finds other major causes of tobacco farming like having much money at a time, having easier market access, uncertain market price of other crops, ancestral occupation, having incentives (in loan, seeds, fertilizers, pesticides etc.). It is found from the study result that many of the respondents admits the negative impacts of tobacco farming and also 61% termed tobacco production is unethical. But their production behavior is not reflected by their claim of unethicality. They should cut or leave tobacco production from the ethical point view.

It is shown in the study result, only 21% of them want to stop or cut tobacco cultivation from the next season. 73% of respondents are not interested to leave tobacco farming in the study area. The regression result shows the similar picture like many others researchers’ findings. Among eight selected variables, six variables namely fertilizer, labor, support from the company, land quality, seed, and pesticides have significant positive impact on tobacco yield in the study area, while ethics, the most important variable in this paper, has very insignificant negative relationship with tobacco yield.

Tobacco controlling is one of the concern issues of policymakers in Bangladesh. From the supply side restricting tobacco farming is the important. For the improvement of tobacco control policy in Bangladesh, some recommendations are below:

- Social awareness should be developed and some awareness program should be arranged to stop tobacco production.
- The consciousness of the farmers about the negative impact of tobacco and its validity from ethical ground needs to be increased.
- The govt. and also NGO should provide easy accessibility of seeds, fertilizer, and other inputs to the farmers so that they are stimulated to use their land for food crops rather than tobacco.
- Necessary steps to be taken to ensure fair and stable price of food crops and minimizes the risk of damaging crops.
Initiatives to be taken to spread out the idea about ethical legitimacy of tobacco farming through educational institutions, religious institutions (i.e. Mosque, temple), local Union council.

Conclusion

Tobacco production is harmful for the individual farmers, their families, public health, environment, and society. Thus tobacco controlling is the inevitable for Bangladesh. The government has been discouraging tobacco cultivation through the DAE, other agriculture and environment related organizations to save soil fertility and public health as well as environment from pollution.

To regulate tobacco cultivation, it is taken various initiatives such as decision to stop loan facilities in tobacco farming by Bangladesh Bank, ban on using subsidized fertilizer in tobacco farming by the Agricultural Ministry but they are almost of no use. Further supply side measures should be taken besides demand-side regulations by the government. Farmers are farming tobacco instead of paddy and other crops after getting seeds, fertilizers and interest loan facilities from the tobacco companies. They are convinced by tobacco companies that it is more profitable than other crops.

Many farmers are not interested to cultivate paddy and winter crops on their land as they often do not get fair prices because of poor marketing and transport. Realizing the disastrous impacts of tobacco farming, many of them now want to leave tobacco farming but they need alternative better options. Besides the government, NGO should come forward to provide various facilities to farmers so that they feel encouraged to cultivate food crops instead of tobacco.
Reference


Fox, B. J, (2005) ‘Framing tobacco control efforts within an ethical context’ (Available from http://tobaccocontrol.bmj.com/ on January 10, 2017 - Published by group.bmj.com)


Economic Growth and Inequality in Bangladesh

Khan A. Matin*

Abstract. The study aims at analyzing the long term relationship between growth and inequality in Bangladesh. Following the seminal work of Simon Kuznets (1955), the causal relationship running from growth to inequality has been characterized as an inverted U-relationship, where inequality first rises with growth and subsequently falls as a country becomes richer. The decadal average annual growth rate of GDP has been estimated to be 3.74 per cent in 1970s, 3.71 per cent in 1980s, 4.96 per cent in 1990s, 5.87 per cent in the 2000s, and 6.45 per cent during 2011-16. In the last financial year (2015/16) GDP growth rate has been found to be 7.11 per cent. The per capita GDP growth rate has been estimated to be 1.32 per cent in the 1970s, 1.67 per cent in the 1980s, 3.16 per cent in the 1990s, 4.51 per cent in 2000s and 5.04 per cent during 2011-16. The income Gini coefficient increased from 0.34 in 1974 to 0.46 in 2010. The per capita real income had significant positive effect and income squared had significant negative effect on Gini coefficient. The fitted Gini curve indicated that may be we have just travelled half way on the locus of inverted U-relationship. The extent of inequality in landholding, education, employment, health, nutrition and reproductive health care has also been investigated. The land Gini exhibited declining trend from 0.54 in 1984 to 0.50 in 2008. The education Gini was found to be 0.52 in 2011. Differentials in adult literacy rate, enrolment rate, average years of schooling, literacy of ever married women were observed according to socioeconomic status of the population. Marked differences were observed in employment share according to gender and locality. The concentration curve and concentration index computed for women’s literacy, children’s nutrition, nutrition of mother, utilization of reproductive health care services-all exhibited a great deal of disproportionate concentration of the study

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variables according to wealth quintiles. Bangladesh has made considerable progress in the field of literacy, nutrition and reproductive health care but all have the essence of inequality. The increasing growth was accompanied by rising inequality over the period under consideration. Bangladesh’s main challenge is now reducing income inequality. Disparity of income is both a virtue and a vice. The virtue of providing rewards for effort and generating economic growth must be balanced against the vice of inequality’s manifest injustice. Beginning with July 2015 Bangladesh has been classified as a LMIC by the World Bank.

Keywords: Growth. Kuznets hypothesis. Income Gini coefficient. Inequality in landholding, employment, education, nutrition and health care. Bangladesh.

Introduction

Rising economic inequality through the distribution of income, consumption, wealth or assets is a major challenge. There is considerable concern in Bangladesh about the growing income inequality. Available household level information suggests that the distribution of income is much more unequal than the distribution of consumption. Income inequality as measured by the Gini coefficient for the distribution of income has risen substantially during the last four decades or so. The analysis is carried out by two interlinked method of measuring inequality: the Lorenz Curve and the Gini Coefficient. Both originated in the early years of the twentieth century. In 1905 Max Otto Lorenz published a paper in an American Statistical Journal outlining the technique which was to bear his name. Corrado Gini’s index of income inequality was published shortly afterwards in 1912. The study aims at analyzing the long term relationship between growth and inequality in Bangladesh. Following the seminal work of Simon Kuznets (1955), the causal relationship running from growth to inequality has been characterized as an inverted U-relationship, where inequality first rises with growth and subsequently falls as a country becomes richer. The relationship between growth and inequality is characterized by two-way causation. The rate and process of growth may shape the evolving pattern of inequality, and the existing pattern of inequality may in turn affect the prospects for growth. The pertinent questions are: What is the effect of inequality on economic growth and economic performance? Do more unequal societies enjoy better conditions for economic growth, or can inequality have a dampening effect on efficiency? What are the channels through which inequality has these effects? Does inequality create unfavorable conditions for the enactment of economic reforms that can lead
to greater efficiency? Apart from the inequality of income, the nature and trend of inequality in consumption expenditure, land holding, education, nutrition and utilization of health care services have been studied.

On the global front we have been listening to that the number of ultra-rich people whose aggregate wealth is equal to the poorest half (3.6 bn) of the world population has reduced from 388 in 2010 to 62 in 2015. Recently revised and updated findings present that the number of billionaires whose wealth is equal to that of the bottom half of the world population could be just 8 in 2016. The projected numbers indicate that by about 2022, there could be a single super rich individual whose wealth alone shall match the wealth of the bottom half of the world population. (Oxfam, 2017).

Oxfam calculations are based on data on wealth of the richest individuals from the Forbes Billionaires list and wealth of the bottom 50% from Credit Suisse Global Wealth Data book (2016).

Data

The current statistics of the Bangladesh Bureau of Statistics (BBS, 2016), Bangladesh Bank (2016) Ministry of Finance (2016) and Bangladesh Demographic and Health Surveys (BDHS) are the main source of data. However on line data set available on the website of ADB, World Bank, OECD, UN and other organizations have also been used.

Inequality of what?

Inequality of Opportunity and Inequality of Outcomes: Intergenerational Transfer of Inequality.

In recent years, debates on inequality in development economics have been dominated by the concept of equality of opportunity. Implicit in this concept is a focus on access to basic services such as health, education, and basic infrastructure in childhood, and especially on eliminating discrimination in access because of inherited circumstances, such as gender, ethnicity, or location. Children born to poor family shall have no access to property, asset or wealth. They have limited access to finance. Entrenched inequality can significantly undermine individuals’ aspirations in youth, affecting their subsequent educational and occupational choices. Their opportunity for mobility remains very limited. Inequality may damage trust—the foundation for social cohesion—and thus weaken collective decision making. These may well lead to social instability.
In this paper I shall be discussing inequality of income, landholding, employment, education, health and nutrition and reproductive health care utilization.

In modern economics, the thinking on social arrangements was initially shaped by welfarism, with utilitarianism being its most influential school of thought. According to utilitarianism, the social goal is to achieve “the greatest happiness for the greatest numbers”.

**Income growth and inequality**

Almost all the great classical economist—from Adam Smith to Karl Marx—propounded the theory that capital accumulation was key to growth, and that accumulation was driven by the savings of the people, which in turn depends on the distribution of income. They also assumed that the rich capitalists tended to save a bigger proportion of their income than the poor workers. The classical chain of reasoning can be divided into two parts: First part says that more unequal distribution of income results in higher savings and accumulation because the rich tend to save more, and the second part says the more you save the faster you grow. Thus the fastest way to goal should looks like

\[
\text{Income} \rightarrow \text{Saving} \rightarrow \text{Capital accumulation} \rightarrow \text{Growth}
\]

Moses Abramovitz (1956) the pioneer of the growth accounting called this major part of the contribution “measure of our ignorance” conveying the message that we knew very little of the forces that promotes growth. Other studies based more reliable data produced mixed findings. There are also indications that growth precedes rather than following capital accumulation.

**Real GDP, Per capita GDP and Population growth**

Bangladesh experienced an unstable and a low average growth rate of real GDP during the 1970s and 1980s. The first two decades after the independence of Bangladesh in 1971 were the most difficult times in the country’s economic history. The 1970s passed in trying to recover from the ravages of war, cyclones, floods and famine, and the 1980s were devoted to consolidating the success in recovery and reconstruction. The average annual growth rate in the first two decades was hovering around 3.7 per cent. However, since the early 1990s growth rate had been experiencing an increasing trend with some year-to-year fluctuations. The average annual growth rate in the 1990s was around 5 percent, which increased further to 5.9 percent during the 1st decade of the millennium. During the last five years the country has been maintaining an average annual growth rate of 6.4 percent. In the last financial year (2015/16) GDP growth rate
has been found to be 7.11 per cent. The growth rate of per capita real GDP has been very low in the first two decades -1.3 per cent in the 1970s and 1.7 per cent in the 1980s. This low rate of growth in per capita income has been ascribed by many due largely to the high growth rate of population. But since then the growth rate of per capita real GDP started taking momentum- increased to 3.2 per cent in the 1990s, 4.5 per cent in the 2000s. In the last five years the average annual growth rate of per capita GDP was posted as 5 per cent. Over the period under consideration, the average annual growth rate of population has decreased from 2.34 per cent in the 170s to 1.30 per cent in the recent years. Figures 1a, 1b, 1c. Bangladesh’s economic growth rates in recent years have been higher than most of the South Asian countries and many of the sub-Saharan African countries and thus it is a remarkable achievement by historical standards and also quite impressive in comparison with the developing world as a whole.

Fig 1a. Real GDP growth rate

Fig 1b. Per capita GDP growth rate

Fig 1c. Population growth rate

Notes: (1) average annual growth rate for each period. (2) The FY73-80 refers to the period 1972/73 to 1979/80 and so on. Author’s computation
Source: BBS. Bangladesh Bank. The data for the period FY1973 to FY2010 are at constant 1995/96, and for FY2011-2016 are from constant 2005/06 bases.
Relationship Between inequality and Per Capita Income. Kuznets Curve

Simon Kuznets (1955) on the basis of the study of historical data of the developed countries observed that the pattern of distribution of income within a country changes in a specific way as the country becomes richer. As it begins to grow from a low level of income, inequality first rises, and only after it has reached a certain level of affluence, that inequality begins to fall. Thus the diagram depicting the relationship of inequality and per capita income shall have an inverted U-shape. So at the early stage of development both inequality and growth shall go together. In fashionable language the assertion is that “you must let the cake grow first before sharing it equally”.

Subsequent analyses based on more detailed data came up with mixed findings. Some supporting the proposition of Kuznets while others opposing it. Information on the data set available for the period 1973/74 to 2010 is given in table 1 and Figure 2. The increase in inequality (Gini concentration ratio for income) along with the rise in real per capita GNI (at base 1995/96) is evident from the graph. However there appears to be a start of the decline in inequality from the per capita income level of Taka 20.5 thousand which at the prevailing exchange rate equals US$ 334 during the FY2005.

The Per capita GNI at current Taka was Tk 28.4 thousand which at the prevailing exchange rate turns out to be US$ 463 for the same period. This may put some of us in a worrisome situation to negotiate with the findings on declining value of Gini concentration ratio at such a low income level. Thus the million dollar question is –has Bangladesh reached that level of affluence where a decline in inequality is expected?

We have tried to fit a long term shape of Gini curve on the basis of data points available in table 1. The Ordinary Least Squares method has been applied to estimate the parameters. The natural log transformation of per capita real income and its square term to capture the influence of higher income have been used as explanatory variables.

The fitted Gini coefficients can be obtained from equation (1). And the curves of observed and expected Gini coefficients are shown in Figure 2. The income has significant positive effect on Gini coefficient while its square term has significant negative effect on Gini coefficient. The effects were statistically significant at 5 per cent level. The shape of the fitted Gini curve suggests that we are probably half way through in order to have its inverted U-shape on the basis of the published value of Gini coefficients.
Development of Landholding

The information available on size distribution of land holding by farm size is given in table 2. It appears from the table that over a period of two and half decades the proportion of small farm (.05 to 2.49 acres) households has increased from 70.4 per cent in 1984 to 84.3 per cent in 2008 but the operated area under
the small farm holdings has increased from 28.3 per cent in 1984 to 50.8 per cent in 2008. The proportion of medium size farm (2.50 to 7.49 acres holding has decreased from 24.7 per cent in 1984 to 14.2 per cent in 2008 and the operated area under the medium size holding has decreased from 45.1 per cent in 1984 to 37.1 per cent in 2008. The proportion of large farms (7.50 acres and above) has also experienced decline from 4.9 per cent in 1984 to 1.5 per cent in 2008. The proportion of operated area has decreased from 25.9 per cent in 1983/84 to 12.1 per cent in 2008. The overall mean land holding size of the operated area decreased from 2.26 acres in 1984 to 1.68 acres in 2008. The land Gini exhibited a declining trend from 0.5440 in 1984 to 0.5008 in 2008. The land Lorenz curve is shown in Figure 3.

Table 2: Distribution of Farm Households and Their Operated Area: 1984-2008.

<table>
<thead>
<tr>
<th>Items</th>
<th>1984</th>
<th>1996</th>
<th>2008</th>
<th>Change/a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total farm</td>
<td>10045(100)</td>
<td>11798(100)</td>
<td>14870(100)</td>
<td>2.60</td>
</tr>
<tr>
<td>Household(000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small farm</td>
<td>7066(70.4)</td>
<td>9423(79.9)</td>
<td>12534(84.3)</td>
<td>3.22</td>
</tr>
<tr>
<td>Medium farm</td>
<td>2483(24.7)</td>
<td>2077(17.6)</td>
<td>2109(14.2)</td>
<td>-6.27</td>
</tr>
<tr>
<td>Large farm</td>
<td>496(4.9)</td>
<td>297(2.5)</td>
<td>229(1.54)</td>
<td>-2.29</td>
</tr>
<tr>
<td>Total Operated</td>
<td>22678(100)</td>
<td>19957(100)</td>
<td>21945(100)</td>
<td>-1.34</td>
</tr>
<tr>
<td>Area(000 acres)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>6573(29.0)</td>
<td>8219(41.2)</td>
<td>11152(50.8)</td>
<td>2.90</td>
</tr>
<tr>
<td>Medium</td>
<td>10226(45.1)</td>
<td>8282(41.5)</td>
<td>8128(37.0)</td>
<td>-0.85</td>
</tr>
<tr>
<td>Large</td>
<td>5879(25.9)</td>
<td>3456(17.3)</td>
<td>2665(12.2)</td>
<td>-2.28</td>
</tr>
<tr>
<td>Mean farm holding</td>
<td>2.26</td>
<td>1.69</td>
<td>1.48</td>
<td>-1.44</td>
</tr>
<tr>
<td>Size(acres)</td>
<td>Per capita operated</td>
<td>0.25</td>
<td>0.17</td>
<td>0.16</td>
</tr>
<tr>
<td>Size(acres)</td>
<td>Land Gini</td>
<td>5440</td>
<td>5332</td>
<td>5008</td>
</tr>
</tbody>
</table>

a/ annual rate of growth (%) during 1984-2008. b/ figures in parenthesis. Indicate percentage. Author's computation. Source. BBS. Census of Agriculture

Employment Development

In 1972-73 total employed population was 20.73 million of which 57.4 per cent belonged to agriculture sector, 15.9 per cent to industry sector and 26.7 per cent belonged to tertiary sector. This number of employed population increased to 58.1 million in 2013 of which 45.1 percent belonged to agriculture sector 20.8 per cent belonged to industry sector and 34.1 per cent belonged to services sector (Figure 4).
Fig 3. Land Lorenz curve

Source: BBS. Census of Agriculture.
Author’s computation.

Fig 4: Sectoral share of employment

Source: BBS. Census of Agriculture.
Author’s computation.
The least squares annual growth rate of per cent employed population in agriculture, industry and services sectors was found to be -0.99, 2.53 and 0.30 per cent respectively. The least squares growth for the employed population in agriculture, industry and services sectors were found to be 1.15 per cent, 5.02 per cent and 2.83 per cent respectively. The least squares annual growth rate for the total employed population was found to be 2.43 per cent (Table 3).

Table 3: Least Squares Growth Rate of Sectoral Shares (Per cent) of Employed Population: FY1973 To FY2013.

<table>
<thead>
<tr>
<th>Sectors</th>
<th>N (Mean)</th>
<th>Regression Coefficient ($\beta^\theta$)</th>
<th>t-ratio</th>
<th>P-value</th>
<th>R square</th>
<th>Least Squares Growth Rate(%)</th>
<th>D-W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture (Per cent)</td>
<td>41 (52.47)</td>
<td>-.009</td>
<td>6.20</td>
<td>.000</td>
<td>.83</td>
<td>-0.99</td>
<td>0.24</td>
</tr>
<tr>
<td>Industry (Per cent)</td>
<td>41 (11.72)</td>
<td>.025</td>
<td>18.21</td>
<td>.000</td>
<td>.91</td>
<td>2.53</td>
<td>0.12</td>
</tr>
<tr>
<td>Service (Per cent)</td>
<td>41 (35.81)</td>
<td>.003</td>
<td>4.44</td>
<td>.000</td>
<td>.44</td>
<td>0.30</td>
<td>0.47</td>
</tr>
</tbody>
</table>

Source and Notes. BBS. Author’s Computation. The Agriculture sector consists of (a) Agriculture and Forestry (b) Fishing and (c) Mining and Quarrying. The Industry Sector consists of (a) Manufacturing (b) Electricity, Gas and Water Supply and (c) Constructions. The remaining various services categories comprise the Services Sector.

The Regression line is $ln Y = \alpha + \beta X$. The average annual growth rate $r = \left[ \frac{\exp ^{\beta} - 1}{100} \right]$, where $\beta^\theta$ is the least squares estimate of $\beta$.

Employment Elasticity by Sectors

For the overall economy the employment elasticity has declined from 0.59 in 2000 to 2006 to 0.38 in 2010 to 2013. The decline is considerable suggesting the shrinkage in the employment generating capacity of the economy during the period 2010 to 2013.

Table 4. Employment elasticity by sectors. 2000 to 2013.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP(All sectors)</td>
<td>0.59</td>
<td>0.55</td>
<td>0.38</td>
<td>0.52</td>
</tr>
<tr>
<td>Agriculture</td>
<td>0.73</td>
<td>0.67</td>
<td>0.21</td>
<td>0.58</td>
</tr>
<tr>
<td>Industry</td>
<td>1.24</td>
<td>1.85</td>
<td>0.89</td>
<td>1.07</td>
</tr>
<tr>
<td>Services</td>
<td>0.47</td>
<td>0.26</td>
<td>0.29</td>
<td>0.35</td>
</tr>
</tbody>
</table>

Source. BBS. LFS. BB Economic Trends. Author’s computation.

Table 4. Among the broad sectors shown in the table agriculture is exhibiting its utmost restraint starting with the 2010s. The situation in the Industry sector showing...
some sign of encouragement in employment generation. For the period 2000 to 2010, the value of employment elasticity is greater than 1-indicative of a decline in labour productivity in the industry sector. The employment elasticity in the service sector has decreased from 0.47 in 2000 to 0.26 in 2006 to 0.29 in 2010 and then showing slight improvement to 0.29 in 2010 to 2013. We need to consider the issue of labour productivity while interpreting these values. The 7th Five Year Plan used 0.45 as the employment elasticity for considering the employment generation at the aggregate level. Using the same employment elasticity as in the Sixth Plan (0.45 on aggregate based on specific sectoral elasticities), and a projected average annual GDP growth rate of 7.4% during 2016-2020 (and underlying production structure), varying from 7% (FY16) through 8.0% (FY2020), the economy will be creating additional jobs ranging from 2.3 million in FY16 to 2.9 million in FY20. What this means is that if the projected GDP growth materializes, employment generated in the economy will exceed additions to the labour force each year, so that many of the workforce currently unemployed or under-employed will have the opportunity to move into productive jobs, primarily in the formal manufacturing sector of the economy (7th FYP, p 52).

Employment shift by sectors

Over the last four decades or so employment creation has shifted from agriculture to industry and service sectors. The employment in the agriculture sector has fallen from 19.8 million (57.1 per cent) in 2000 to 26.2 million (45.1 per cent) in 2013. As of 2013, the manufacturing has the largest share of 9.5 million (16.3 per cent) followed by 7.5 million (12.9 per cent) by trade, hotels and restaurants, 3.7 million (6.4 per cent) in the transport, storage and communication. Table 5. Since 2000, the share of employment in the trade sector has remained relatively stable hovering around 15.5 percent but decreased to 7.5 million (12.9 per cent in 2013)- while in the case of the manufacturing sector it increased from 9.5 per cent to 16.3 per cent in the same period. Most of the new jobs in the manufacturing sector have been in the RMG sector, construction, transport and other trade-related activities. As regards the rate of change, manufacturing sector had the highest growth(12.1 per cent) followed by 7.7 per cent in electricity, gas steam,7 per cent in the construction sector and 5.8 per cent in the financial and insurance sector. The overall rate of employment growth has been 3.8 per cent.

Employment Shift in Occupation

In terms of occupations, indeed, the analysis reveals that the share of agriculture, forestry and fisheries has constantly declined from 51 per cent in 2000 to 46.3 per
cent in 2010. Table 6. This decline has been mainly compensated with an increase in production and transport – from 20.8 per cent in 2000 to 24.9 per cent in 2010. The highest average rate of growth of 25.0 per cent was observed for Administrative and Managerial class, followed by 6.67 per cent for production & transport labourers, 5.0 per cent for professional and technical class and about 4 per cent for sales and service category. It is only the clerical workers group that has posted a decrease of 1.6 per cent per annum. The overall rate of increase of employed increased by 3.9 per cent per year.

Table 5: Employment (Million) shift by Sectors: 2000-2010

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour force</td>
<td>40.7</td>
<td>46.3</td>
<td>49.5</td>
<td>56.7</td>
<td>60.7</td>
<td>3.8</td>
</tr>
<tr>
<td>Employment (All sectors)</td>
<td>39.0</td>
<td>44.3</td>
<td>47.4</td>
<td>54.1</td>
<td>58.1</td>
<td>3.8</td>
</tr>
<tr>
<td>Agriculture, forestry, and fishing</td>
<td>19.8</td>
<td>22.9</td>
<td>22.8</td>
<td>25.7</td>
<td>26.2</td>
<td>2.4</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.2</td>
<td>0</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>3.7</td>
<td>4.3</td>
<td>5.2</td>
<td>6.7</td>
<td>9.5</td>
<td>12.1</td>
</tr>
<tr>
<td>Electricity, gas, steam; water supply, sewerage, waste management, and remediation activities.</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.2</td>
<td>7.7</td>
</tr>
<tr>
<td>Construction</td>
<td>1.1</td>
<td>1.5</td>
<td>1.5</td>
<td>2.6</td>
<td>2.1</td>
<td>7.0</td>
</tr>
<tr>
<td>Wholesale and retail trade; repair of motor vehicles</td>
<td>6.1</td>
<td>6.7</td>
<td>7.8</td>
<td>8.4</td>
<td>7.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Transportation and storage</td>
<td>2.5</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>3.7</td>
<td>3.7</td>
</tr>
<tr>
<td>Financial and insurance activities.</td>
<td>0.4</td>
<td>0.3</td>
<td>0.8</td>
<td>1.0</td>
<td>0.7</td>
<td>5.8</td>
</tr>
<tr>
<td>Others</td>
<td>5.1</td>
<td>5.2</td>
<td>5.2</td>
<td>5.7</td>
<td>8.1</td>
<td>4.5</td>
</tr>
<tr>
<td>Unemployment</td>
<td>1.8</td>
<td>2.0</td>
<td>2.1</td>
<td>2.6</td>
<td>2.8</td>
<td>4.3</td>
</tr>
<tr>
<td>Unemployment Rate (%)</td>
<td>4.4</td>
<td>4.3</td>
<td>4.2</td>
<td>4.6</td>
<td>4.3</td>
<td>-0.2</td>
</tr>
</tbody>
</table>


Employment shift by gender and location

Table 7, Panel A, B and C shows the findings on shift in employment by gender and location. We observe that there has been a slow but steady shift of the
workforce from rural to urban areas. The share of rural employment out of total employment has decreased from 89 to 76 per cent between 1989 and 2003. Since then, this percentage has remained stable, indicating of the achievement of an equilibrium point.

Regarding gender gap in shift in employment, we also notice a change in favour of female share of the employment. The percentage of female share in employment improved by about 9 percentage point during 2000-13- from 20.3 per

---

**Table 6: Employment (Million) shift by Occupations and growth rate : 2000-2010**

<table>
<thead>
<tr>
<th>Occupations</th>
<th>2000</th>
<th>2003</th>
<th>2006</th>
<th>2010</th>
<th>Growth rate/a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour force</td>
<td>40.7</td>
<td>46.3</td>
<td>49.5</td>
<td>56.7</td>
<td>3.9</td>
</tr>
<tr>
<td>Employment (All occupations)</td>
<td>39.0</td>
<td>44.3</td>
<td>47.4</td>
<td>54.1</td>
<td>3.9</td>
</tr>
<tr>
<td>Professional, Technical</td>
<td>1.6</td>
<td>1.7</td>
<td>2.2</td>
<td>2.4</td>
<td>5.0</td>
</tr>
<tr>
<td>Administrative, Managerial</td>
<td>0.2</td>
<td>0.1</td>
<td>0.2</td>
<td>0.7</td>
<td>25.0</td>
</tr>
<tr>
<td>Clerical workers</td>
<td>1.2</td>
<td>1.5</td>
<td>1.0</td>
<td>1.0</td>
<td>-1.6</td>
</tr>
<tr>
<td>Sales workers</td>
<td>5.8</td>
<td>6.5</td>
<td>6.7</td>
<td>8.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Service workers</td>
<td>2.2</td>
<td>2.0</td>
<td>2.8</td>
<td>3.0</td>
<td>3.6</td>
</tr>
<tr>
<td>Agri. Forestry, Fisheries</td>
<td>19.9</td>
<td>22.8</td>
<td>23.0</td>
<td>25.7</td>
<td>2.91</td>
</tr>
<tr>
<td>Production &amp; transport labourers &amp; others</td>
<td>8.1</td>
<td>9.7</td>
<td>11.5</td>
<td>13.5</td>
<td>6.67</td>
</tr>
<tr>
<td>Unemployment</td>
<td>1.8</td>
<td>2.0</td>
<td>2.1</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>Unemployment Rate(%)</td>
<td>4.4</td>
<td>4.3</td>
<td>4.2</td>
<td>4.6</td>
<td></td>
</tr>
</tbody>
</table>

*a/ annual rate of growth (%) during 2000-2010.
Author’s computation. Source: BBS, LFS.

---

Regarding gender gap in shift in employment, we also notice a change in favour of female share of the employment. The percentage of female share in employment improved by about 9 percentage point during 2000-13- from 20.3 per

**Table 7: Employment shift by gender and location and growth rates: 2000-2013.**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Panel A. Employment (Million) shift by gender</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Growth rate/a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>employment</td>
<td></td>
<td>31.1</td>
<td>34.5</td>
<td>36.1</td>
<td>37.9</td>
<td>41.2</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(79.7)/b</td>
<td>(77.9)</td>
<td>(76.2)</td>
<td>(70.0)</td>
<td>(70.9)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>employment</td>
<td></td>
<td>7.9</td>
<td>9.8</td>
<td>11.3</td>
<td>16.2</td>
<td>16.8</td>
<td>8.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(20.3)</td>
<td>(22.1)</td>
<td>(23.8)</td>
<td>(30.0)</td>
<td>(29.1)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>39.0</td>
<td>44.3</td>
<td>47.4</td>
<td>54.1</td>
<td>58.1</td>
<td>3.8</td>
</tr>
<tr>
<td>employment</td>
<td></td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
<td></td>
</tr>
</tbody>
</table>
cent in 2000 to 29.1 per cent in 2013. Progressing at this rate females of Bangladesh have to keep struggling for about two more decades or so for attaining gender parity in employment, other things remaining same.

During the last 13 years, the highest rate of growth of employment has been achieved by female-8.7 per cent at national, 8.8 per cent at urban and 7.7 per cent in rural areas. We mention here with concern that during the period 2010-13 the number of female employment in rural area decreased from 12.6 million to 12.3 million. The growth of rural male employment has been lowest (1.7 per cent),

---

**Panel B. Employment (Million) shift by location**

<table>
<thead>
<tr>
<th>Location</th>
<th>2000</th>
<th>2003</th>
<th>2006</th>
<th>2010</th>
<th>2013</th>
<th>Growth rate/a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>8.7</td>
<td>10.7</td>
<td>11.3</td>
<td>12.4</td>
<td>16.1</td>
<td>6.5</td>
</tr>
<tr>
<td>Employment</td>
<td>(22.3)b</td>
<td>(24.1)</td>
<td>(23.8)</td>
<td>(22.9)</td>
<td>(27.7)</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>30.3</td>
<td>33.6</td>
<td>36.1</td>
<td>41.7</td>
<td>41.7</td>
<td>2.9</td>
</tr>
<tr>
<td>Employment</td>
<td>(77.7)</td>
<td>(75.9)</td>
<td>(76.2)</td>
<td>(77.1)</td>
<td>(72.3)</td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>39.0</td>
<td>44.3</td>
<td>47.4</td>
<td>54.1</td>
<td>58.1</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
<td></td>
</tr>
</tbody>
</table>

---

**Panel C. Employment (Million) shift by gender, location**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour force</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td>40.7</td>
<td>46.3</td>
<td>49.5</td>
<td>56.7</td>
<td>60.7</td>
<td>3.8</td>
</tr>
<tr>
<td>National</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>39.0</td>
<td>44.3</td>
<td>47.4</td>
<td>54.1</td>
<td>58.1</td>
<td>3.8</td>
</tr>
<tr>
<td>Female</td>
<td>39.0</td>
<td>44.3</td>
<td>47.4</td>
<td>54.1</td>
<td>58.1</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>7.9</td>
<td>9.8</td>
<td>11.3</td>
<td>16.2</td>
<td>16.8</td>
<td>8.7</td>
</tr>
<tr>
<td>Urban</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>8.7</td>
<td>10.7</td>
<td>11.3</td>
<td>12.4</td>
<td>16.1</td>
<td>6.5</td>
</tr>
<tr>
<td>Female</td>
<td>6.6</td>
<td>8.2</td>
<td>8.6</td>
<td>8.8</td>
<td>11.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2.1</td>
<td>2.5</td>
<td>2.7</td>
<td>3.6</td>
<td>4.5</td>
<td>8.8</td>
</tr>
<tr>
<td>Female</td>
<td>2.1</td>
<td>2.5</td>
<td>2.7</td>
<td>3.6</td>
<td>4.5</td>
<td>8.8</td>
</tr>
<tr>
<td>Unemployment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate (%)</td>
<td>1.8</td>
<td>2.0</td>
<td>2.1</td>
<td>2.6</td>
<td>2.8</td>
<td>4.3</td>
</tr>
</tbody>
</table>

---

*a/ annual rate of growth (%) during 2000-2013. b/ figures in parenthesis indicate percentage*
helping to lower down the growth rate of male employment at 2.5 per cent at national level. The urban male employment growth rate has been higher (5.8 per cent). The employment growth rate in rural area (2.9 per cent) is just the half of its rate in urban counterpart (5.8 per cent).

In the paragraphs that follows, some of the recent opinion of Asian Development Bank and the International Labor Organization are reproduced. In the opinion of International Labour Organization:

**Formal job creation has been rather lackluster**

Despite the strong economic performance that has characterized the Bangladesh economy in recent years, there has been little improvement in the overall labour market situation. Between 2000 and 2010 when GDP growth averaged nearly 6 per cent, the employment rate (ratio of employment to the working-age population) actually fell 1.7 percentage points to stand at roughly 67 per cent in 2010. One of the main challenges to creating enough employment opportunities is related to the fact that the working-age population has grown at a rate of more than 2 million people per year over the past two decades and is expected to grow at a rate of 2.2 million per year over the next decade. Yet formal job creation has averaged only 200,000 per year in the past 10 years. As a result, the incidence of informal employment increased from 75 per cent in 1999/00 to 87 per cent in 2010 – the highest in the region. Moreover, not all of the formal jobs are full-time. In fact, underemployment – defined as employment of less than 35 hours per week – is pervasive. In particular, the rate of underemployment increased from 16.6 per cent in 1999–2000 to 20.3 per cent in 2010. (ILO, 2013)

While the Asian Development Bank in its August 2016 briefs mentions the key employment challenge as:

**Key Employment Challenges at a Glance**

- Capitalizing on the increase in the working-age population by raising the qualitative level of the labor force in both general and technical education with direct relevance to the needs of the labor market.
- Reversing the decline in the female labor force participation rate.
- Raising GDP growth progressively to 8% a year, which is required to absorb the surplus labor within 15 years or so.
- Attaining job-rich growth where high employment growth is achieved alongside high output growth. This is a challenge because of the recent experiences of manufacturing and construction. In the former,
employment growth has exceeded output growth, whereas, in construction, employment growth has been negative despite positive output growth.

- The above requires a genuine structural transformation of the economy through much more diversified growth, in general, and of manufacturing, in particular.
- A major challenge is to raise productivity and incomes from labor—of both the wage employed and the self-employed. Separate strategies are needed for the two groups.
- The decline in women’s employment growth needs to be reversed. Particularly important is a diversification of women’s jobs to include service sector jobs and jobs abroad.
- The skill composition of migrant workers needs to change toward more skilled workers.
- Bringing down the unemployment rate among the educated and youth. Higher returns associated with investment in higher education show that investment in education is useful. But the functioning of the labor market for educated job seekers needs to improve. (ADB, 2016a).

Apart from this policies to make growth more employment-friendly have to be adopted. These include: (i) facilitating structural transformation to create a greater number of productive jobs, and maintaining a balanced sectoral composition of growth between manufacturing, services, and agriculture; (ii) supporting development of small and medium-sized enterprises; (iii) removing factor market distortions that favor capital over labor; (iv) establishing or strengthening labor market institutions; and (v) introducing public employment schemes as a temporary bridge to address pockets of unemployment and underemployment (Zhuang et al. 2014).

**Sectoral Shares of GDP: 1973-2016**

A brief mention of sectorial GDP shift is in order. In table 8, we make a succinct presentation of the change in sectoral composition of GDP with a touch of the effect of shift in bases in the measurement of GDP. Bangladesh so far has computed annual GDP using four different base year- 1972/73, 1985/86, 1995/96 and 2005/06. The GDP series thus obtained are available in both current and constant prices of the base year for certain number of years in the published documents of Bangladesh Bureau of Statistics and Bangladesh Bank.
During FY1973, the sectoral contribution of GDP was 52.4 per cent by agriculture sector, 11.3 per cent by industry sector and 36.2 per cent by the services sector according to 1972/73 constant prices. The sectoral share of GDP in 1985/86 constant was 49.7 per cent for agriculture, 13.8 per cent for industry and 36.5 per cent for the services sector. The shrinkage of GDP in the agriculture sector by 2.5 (52.2-49.7) was absorbed into two other sectors-2.5 percentage point in the industry sector and 0.4 percentage point in the services. Table 8. The contribution of industry sector increased in the new base during the period as the contributions of more and more industrial activities were taken into account. For the FY1980, according to 1985/86 constant base, the sectoral share of GDP was 43.9 per cent by the agriculture sector, 15.6 per cent by the industry sector and 40.5 per cent by the services sector.

But according to 1995/96 the sectoral share of GDP was 33.8 per cent for agriculture sector, 16.5 per cent for industry sector and 49.7 per cent for the services sector. Here we notice a shrinkage of agriculture sector GDP by 10.1 (43.9-33.8) percentage points, and an expansion of share of GDP of industry sector GDP by 1 percent and 9.2 percentage points in the service sector. Similar increasing contributions of secondary and services are also observed for other base shifting. It is observed that during the last four decades or so, the share of agriculture sector in GDP has decreased from 52.2 per cent in 1972/73 to 16.3 per cent in 2005-16, though at different bases. The industry sector has gained by 17.3 percentage point from 11.3 per cent in 1972/73 to 28.6 per cent in FY2015-16. The gain of services sector was by 18.9 percentage point, from 36.2 percent in 1972/73 to 55.1 per cent in 2015-16. The least squares growth rate for sectoral share of growth rate was -0.98 for agriculture sector, 1.02 for industry sector and 0.000 for the services sector for the period 1980 to 2013 at 1995/96 constant base. Table 9 and Figure 5. Whenever, a new base for the measurement of GDP is introduced, the tertiary sector is crowned with expansion in its contribution. Why? Because a lot of new facilities have been introduced in the period since the last base year. But one pertinent question is- why this services sector keeps on revolving at the same share of its contribution for long? Figure 5 shows that for the last 34 years during FY1980 to FY2013 the locus of the share of services sector GDP is almost a straight line, forbidding any rate of change other than zero with respect to change in time period-handing over the delicate task of the negotiations of mutual trade off to the remaining two sectors- agriculture and industry sectors. They have been mutually exchanging about 1 per cent growth in favor of secondary sector on an average for the last 34 years.
Development in Education

Adult Literacy Rate

Bangladesh has made substantial improvement in its indicators of education since its independence. From table 10 we can see that the adult literacy rate has increased from 25.8 per cent in 1974 to 61.1 per cent in 2014. The average annual rate of growth has been 3.4 percent. The have been difference in the...
increase in the level of literacy in all segments of the population such as male and female and locality such as rural and urban. Historically better educational facilities were located in urban area while compared to rural area. Due to prevailing customs and norms girls were not encouraged for schooling in earlier days. These are well reflected in the lower level of literacy for female while compared to male, and also higher literacy rate in urban area in comparison to rural area. But the situation has been observed to improve in rural and urban area in the last four decades or so due to the implementation of the various educational programs by the national government and bilateral programs. Particular incentives e.g. tuition, scholarship, etc. have been provided to the girl students to improve their access to educational institutions.

These programs have been successful in bringing the girls to educational institutions and they have a gain in the rate of literacy while compared to the boys. At the national level the average annual rate of change of literacy has been 1.85 per cent for male while it was 8.52 per cent for female. In the urban area the increase in the rate of literacy for female is 2.90 per cent while the male experienced an increase of 0.61 per cent. The weighty impact of educational programs has been experienced by rural female who accomplished a hefty increase of 8.68 per cent while compared to a meager 1.88 per cent for the male counterpart. While passing we mention that in 1974, female had the lowest level of literacy in both rural and urban areas. The urban and rural differences in literacy was 24.7 per cent in 1974, which is still high-13.0 per cent in 2014. The
male female difference in literacy in 1974 was 24.0 percent which reduced to 6.5 percent in 2014.

Adults Literacy Rate by SES

We have also analyzed information on adult literacy rate by socioeconomic status of the population. Table 11 provides evidence of wide differences in literacy rate according to socioeconomic status of the population for 2008. The adult literacy

<table>
<thead>
<tr>
<th>Source</th>
<th>Year</th>
<th>Total</th>
<th>National</th>
<th>Adult literacy rate(Per cent)</th>
<th>Rural</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVRS</td>
<td>2014</td>
<td>61.1</td>
<td>64.7</td>
<td>58.2</td>
<td>74.6</td>
<td>77.7</td>
<td>71.5</td>
</tr>
<tr>
<td></td>
<td>2013</td>
<td>61.0</td>
<td>64.2</td>
<td>57.8</td>
<td>74.1</td>
<td>77.3</td>
<td>70.9</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>58.6</td>
<td>62.9</td>
<td>55.4</td>
<td>71.6</td>
<td>75.5</td>
<td>67.8</td>
</tr>
<tr>
<td>Literacy Survey</td>
<td>2008</td>
<td>48.8</td>
<td>48.6</td>
<td>49.1</td>
<td>56.9</td>
<td>56.7</td>
<td>57.1</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>41.5</td>
<td>47.0</td>
<td>36.7</td>
<td>55.7</td>
<td>62.7</td>
<td>49.5</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>38.8</td>
<td>46.3</td>
<td>32.0</td>
<td>61.5</td>
<td>69.8</td>
<td>53.9</td>
</tr>
<tr>
<td>Census</td>
<td>2001</td>
<td>47.9</td>
<td>53.9</td>
<td>40.8</td>
<td>64.3</td>
<td>70.3</td>
<td>57.1</td>
</tr>
<tr>
<td></td>
<td>1991</td>
<td>35.3</td>
<td>44.3</td>
<td>25.8</td>
<td>54.4</td>
<td>62.6</td>
<td>44.0</td>
</tr>
<tr>
<td></td>
<td>1981</td>
<td>29.2</td>
<td>39.7</td>
<td>18.0</td>
<td>48.1</td>
<td>58.0</td>
<td>34.1</td>
</tr>
<tr>
<td></td>
<td>1974</td>
<td>25.8</td>
<td>37.2</td>
<td>13.2</td>
<td>48.1</td>
<td>62.5</td>
<td>33.1</td>
</tr>
<tr>
<td>Change:1974-14</td>
<td>35.3</td>
<td>27.5</td>
<td>45.0</td>
<td>45.0</td>
<td>26.0</td>
<td>15.2</td>
<td>38.4</td>
</tr>
<tr>
<td>Rate of change/a</td>
<td>3.42</td>
<td>1.85</td>
<td>8.52</td>
<td>1.34</td>
<td>0.61</td>
<td>2.90</td>
<td>3.63</td>
</tr>
<tr>
<td>Ratio: 2014/1974</td>
<td>2.37</td>
<td>1.74</td>
<td>4.41</td>
<td>1.55</td>
<td>1.24</td>
<td>2.16</td>
<td>2.45</td>
</tr>
</tbody>
</table>

Note. a/annual rate of change(Per cent). Author’s Computation. Source. BBS. Population Census Literacy Survey. SVRS

rate increased with the increase in socioeconomic status in all segments of the population shown in the table. At the national level, the adult literacy rate for the poorest was 28 per cent which increased to 75 per cent for the richest group of population. The ratio of bottom to top quintile in the adult literacy rate was 0.37 in all segments of the population except urban female who had slightly better situation in their favour having a ratio of 0.43. The difference in male and female literacy rate in all the socioeconomic categories at national, rural and urban area was very minimal-between 0-2 percentage point. However, the difference in urban and rural literacy rate in all the socioeconomic categories varied between 6-14 percentage points. The lowest difference of 6 was observed for poorest part of the population which increased with the increase in socioeconomic status to a value of 14 percentage point for richest. Educational programs implemented so far
have been successful in reducing the gender gap in adult literacy, but more efforts are in order to mitigate the issues involving urban rural divide.

**Enrolment and SES**

Table 12 provides information about gross and net enrolment rate at primary, secondary and higher secondary level by socioeconomic status as indicated by wealth quintiles to which the students belong. For all levels of education shown in the table enrolment rate is highest in the richest quintile for both sex and male and female as well. This is true for both gross and net enrolment rate.

### Table 11: Adult Literacy Rates of population 15 years and above by Wealth level, Gender and locality, 2008.

<table>
<thead>
<tr>
<th>Wealth level</th>
<th>Total Male</th>
<th>Total Female</th>
<th>Urban Male</th>
<th>Urban Female</th>
<th>Rural Male</th>
<th>Rural Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poorest</td>
<td>28</td>
<td>28</td>
<td>29</td>
<td>32</td>
<td>30</td>
<td>36</td>
</tr>
<tr>
<td>Poor</td>
<td>40</td>
<td>39</td>
<td>38</td>
<td>47</td>
<td>46</td>
<td>48</td>
</tr>
<tr>
<td>Middle</td>
<td>51</td>
<td>51</td>
<td>51</td>
<td>57</td>
<td>59</td>
<td>55</td>
</tr>
<tr>
<td>Rich</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>71</td>
<td>71</td>
<td>71</td>
</tr>
<tr>
<td>Richest</td>
<td>75</td>
<td>76</td>
<td>76</td>
<td>83</td>
<td>83</td>
<td>84</td>
</tr>
<tr>
<td>Poorest/Richest</td>
<td>0.37</td>
<td>0.37</td>
<td>0.38</td>
<td>0.38</td>
<td>0.36</td>
<td>0.43</td>
</tr>
</tbody>
</table>

Source: BBS. Literacy Assessment Survey 2008. Author’s computation

Considering the primary level we see that the ratio of bottom to top quintile for both gross and net enrolment rate has improved in favour of the poorest quintile during the period 2005-10. For gross enrolment rate the ratio increased from 0.78 in 2005 to 0.88 in 2010. For net enrolment rate the ratio increased from 0.76 in 2005 to 0.89 in 2010 indicating an improved situation for the pupils in the poorest quintile. Regarding the enrolment of boys the change in ratio of bottom to top quintile has been same for both gross enrolment rate and net enrolment rate, from 0.69 in 2005 to 0.82 in 2010. As regards the girls there was no change in the ratio of bottom to top quintile of gross enrolment rate during 2005-10, having a value of 0.96 which is close to gender parity. The bottom to top ratio of net enrolment rate had a low value of 0.80 in 2005 which gained momentum in 2010 with a value of 0.95.

**Secondary level**

The difference in enrolment rate at the secondary level according to wealth
quintile is worsening. The gross enrolment rate for all pupils (boys and girls) for the poorest quintile was only about 31 percent of enrolment of those who were in the affluent class in 2005 which increased to 45 per cent in 2010. The performance of pupils in terms of net enrolment rate was more or less similar to the gross enrolment rate. The bottom to top ratio in net enrolment rate increased from 0.33 in 2005 to 0.45 in 2010. The boys of the poorest households had only 25 per cent share of their counterpart in the richest households, this share had risen to 38 per cent in 2010. The change in the ratio of bottom to top quintile in net enrolment rate was more or less similar- increasing from 0.24 in 2005 to 0.39 in 2010. The ratio of enrolment rates of bottom/top quintiles was much better for girls in both gross and net enrolment rates. The gross enrolment ratio for girls increased from 0.36 in 2005 to 0.51 in 2010; the net enrolment ratio still better from 0.42 in 2005 to 0.55 in 2010. Table 12.

**Higher secondary level**

Here, the proportion of boys and girls enrolled in the poorest quintile was very low, varying between 3-11 per cent. The proportion of boys and girls of richest quintile who were enrolled were much higher displaying wide range of variations in gross and net enrolment rates and the two time period considered. The ratio of bottom/top quintiles in gross enrolment rate for both boys and girls slightly increased from 0.12 in 2005 to 0.13 in 2010, regarding net enrolment rate, this ratio decreased from 0.15 in 2005 to 0.14 in 2010. The bottom/top quintile ratio in gross enrolment rate for boys was static at 0.14 in the time periods considered, while this ratio for net enrolment rate demonstrated a noticeable decline from 0.22 in 2005 to a low of 0.07 in 2010 suggesting a near calamity situation for boys in the poorest quintile. Regarding the girls, we see that the bottom/top quintile ratio of gross enrolment rate slightly increased from 0.10 in 2005 to 0.12 in 2010; this ratio for net enrolment rate showed an improving performance, from 0.15 in 2005 to 0.22 in 2010. Table 12.

**Education Gini Coefficient: Population Census 2011**

Analysing data from Population cenus 2011, the national Gini ratio is 0.5255 and the Gini ratio for rural area is 0.5403 and for the urban area Gini ratio is found to be 0.4578 suggesting a concentration at the lower end of the years of schooling in rural areas while compared to urban area. The Gini coefficient for female has been all along higher while compared to the Gini coefficient for male suggesting intra-concentration of inequality for female in all the locations. This pattern of differentials in Education Gini ratio is prevalent in all the divisions. Among the
divisions Rajshahi, Rangpur and Sylhet had the higher value of Gini concentration ratio while Barisal, Chittagong and Khulna regions were on the lower value of Gini ratio. Figure 6.

**Illiteracy of Ever married women**

Findings based on the analysis of illiteracy of ever married women (age 15-49) obtained in BDHS are presented in Table 13 and Figure 7. Table 13 shows that

<table>
<thead>
<tr>
<th>Level of education</th>
<th>Wealth Quintile</th>
<th>Gross Enrolment rate (%)</th>
<th>Net Enrolment rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>HIES 2005</td>
<td>HIES 2010</td>
</tr>
<tr>
<td>Primary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys and Girls</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; quintile</td>
<td>77</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; quintile</td>
<td>99</td>
<td>105</td>
</tr>
<tr>
<td>Ratio (1&lt;sup&gt;st&lt;/sup&gt; to 5&lt;sup&gt;th&lt;/sup&gt; quintile)</td>
<td></td>
<td>0.78</td>
<td>0.88</td>
</tr>
<tr>
<td>Boys</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; quintile</td>
<td>71</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; quintile</td>
<td>102</td>
<td>104</td>
</tr>
<tr>
<td>Ratio (1&lt;sup&gt;st&lt;/sup&gt; to 5&lt;sup&gt;th&lt;/sup&gt; quintile)</td>
<td></td>
<td>0.69</td>
<td>0.82</td>
</tr>
<tr>
<td>Girls</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; quintile</td>
<td>83</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; quintile</td>
<td>96</td>
<td>106</td>
</tr>
<tr>
<td>Ratio (1&lt;sup&gt;st&lt;/sup&gt; to 5&lt;sup&gt;th&lt;/sup&gt; quintile)</td>
<td></td>
<td>0.96</td>
<td>0.96</td>
</tr>
<tr>
<td>Secondary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys and girls</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; quintile</td>
<td>30</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; quintile</td>
<td>98</td>
<td>82</td>
</tr>
<tr>
<td>Ratio (1&lt;sup&gt;st&lt;/sup&gt; to 5&lt;sup&gt;th&lt;/sup&gt; quintile)</td>
<td></td>
<td>0.31</td>
<td>0.45</td>
</tr>
<tr>
<td>Boys</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; quintile</td>
<td>25</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; quintile</td>
<td>99</td>
<td>81</td>
</tr>
<tr>
<td>Ratio (1&lt;sup&gt;st&lt;/sup&gt; to 5&lt;sup&gt;th&lt;/sup&gt; quintile)</td>
<td></td>
<td>0.25</td>
<td>0.38</td>
</tr>
<tr>
<td>girls</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; quintile</td>
<td>35</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; quintile</td>
<td>96</td>
<td>84</td>
</tr>
<tr>
<td>Higher Secondary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys and girls</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; quintile</td>
<td>7</td>
<td>11</td>
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<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; quintile</td>
<td>57</td>
<td>81</td>
</tr>
<tr>
<td>Ratio (1&lt;sup&gt;st&lt;/sup&gt; to 5&lt;sup&gt;th&lt;/sup&gt; quintile)</td>
<td></td>
<td>0.12</td>
<td>0.13</td>
</tr>
<tr>
<td>Boys</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; quintile</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; quintile</td>
<td>57</td>
<td>83</td>
</tr>
<tr>
<td>Ratio (1&lt;sup&gt;st&lt;/sup&gt; to 5&lt;sup&gt;th&lt;/sup&gt; quintile)</td>
<td></td>
<td>0.14</td>
<td>0.14</td>
</tr>
<tr>
<td>Girls</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; quintile</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; quintile</td>
<td>57</td>
<td>80</td>
</tr>
<tr>
<td>Ratio (1&lt;sup&gt;st&lt;/sup&gt; to 5&lt;sup&gt;th&lt;/sup&gt; quintile)</td>
<td></td>
<td>0.10</td>
<td>0.12</td>
</tr>
</tbody>
</table>

*Source: 7<sup>th</sup> FYP. HIES 2005 and 2010. Author’s computation.*
overall mean illiteracy rate of all women decreased from 32.1 per cent in 2007 to 23.5 per cent in 2014. In all the survey years considered in the table the illiteracy rate monotonically decreased with the increase in the socioeconomic status of the women as determined by wealth quintile. The ratio of illiteracy rate of poorest/richest quintile increased from 3.83 in 2007 to 5.17 in 2014 indicating a worsening situation for illiteracy of women in the bottom quintile. The illiteracy rate has decreased during 2007-14 in all the socioeconomic group of the women but the rate of decrease are different. The highest rate of reduction of 5.9 per cent in illiteracy was observed for women in the richest quintile, followed by 5.8 per cent for women in the middle quintile. The women in the poorest quintile has the minimum gain of 3.0 per cent. The average annual rate of decrease has been 3.8 per cent.

Concentration index and concentration curve

In the analysis that follows we shall employ the technique of Concentration curve and concentration index in measuring the extent of inequality in education, health and nutrition sector variables. The concentration index and related concentration curve provide a means of quantifying the degree of income-related inequality in a specific variable. The two key variables underlying the concentration curve are: the variable (e.g. health, nutrition, and education), the distribution of which is the subject of interest; and a variable capturing living standards, against which the distribution is to be assessed. In the present analysis study population, e.g. women, children etc are grouped according to socioeconomic status (e.g. wealth quintile). The ranking of the groups (which group is poorest, which group is second poorest, and so on) and the percentage of the sample, (e.g. 20% in each)
is known. The convention is that the index takes a negative value when the curve lies above the line of equality, indicating disproportionate concentration of the variable among the poor, and a positive value when it lies below the line of equality. If the variable, is a ‘bad’ such as ill health, a negative value of the concentration index means ill health is higher among the poor. Table 14 and equation (1) give the details of procedure for computing concentration index.

The concentration curve plots the cumulative percentage of the variable (Lp) in vertical axis against the cumulative percentage of the sample, ranked by living standards, beginning with the poorest, and ending with the richest (p) in horizontal axis. If everyone, irrespective of his living standards, has exactly the same value of the criterion variable, the concentration curve will be a 45° line, running from the bottom left-hand corner to the top right-hand corner. This is known as the line of equality. If, by contrast, the health sector variable takes higher (lower) values amongst poorer people, the concentration curve will lie above (below) the line of equality. The further the curve is above the line of equality, the more concentrated the health variable is amongst the poor. The techniques have been widely used in the analysis of health variable. But I find no problem in assessing the concentration of illiteracy. Figure 7 gives the illiteracy concentration curve forever married women. The concentration index computed for the year 2007 was found to be -0.2535 which increased to -0.2784 in 2014 indicating that concentration of illiteracy in the lower socioeconomic status is on the rise. The concentration curves drawn for the years 2007, 2011 and 2014 all laid above the line of equality suggesting that there have been concentration of illiteracy among the women belonging to lower quintiles.

Table 13. Illiteracy Rate of Ever Married Women (age 15-49) by Wealth Index: BDHS 2007-2014

<table>
<thead>
<tr>
<th>Wealth Index</th>
<th>Percent Illiterate</th>
<th>BDHS2007</th>
<th>BDHS2011</th>
<th>BDHS2014</th>
<th>Change/a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poorest</td>
<td>-0.2535</td>
<td>-0.2618</td>
<td>-0.2784</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poorer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Women</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poorest/Richest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a*/annual rate of change (Per cent) during 2007-2014. Women in ‘no education’ category has been considered illiterate. Author’s computation. BDHS 2007, BDHS2011, BDHS2014.
The concentration Index is given by the formula (Fuller and Lurry, 1977).

\[ C = (p_1 L_2 - p_2 L_1) + (p_2 L_3 - p_3 L_2) + (p_3 L_4 - p_4 L_3) + ... + (p_{T-1} L_T - p_T L_{T-1}). \]  

where \( p \) is the cumulative percent of the sample ranked by economic status, \( L(p) \) is the corresponding concentration curve ordinate, and \( T \) is the number of socioeconomic groups.

**Illiteracy still an issue**

With the progress it is currently making, Bangladesh needs another 44 years to have an initial level of literacy skills for all its citizens and 78 years to attain the advanced level, according to a report of Campaign for Popular Education. While the number of people in each level of literacy has increased, the main driver behind this increase has been the overall population growth. And although

<table>
<thead>
<tr>
<th>Wealth Quintile</th>
<th>No of Women</th>
<th>Relative %</th>
<th>Cum % Women</th>
<th>No of Illiterate Women</th>
<th>Relative %</th>
<th>Cum % Illiterate Women</th>
<th>Per cent Illiterate</th>
<th>Conc. index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>3251</td>
<td>18.2</td>
<td>18.2</td>
<td>1410</td>
<td>33.5</td>
<td>33.5</td>
<td>43.4</td>
<td>-.0183</td>
</tr>
<tr>
<td>2nd</td>
<td>3360</td>
<td>18.8</td>
<td>37.0</td>
<td>1036</td>
<td>24.6</td>
<td>58.1</td>
<td>30.8</td>
<td>-.0491</td>
</tr>
<tr>
<td>3rd</td>
<td>3621</td>
<td>20.3</td>
<td>57.3</td>
<td>782</td>
<td>18.6</td>
<td>76.7</td>
<td>21.6</td>
<td>-.0730</td>
</tr>
<tr>
<td>4th</td>
<td>3769</td>
<td>21.1</td>
<td>78.4</td>
<td>652</td>
<td>15.5</td>
<td>92.2</td>
<td>17.3</td>
<td>-.1380</td>
</tr>
<tr>
<td>5th top</td>
<td>3842</td>
<td>21.5</td>
<td>100.0</td>
<td>326</td>
<td>7.7</td>
<td>100.0</td>
<td>8.4</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>17863</td>
<td>100.0</td>
<td>4206</td>
<td>100.0</td>
<td>23.5</td>
<td>23.5</td>
<td>5.17</td>
<td>-.2784</td>
</tr>
</tbody>
</table>

*Source: BDHS 2014. Author’s computation.*

progress has been made in various levels of literacy, the pace of progress has remained sluggish — 0.7 percent annually. This is obviously unsatisfactory as the progress made has clearly been stymied, most noticeably, by social constraints. One example would be the large number of children, who are still not attending schools in spite of the government making primary education free for all. Instead, they are being forced into child labour to economically support their struggling families. But even when we do have individuals going through the education system for a long enough period of time, sometimes, their level of literary competency remains awfully low compared to what is acceptable. Not only does this cast a shadow on the quality of education that is being provided, but it also indicates to the existence of deep systemic problems within the entire system that needs addressing for there to be any substantial improvement. And to identify
these and address the most fundamental problems within our education system, the authorities must involve experts to devise a comprehensive strategy for improving the quality of education. Meanwhile, by removing the various social constraints, access to education can be increased significantly across the board. (The daily Star. Editorial. 24 December 2016).

Development in Health and Nutrition

Infant and Child Mortality

During 1970s, the infant and child mortality in were considerably high in Bangladesh. For earlier years of the nation we have information from studies on Population Growth Estimation (PGE) Experiment, Bangladesh Retrospective Survey of Fertility and Morality (BRSFM), World Fertility Survey/Bangladesh Fertility Survey and UN World Population Prospects. During 1970s the infant mortality rate was in the vicinity of 150-160 per thousand live births, and the Under 5 mortality rate was in the range of 230-250 per thousand live births. But infant and child mortality has decreased greatly over the last four decades or so due to the implementation of massive population and health related programmes mostly financed by the bilateral and multilateral donors in the form of relief, grants and loans. By mid-1980 various reform programmes for enhancing access to educational institutions were initiated starting with the universalisation of primary education project.
The BDHS provides information on the level and trend of infant and child mortality in regular and comparable framework. The value of infant mortality rate decreased from 87 in 1993-94 to 38 in 2014. The value of under 5 mortality also showed similar decline from 133 per thousand live birth in 1993-94 to 46 in 2014. Table 5 provides information on the change of infant and under 5 mortality rates according to wealth quintile of the children’s households. In general, infant and child mortality are inversely related to the socioeconomic status of households as it is expected. The highest decline in both infant mortality (-6.3%) and under 5 mortality (-5.8%) has been observed for the richest households,

<table>
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<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Poorest</td>
<td>90</td>
<td>121</td>
<td>43</td>
<td>53</td>
<td>-5.2</td>
<td>-5.6</td>
</tr>
<tr>
<td>Poorer</td>
<td>66</td>
<td>98</td>
<td>52</td>
<td>63</td>
<td>-2.1</td>
<td>-3.6</td>
</tr>
<tr>
<td>Middle</td>
<td>75</td>
<td>97</td>
<td>41</td>
<td>47</td>
<td>-4.5</td>
<td>-5.1</td>
</tr>
<tr>
<td>Richer</td>
<td>59</td>
<td>81</td>
<td>31</td>
<td>37</td>
<td>-4.7</td>
<td>-5.4</td>
</tr>
<tr>
<td>Richest</td>
<td>65</td>
<td>72</td>
<td>24</td>
<td>30</td>
<td>-6.3</td>
<td>-5.8</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>88</td>
<td>38</td>
<td>46</td>
<td>-4.1</td>
<td>-4.8</td>
</tr>
<tr>
<td>Ratio: 1st/5th</td>
<td>1.38</td>
<td>1.68</td>
<td>1.79</td>
<td>1.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


* Infant mortality rate (per 1,000 live births).
* Under 5 mortality rate (per 1,000 live births).

*a/ annual rate of growth (%) during 2004-2014. Author’s computation.

followed by decline of -5.2% of infant mortality and -5.6% decline of under 5 mortality for the poorest households. Here the performance of the households in the poorest quintile in utilizing the health care facilities appears to be judicious, great and exceptional.

While studying the inter temporal change in other characteristics such as access to education and in child nutrition, the gain of the households in the bottom quintiles was at its lowest rung. That’s not all, a careful look at the change in the achievements of infant and under 5 mortality suggests that all the sample households irrespective of socioeconomic status fought a very fierce battle in materializing the facilities available for the preventions of deaths of their children at their early life. On the other hand- was it that the inputs for the prevention of infant and child deaths were optimal? - or was it that the programmes were implemented very efficiently of which we don’t here very often? It has been
argued that the reductions in mortality in Bangladesh in general, has largely been remain concentrated at the early and young age of the population. At the end of the day for the year 2014 we have expectation of life (at birth) increased to 69.1 years for male and 71.6 years for female and 70.7 for both male and female from a humble level of 46.31 for male, 46.25 for female and 46.28 for both male and female in the early 1970s.

**Children’s Nutritional Status**

**Stunting**

There has been some improvement in child nutritional status over the past decades. Table 15a Figure 8a. The level of stunting among children under age 5 has declined from 50.6 percent in 2004 to 36.1 percent in 2014 The proportion of stunted children under five years of age varied inversely with the household wealth quintile. For the year 2014, it was highest (49.2%) in the bottom quintile and lowest (19.4%) in the top quintile, and the rate ratio of bottom/top quintiles was 2.54. During the period 2007-14 the gain in the change in the rate of reduction in stunting has been highest of 3.75% for the children of richest families followed by children from richer families. As is expected, children from the households in poorest quintile has to be satisfied with the lowest rate of reduction of 1.27%. The concentration index increased from 0-.1233 in 2007 to -0.1639 indicating concentration of stunting in the lower wealth quintiles of the household. The concentration curve laid above the line of equity (45° line) indicating that there is good deal of concentration of under nutrition in stunting the lower wealth quintiles. Table 16.

**Wasting**

The proportion of wasting of children decreased from 14.5% in 2004 to 14.3% in 2014. The proportion wasting also varies inversely with the household wealth quintiles. Table 15b and Figure 8b. For the year 2007 the highest proportion (20.8%) of wasting was found for bottom household quintile while lowest proportion (13.2%) of wasting was found for the children of the top household wealth quintile and the rate ratio for bottom/top quintiles was 1.58. The value of concentration index was found to be -0.0575 for 2007 which increased to -0.0878 in 2014 and was found to be indicating concentration of wasting among children from households belonging to lower quintiles The concentration curve laid above the line of equity (45° line) indicating that there is good deal of concentration of under nutrition in the lower wealth quintiles.
Underweight

The proportion of underweight children decreased from 42.5% in 2004 to 32.6% in 2014. The proportion underweight children also varies inversely with the household wealth quintiles. For the year 2007, the highest proportion (50.5%) of underweight was found for bottom household quintile while lowest proportion (26.0%) of underweight was found for the children of the top household wealth quintile and the rate ratio for bottom/top quintiles was 1.94. The value of concentration index was found to be -0.1090 for 2007 which increased to -0.1718 in 2014 indicating concentration of underweight among children from households belonging to lower quintiles. The concentration curve laid above the line of equity (45° line) indicating that there is good deal of concentration of underweight in the lower wealth quintiles (Table 15c and Figure 8c).

There has been some improvement in child nutritional status over the past decade. The level of stunting among children under age 5 has declined from 50.6 percent in 2004 to 36.1 percent in 2014. In the last three years it declined by 5.2 percentage points. Wasting increased to 17.4 percent in 2007 from 14.5 percent in 2004 and has gradually declined since then, to 14.3 percent in 2014. The level of underweight has declined from 42.5 percent in 2004 to 32.6 percent in 2014. The HPNSDP 2011-16 targets for 2016 are 38 percent for stunting and 33 percent for underweight. The 2014 BDHS data show that these targets have been achieved.

Table 15a: Trend in Stunting(Ht/A) of children under age 5 by Wealth Index: BDHS 2007-2014

<table>
<thead>
<tr>
<th>Wealth Index</th>
<th>Stunting (Percent stunted)</th>
<th>Change/a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BDHS2007</td>
<td>BDHS2011</td>
</tr>
<tr>
<td>Poorest</td>
<td>54.0</td>
<td>53.7</td>
</tr>
<tr>
<td>Poorer</td>
<td>50.7</td>
<td>45.4</td>
</tr>
<tr>
<td>Middle</td>
<td>42.0</td>
<td>40.7</td>
</tr>
<tr>
<td>Richer</td>
<td>38.7</td>
<td>35.9</td>
</tr>
<tr>
<td>Richest</td>
<td>26.3</td>
<td>25.7</td>
</tr>
<tr>
<td>All Women</td>
<td>43.2</td>
<td>41.3</td>
</tr>
<tr>
<td>Poorest/Richest</td>
<td>2.05</td>
<td>2.09</td>
</tr>
<tr>
<td>Concentration Index</td>
<td>-1.233</td>
<td>-1.452</td>
</tr>
</tbody>
</table>

Source: BDHS. Author’s computation. a/ annual rate of change (Per cent) during 2007-2014
Trend in nutritional status of Women

Short stature height (Height <145 cm.)

The percentage of women in low stature height (height<145 cm.) decreased from 15.6 per cent in 2004 to 12.6 percent in 2014. The ratio of bottom to top quintile of percentage of low stature height decreased from 2.59 in 2007 to 1.73 in 2014.

The concentration index for 2007 was found to be -0.1154 in 2007 which decreased to -0.1081 in 2014. Low body mass index (<18.5 kg/m2) and/or short stature (height <145 cm) are common in women in low-income countries, with the highest rates of the former observed in southern and southeastern Asia. Figure 9a.

Table 15b. Trend in Wasting (Wt/Ht) of children under age 5 by Wealth Index: BDHS 2007-2014

<table>
<thead>
<tr>
<th>Wealth Index</th>
<th>BDHS2007</th>
<th>BDHS2011</th>
<th>BDHS2014</th>
<th>Change/a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poorest</td>
<td>20.8</td>
<td>17.5</td>
<td>17.1</td>
<td>-2.54</td>
</tr>
<tr>
<td>Poorer</td>
<td>17.8</td>
<td>16.2</td>
<td>16.5</td>
<td>-1.04</td>
</tr>
<tr>
<td>Middle</td>
<td>16.9</td>
<td>17.7</td>
<td>12.8</td>
<td>-3.46</td>
</tr>
<tr>
<td>Richer</td>
<td>17.6</td>
<td>13.6</td>
<td>13.1</td>
<td>-3.65</td>
</tr>
<tr>
<td>Richest</td>
<td>13.2</td>
<td>12.1</td>
<td>11.7</td>
<td>-1.62</td>
</tr>
<tr>
<td>All Women</td>
<td>17.4</td>
<td>15.6</td>
<td>14.3</td>
<td>-2.54</td>
</tr>
<tr>
<td>Poorest/Richest</td>
<td>1.57</td>
<td>1.45</td>
<td>1.46</td>
<td>-1.00</td>
</tr>
<tr>
<td>Concentration Index</td>
<td>-0.0575</td>
<td>-0.0674</td>
<td>-0.0878</td>
<td></td>
</tr>
</tbody>
</table>

Source: BDHS. Author’s computation. a/ annual rate of change (Per cent) during 2007-2014

Thick women (BMI<18.5):

The proportion of women with BMI<18.5 decreased from 52.0 percent in 1997 to 18.6 per cent in 2014. The proportion of thin women varies inversely with the wealth quintile of the household. The bottom to top quintile ratio declined from
The concentration index was found to be -0.1889 for 2007 which increased to -0.2692 for 2014. Figure 9b.

**Overweight (BMI>25.0).** The proportion of overweight (BMI>25.0) women increased from 2.8 percent in 1997 to 23.8 percent in 2014. In 2014 the proportion of overweight women was 8.4 per cent in the poorest quintile which increased with the increase in the wealth quintile and in the richest quintile the 46.6 percent of the women was overweight. The bottom to top ratio in the proportion of overweight women increased from 0.10 to 0.18. The concentration index was found to be 0.4440 in 2007 which decreased to 0.3078 in 2014. Figure 9c.

### Table 15c. Trend in Underweight (Wt/A) of children under age 5 by Wealth Index: BDHS 2007-2014

<table>
<thead>
<tr>
<th>Wealth Index</th>
<th>Underweight (Percent)</th>
<th>Change/a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BDHS2007</td>
<td>BDHS2011</td>
</tr>
<tr>
<td>Poorest</td>
<td>50.5</td>
<td>50.3</td>
</tr>
<tr>
<td>Poorer</td>
<td>45.9</td>
<td>41.6</td>
</tr>
<tr>
<td>Middle</td>
<td>41.0</td>
<td>36.0</td>
</tr>
<tr>
<td>Richer</td>
<td>38.1</td>
<td>27.5</td>
</tr>
<tr>
<td>Richest</td>
<td>26.0</td>
<td>20.9</td>
</tr>
<tr>
<td>All Women</td>
<td>41.0</td>
<td>36.4</td>
</tr>
<tr>
<td>Poorest/Richest</td>
<td>1.94</td>
<td>2.41</td>
</tr>
<tr>
<td>Concentration Index</td>
<td>-.1090</td>
<td>-.1361</td>
</tr>
</tbody>
</table>

*Source: BDHS. Author’s computation. a/annual rate of change (Per cent) during 2007-2014*

### Table 16. Inequality in Children’s Nutrition (Stunting: Ht/A) by Wealth Quintile: BDHS 2014

<table>
<thead>
<tr>
<th>Wealth Quintile</th>
<th>No of children</th>
<th>Relative %</th>
<th>Cum % Children</th>
<th>No of Stunted children</th>
<th>Relative %</th>
<th>Cum % Stunted L(p)</th>
<th>Per cent Stunted</th>
<th>Conc... index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>1661</td>
<td>22.7</td>
<td>22.7</td>
<td>817</td>
<td>36.9</td>
<td>30.9</td>
<td>49.2</td>
<td>-.0082</td>
</tr>
<tr>
<td>2nd</td>
<td>1383</td>
<td>18.9</td>
<td>41.6</td>
<td>584</td>
<td>22.1</td>
<td>53.0</td>
<td>42.2</td>
<td>-.0168</td>
</tr>
<tr>
<td>3rd</td>
<td>1464</td>
<td>18.8</td>
<td>60.4</td>
<td>525</td>
<td>19.9</td>
<td>72.9</td>
<td>35.9</td>
<td>-.0419</td>
</tr>
<tr>
<td>4th</td>
<td>1465</td>
<td>20.0</td>
<td>80.4</td>
<td>454</td>
<td>17.2</td>
<td>90.1</td>
<td>31.0</td>
<td>-.0970</td>
</tr>
<tr>
<td>5th top</td>
<td>1345</td>
<td>18.6</td>
<td>100.0</td>
<td>261</td>
<td>9.9</td>
<td>100.0</td>
<td>19.4</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>7318</td>
<td>100.0</td>
<td>2641</td>
<td>100.0</td>
<td>36.1</td>
<td>1.1639</td>
<td>2.5</td>
<td></td>
</tr>
</tbody>
</table>

*Source: BDHS 2014. Author’s computation.*
Utilization of Reproductive Health Care Services

Antenatal Care

The percentage of women receiving antenatal care from medically trained provider increased from 51 per cent in 2004 to 64 per cent in 2014. The percentage of women utilizing antenatal care varies inversely with the wealth quintiles. In 2014 the highest (90.0%) percentage of women utilizing antenatal care was for the top quintile and the lowest (35.6%) was found for women in the bottom wealth quintile. The rate-ratio of bottom/top quintiles was 0.40. The value of concentration index was found to be 0.2055 for 2007 which decreased to 0.1614 in 2014 indicating good deal of concentration in the utilization of antenatal care services among women in richer quintiles. The concentration curve laid below the line of equity as expected (Figure 10a).

Delivery Assistance by MTP

The percentage of women receiving assistance in delivery care by the medically trained provider increased from 37.4 per cent in 2007 to 42.1 per cent in 2014. The percentage of women utilizing delivery assistance by MTP varies inversely with the wealth quintiles. In 2014 the highest (70.2%) percentage of women utilizing delivery care was for the top quintile and the lowest (17.9) was found for women in the bottom wealth quintile. The rate-ratio of bottom/top quintiles was 0.42. The value of concentration index for 2014 was found to be 0.2604 indicating good deal of concentration in the utilization of delivery care services among women in richer quintiles. The concentration curve laid below the line of equity as expected (Figure 10b).

Place of Delivery

The per cent of deliveries taking place at the health facility increased from 14.6 per cent in 2007 to 37.4 per cent in 2014. The proportion of mother who had deliveries at health facility increased with the increase in her socioeconomic status. In 2014 highest (70.2%) percentage of mothers who used health facility for delivery was in the top quintile, while proportion of mothers in the poorest quintile using health facility for delivery was only 14.9 per cent. The ratio of bottom to top quintile percentage in using health facility increased from 0.10 2007 to 0.21 in 2014. The concentration index for 2014 was found to equal to 0.2981 implying good deal of concentration of using health facility at the upper quintiles of the women. Figure 10c.
Delivery at C-Section

The proportion of mothers who had delivery at C-Section increased from 7.5 per cent in 2007 to 22.9 per cent in 2014. The proportion of women using C-section for delivery increased with the increase in the wealth quintile to which the women belong. The ratio of bottom to top quintile of the proportion of women using C-section increased from 0.10 in 2007 to 0.13 in 2014. The concentration index for the year 2014 was found to be 0.3750 implying that a greater utilization of C-section is done by the women from well to do family. The concentration curve laid below the line of equity.

Bangladesh is one of the top performers in ensuring nutrition and basic medical care, and health and wellness, according to the Social Progress Index 2016 prepared on a study on 133 countries. The nutrition and basic medical care has the smallest number of countries which did well and Bangladesh is one of them. (SPI, 2016).
Graduation from LDC

Amidst this backdrop, Bangladesh has been classified as a lower middle income country (LMIC) by World Bank beginning July 2015. As per the World Bank criteria, Bangladesh graduated to lower middle-income country status as its GNI per capita reached to above US$1046, which is the WB’s standard. The country is now making all-out efforts to meet the United Nations criteria of graduation from the least developed country. The next review for graduation from the least developed country by the Committee for Development Policy (CDP) is due in 2018, where the three different criteria that are presently considered are (a) per capita GNI by World Bank Atlas method (b) human asset index (HAI) and (c) economic vulnerability index (EVI). The criteria are developed and refined periodically by the CDP. That is why it is sometimes compared with as striking a moving goal post. The ECOSOC has to endorse the CDP recommendations for graduation of a country and the UNGA has to confirm it. According to UNCTAD Report on Least Developed countries 2016- Bangladesh along with five other countries might meet the statistical pre-eligibility for graduation in 2018 and full eligibility in 2021.

How to address inequality?

It will not be out of context to reiterate the fact that to talk about inequality was not a very welcome thing in Bangladesh even in the recent past. Why? Mostly because the people were probably made to believe that everyone is equal here! Growth is there. It is the ultimate panacea. Although a near volcanic eruptions were abound across the globe- on apprehension that a handful of individuals are going to be the owner of most of the wealth of this planet in no time. In one of my earlier paper (Matin, 2014) I have quoted the concern of the world leaders and academics regarding the consequences of entrenched inequality on society and I feel no need in repeating them here. I have also discussed Bangladesh government’s efforts in applying social safety net programs in mitigating inequality in another paper (Matin, 2015).

On the global front we have been listening to that the number of billionaires whose wealth is equal to the poorest half (3.6 bn) has reduced from 388 in 2010 to 62 in 2015. Recently revised and updated findings present that the number of billionaires whose wealth is equal to that of the bottom half of the world population could be just 8 in 2016. The projected numbers indicate that by about 2022, there could be a single super rich individual whose wealth shall match the
wealth of the bottom half of the world population. The richest are accumulating wealth at such an astonishing rate that the world could see its first trillionire in just 25 years (Oxfam, 2017).

The major problem involved is to regard growing inequality as an issue. Policies should be adopted in such a way that income of the lower 90 per cent of the households increases at a faster rate than the rate of increase of income of the top 10% of the households. Some steps should be taken as redistribution of income and wealth in favour of the poor where possible such as safety net programs. It has to be supported by strong political commitment and leadership. The policy instruments are available in abundance.

The 7th FYP regarding the issue of addressing inequality says:

The reduction of income inequality is a tough challenge and a long term endeavour. It laid lot of emphasis on reducing the initial gap of endowment of assets and human capabilities among different strata of population. Human development strategy with emphasis on alleviating the access gap for the poor is one powerful instrument. Facilitating asset accumulation through better access to credit for the poor can be helpful for reducing income inequality. Better strategy for social inclusion by eliminating physical and social barriers is another important instrument.

The experience of Western Europe suggests that fiscal policy can be a very powerful instrument for reduction of income inequality. This calls for both increased public spending on social sectors (health, education, sanitation, water supply and social protection) and very importantly a well-designed personal income taxation system that taxes all sources of income at a progressive rate. The dynamic redistribution of wealth, assets and income through policies, regulations and institutions that seek to increase human capital and earnings capabilities of the poor citizens hold much better promise and prospects. Access to better education and healthcare is a fundamental right of the Bangladeshi citizen and requires utmost attention of the government. A strong social protection system is another instrument for improving income distribution. These policies have worked in some advance countries in the world to contain and lower income inequality.

Clearly, a major way that the government can help improve income distribution is by making faster progress in building up the human capital of the poor. This will equip the poor to get better and higher paying employment. An educated and healthy labour force can also help increase the rate of growth of GDP while improving income distribution.
The strategy adopted in the 7th five year plan are (i) to increase the level of spending on education from 2.2 per cent of GDP in the base year to 3.0 per cent in end year 2020 (ii) to increase the spending on health from 0.8 per cent of GDP in base year to 1.2 percent in end year (iii) to increase spending in social protection from its base year level of 2.2 per cent of GDP to 2.3 per cent in end year (iv) to increase spending in rural infrastructure from 2.0 of GDP in base year to 3.0 per cent in the end year.
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Sustainable Social Development, an Ethical Approach towards ensuring Economic Growth

JASIA TAHZEEDA*

Abstract: In neoclassical economics, economic growth is given the highest priority and the concept of ethics in economics was simply ignored. In this paper it is argued that Sustainable Social Development is an ethical approach which propagates economic growth and is a pillar of sustainable development. It is also presented that social backwardness such as inequalities like power, gender; health etc. hampers economic growth in many ways. The paper also maintains that inefficient social cooperation leads towards natural resources mismanagement. This paper gives emphasize on cost of economic development by ignoring social cost, such as issues of climate change, ignoring the rights of minority, ecosystem destruction, and unsustainable food production and livelihood etc. Finally, the paper suggested that for ensuring sustainable social development, it is mandatory to focus on integrated approach of development which includes education, public health, environmental sustainability, gender equality, good governance and economic growth with equality.

1. Introduction

According to Daly and Farley, in neoclassical economics efficiency is given the highest priority. Efficiency is so important that it is sometimes taken to be ends in itself. But if the ends are evil, then efficiency will lead to evil as well (2009). Economic growth which is the quantitative increase in goods and service is also taken as a vital issue in neoclassical economics. Earlier it was believed that economic growth has spillover effects which will automatically promulgate development. But in reality, it was quite opposite; the earth experienced
increasing inequality, starvation, social exclusion etc. while some economies actually grew largely. One example of growing inequality though the country’s economy grew is India.

With time it is realized that not only quantitative increase in goods or service but also improvement in the “quality of life” play an important role in a country or a community. As a result, different qualitative indexes were created which can measure the happiness of people, such as Gross National happiness, happy planet index etc. Furthermore, to deal with the issue of increasing inequality and unjust distribution, the issue of ethics in economics comes to the scene, which can ultimately ensure equity and sustainable development. Sustainable development is based on ethics which has three pillars; these are economics, environmental and social. These three pillars are interlinked with each other.

Social sustainability is a critical aspect of achieving long-term development that significantly improves the lives of the world’s poorest people. Social development adopts an approach that focuses on the need to “put people first” in development processes. Poor people’s own voices tell that poverty means more than simply low incomes - it is also about vulnerability, exclusion and isolation, unaccountable institutions, and powerlessness. As such, overcoming poverty is not just a matter of getting economic policies right, it is also about promoting social development, which empowers people by creating more inclusive, cohesive, and accountable institutions and societies (The World Bank, 2017).

Social development which aligns with ethical point of views propagates economic growth in many ways. In this paper the relationship between social development and economic growth is explained. In section 2, how social backwardness can hamper economic growth is elucidated. Cost of economic development by ignoring social cost is explained in section 3; finally in section 4, how social development can promotes economic growth is also expounded.

2. Social Backwardness Hampers Economic Growth

It is found that social backwardness and behavioral confinement in human society are some of the main reasons behind the economic sluggishness in many societies. Thus there was a clear need of moral and ethical consideration along with the economic growth to ensure social development.

2.1 Social Inequalities Lead to Income Inequalities

Inequality doesn’t only describe the monetary inequality between rich and poor, but it has a broader meaning lies inside it, it talks about inequality in
accessibilities to basic needs, political or negotiation power and particularly indicates gender or class inequality. However, it is found that inequality in any of these aspects ultimately propagates income inequality. Income inequality is negatively related with economic growth (Alberto & Rodrick, 1994).

2.2 Power Inequalities

Inequality in social and political power can leads towards both absolute and relative poverty. Such as the case of water scarce Kuch, a region of Gujrat in Western India has become iconic in the debate about water scarcity in India. The water scarcity in this area is largely human induced and intensely political, and not simply natural. The culpabilities of large farmers, bad water management practices, misuse of water and the circumventing of legislation are the main reasons behind the unequal distribution of water resources.

2.3 Gender Inequalities

One of the most villainous inequalities in society is Gender inequality. It indicates not only the inequality in terms of accessibility in basic needs but also the violence against women. The economic, social, and health-related costs of violence against women—for women, their families, and social and economic development are substantial. There are four types of costs: monetary, nonmonetary, economic multiplier effects, and social multiplier effects. The annual monetary cost of violence against women in Canada has been estimated at Can$684 million in the criminal justice system and Can$187 million for police. Counseling and training in response to violence is estimated for a total of more than Can$1 billion a year. A 2004 study in the United Kingdom estimated the total direct and indirect costs of domestic violence, including pains and suffering, to be £23 billion per year or £440 per person (United Nations Secretary, 2006).

Nonmonetary costs include increased suffering, illness, and death; abuse of alcohol and drugs; and depression. A World Bank (1993) study estimated that annual rates of rape and domestic violence translated into 9 million years of disability-adjusted life years lost, including premature mortality as well as disability and illness. The broader economic effects of violence against women—the economic multiplier effects—include increased absenteeism; decreased labor market participation; reduced productivity; lower earnings, investment, and savings; and lower intergenerational productivity. In Chile domestic violence reduced women’s earnings by $1.56 billion in 1996, or more than 2 percent of GDP (Task force, 2005). Apart from that inequality in education, health care, access to livelihood capital assets can propagate both absolute and relative
poverty. So gender inequality can also promote poverty and economic backwardness.

2.4 Health System and Poverty

The burden of disease in some low-income regions is a great barrier for economic growth. Such as in Sub-Saharan Africa, Malaria and HIV is highly responsible for their economic backwardness. Maternal mortality and infant mortality are also associated with high fertility rate and create great cost to the society (Sachs, 2001). There is a strong bi-directional relationship between poverty and health; if people are in poverty they can’t afford medical facilities and if they have bad health, they ultimately become poor.

2.5 War and Conflict towards Economic Growth

It is found that not only international wars and conflict but also wars or conflicts inside social organization or different communities also cause significant economic and social loss to the country. War and conflict can also lead to reduced food production as well as income losses and limited or no access to food for many people, with the most serious impact on the poorest households. A new dimension of food insecurity in situations of conflict is the use of hunger as a weapon and food insecurity as a constant threat.

The world’s 35 million refugees and internally displaced persons are among those who experience conflict-induced hunger. Food supplies are seized and cut off; food aid is hijacked; crops, water supplies, livestock and land are destroyed and often households and families are stripped of assets. In some regions where food might otherwise have been available, conflict made people food-insecure and affected their access to adequate food as well as their ability to lead healthy and productive lives. In southern Sudan, violence in November 2000 is said to have left some 2.6 million people in need of emergency food assistance (Commission of human security, 2003).

2.6 Inefficient Social Cooperation For Natural Resource Management

If natural resource is mismanaged such as nonrenewable resources are used for production and sustenance; renewable resources are used over the sustainable rate; or waste in disposed in the nature over the assimilated waste absorption capacity, it will lead to natural disaster. In all these cases individuals try to maximize their own benefits by ignoring the social cost. As a result for offsetting the natural disasters both high adaptation and mitigation costs will be incurred.
Climate change is an example. However, without social cooperation the goal of sustainable environment can’t be done particularly in non-excludable goods such as public goods. Tragedy of the common is an example of such failed social cooperation. Thus failure in managing natural resources will lead towards unsustainability and economic cost.

3. **Cost of Economic Development by Ignoring Social Cost**

For the sake of economic development both people and state continuously exploit society and environment. But environment, economic growth and social development are highly interrelated. Some of these issues are described below.

3.1 **Ignoring the Rights of Minority for Development**

Lack of Social inclusiveness in development doesn’t also broaden inequality but it can hamper growth. Ignoring the safety of minorities for the sake of economic growth is not a new phenomenon in developing countries. The Dumber dam on Gumti River, Tripura is an example whereas over 70 thousands of local people were affected directly by the dam and for creating livelihoods they were forcefully engaged in environment degrading works such as deforestation and Jhum cultivation. As a result, overall environment was degraded and hills were besmirched. The amount of alluvium obtained was 27 times more than that of previously estimated, which ultimately tarnished the project of hydroelectricity. Another similar type of failed incidence is Loktak project which also created enormous environmental treat and vulnerabilities to local people, but finally the project couldn’t sustain and it was unable to provide adequate economic opportunities (Ramananda Wangkheirakpam, 2003). So, ignoring the rights of minorities might create enormous economic loss for a country in many ways.

3.2 **Environmental Degradation And Societal Cost**

Society depends on environment as environment ultimately shapes the society. Natural environment doesn’t only influence the resource war and inequalities between groups of people but also influence the culture as a whole, such as dress code, cooking pattern etc.

Human being depends on environment in multiple ways. Topography, geography, weather, rainfall, availability of water resources, rainfall, soil condition etc. shape the types of livelihood for people around the world. Changes in these crucial environmental elements bring threat to people particularly to the vulnerable one. It is estimated that people have crossed some of the planetary boundaries which
hampered the overall growth of the economy. Human being have disturbed into the ecosystem. As a result, lots of problems have been created, which includes loss of biodiversity, food production, climate change etc. which ultimately affects the economic growth.

3.2.1 Climate Change Incurs Economic And Social Cost

Human perturbation to carbon cycle through deforestation, over-usage of fossil fuels and over exploitation of lands are responsible for climate change, which causes rising temperature, loss of biodiversity, conflicts and war, destruction of ecosystem, diseases, loss of food etc.

As many developing countries are located near the sea and sea level will rise, these countries will lose huge amount of heritable lands. Countries like Bangladesh can be completely inundated. Only 1 meter rise in sea level would inundate 18% of Bangladesh’s total land, directly threatening 11% of the country’s population with inundation. In addition, the backwater and increased river flow from sea level rise could affect 60% of the country’s population. Inundation of such a large portion of the country could present major challenges in terms of loss of income and displaced populations. At present, Bangladesh is too poor to be able to adapt to such a rise in sea level. The costs of protection would be substantial (Agrawala and et al.).

The direct annual cost to the national economy of natural disasters over the last 10 years (damage and lost production) is estimated to be between 0.5% and 1% of GDP. As the economy grows, these costs are likely to increase in absolute terms and also as a proportion of GDP, if climate change is not factored into long-term economic planning (International Monetary Fund, 2013).

Climate change will make the weather extreme and it will be dangerous for food production and survival of all animals. National security experts analyzing the current conflict in Sudan’s Darfur region suggest that global warming may be partially responsible as there is a subsequent reduction of available natural resources. So climate change as well as shortage of resources will worsen the condition of geopolitics in the globe which will exacerbate the condition of poverty and inequality.

3.2.2 Ecosystem Destruction and Economic Cost

Ecosystem works as regulatory services in flood control. Topographical features of ecosystems such as mangrove swamps often protect humans living near coastlines. If these coastal features are changed by human actions, there can be
terrible consequences. For example, in the Gulf of Mexico around New Orleans, where human actions affecting the flow of the Mississippi River ended up changing the flood dynamics around New Orleans and leaving the city and its environs exposed to the devastations of Hurricane Katrina in 2005 (Kim Ann Zimmermann, 2015). These severe storms and floods combined with agricultural losses cause billions of dollars in damages, and money is needed to treat and control the spread of disease which are caused by climate change or ecosystem destruction.

3.2.3 Unsustainable Food Production and Livelihood

Human totally depend on nature for food production. Around 40 percent of the world is malnourished or have micronutrient deficiency. Farm system is also under stress. Though the number of people is increasing geometrically, the food production will not increase accordingly as land is limited. In a country like Bangladesh where 61.2% of land is suitable for agriculture, providing land for increasing population means decreasing agricultural land. Again, as food production is insufficient and net export is negative, countries like India and Bangladesh face severe malnutrition with huge proportion of stunting and immunosuppressant. As a result, these people are very prone to complicated diseases and loss of productivity; which creates huge amount of cost for the economy and society.

As the people in developing countries are poor and they lack resources for a sustainable livelihood, it is more likely for them to exploit the natural resources more for fulfilling basic necessities. On the other hand, exploitation of natural resources promotes poverty.

On the other side of the world, where many people are getting wealthier and they want to consume more meat, it’s going to create amplifying effect on grain production. To produce one kg of beef it’s needed to consume 10 to 15 kg of grains by the cow. So the demand for this increasing amount of crop production has created huge pressure on lands and water. Human have perturbed into the climate system and they have destroyed the biodiversity thus it will affect the food production. One example is human promoted genetically modified crop and they also focused on monoculture, as a result in the short term they might get a higher yield, but the single variety within a single species leaves the farmer highly vulnerable to shocks, such as a change in weather patterns or the introduction of a new pest or pathogen or it may upset the regulatory system of the ecosystem; but when the traditional practices of diverse crop production or biodiversity was
prevalent, it worked as a natural prevention against such shocks. So if this unsustainable practice of food production continues Malthusian catastrophe might occur soon as we can fail to provide food for the increasing number of people.

Most of the common lands and waters are almost fully exploited in many countries of the world which can be explained by the concept of “tragedy of the common.” Formerly one of the four largest lakes in the world the “Aral Sea” has been steadily shrinking since the 1960s. This happened after the rivers that fed it were diverted by Soviet irrigation projects. The incidence of reduced river flow of Yellow river in China is also a result of the over exploitation. People also extracted too much ground water, which made the level of water too low for agriculture. Once those rivers which were used for irrigation projects, fishing or hydroelectric Dam, now as a result of overexploitation for maintaining livelihood and climate change, they are almost dead and unable to provide adequate economic opportunities.

4. **Social Development Promotes Economic Growth**

Here it is explained how social exploitation and unsustainable development can hamper economic backwardness in the long run. However, social development also causes economic growth. Under social development the idea of education for all, improved public health, gender equality, environment sustainability and equality with growth come into consideration. All these development issues are highly correlated.

4.1 **Education Promotes Growth**

There is a very strong relationship found among education, development and economic growth. It can be said that investment in education is a key to sustained growth, both because it contributes directly through productivity effects and because it reduces income inequality.

**Case study of East Asian countries**

The rapid growth in the East Asian region has been unparalleled. Eight “high-performing Asian economies”- labeled HPAEs in World Bank -are Hong Kong, Indonesia, Japan, the Republic of Korea, Malaysia, Singapore, Taiwan (China), and Thailand. Not only have the HPAEs outperformed the industrial economies since 1960, but they have grown at higher rates than other developing economies. They have also grown at higher rates than the current industrial economies did during their earlier periods of most rapid growth: the annual average compound
growth rate of GDP per capita of industrial economies was 1.1 percent for 1820-70 and 1.4 percent for 1870-1913. The HPAEs also stand out for persistence of rapid growth: although other developing economies have experienced rapid growth for several years, few have managed to sustain such growth over three decades. The decline in poverty in East Asia has been equally remarkable. The percentage of people below the poverty line has fallen far more rapidly in East Asia than in other regions. For example, in the period from 1970 to 1987, the percentage of people below the poverty line in Indonesia fell from 58 percent (among the highest of all developing economies for which measures are available) to 17 percent (among the lowest of all developing economies).

As would be expected, the absolute number of poor people has also declined significantly in the HPAEs Measures such as the Gini coefficient show improvements in each of the HPAES from 1965 to 1990 .Finally unlike in many other developing economies during this period, income distribution in East Asian economies either improved or, at the very least, did not worsen. It was also found that the combination of a greater supply of education and a greater demand for educated workers contributed to faster economic growth in East Asia than in other developing regions (Birdsall et al, 1995).

By observing the cases of HPAEs, a process of cumulative causation is found, in which education contributed to economic growth, which, in turn, stimulated investment in education. Education is a luxury consumer good as demand for it increases as incomes rises. People who have education tend to have more wages and better working opportunities, as a result they tend to have better living standard and contribute more for the betterment of their children. Then it is found how education contributed to low levels of income inequality which, in turn, stimulated investment in education. Finally, low inequality of income can have a direct, positive effect on economic growth through education.

Endogenous growth theory also predicts that educational investments will enhance growth. A larger stock of human capital facilitates the production of new ideas and technological progress. Moreover, rates of return to human capital may actually be increasing over some range because of spillover benefits, that is, when one more-educated worker makes an entire group of workers more productive. Education augments cognitive and other skills, which, in turn, augment the productivity of labor. Even preschool admission has shown very strong relationship with the economic growth, which indicates that the highest rate of return in human capital, can be achieved from investing in preschool.
4.2 Environmental Sustainability with Social and Economic Development

Sustainable environment and proper natural resource management will ensure adequate natural resources for the future as natural capital consumption will be less. Additionally, if the harvesting is less than the regeneration rate then there will be adequate resource to extract for the future. As a matter of consequence, there is competition for the natural resources will be comparatively less and inequality among groups of people will be less. These practices will ensure a richer future generation with sustainable economic growth and promote intergenerational equity.

4.3 Gender Equalities Promote Economic Growth

By reducing gender inequality one can reduce the vulnerabilities in society and promote economic growth. Educated female don’t only have higher wage benefit but they also get nonwage social benefit. They tend to educate their children; and they are more likely to avail health services for themselves and their children. As a result, the health status and nutrition status become higher. It is also found that those women who have education and those who work outside tend to have lower children. High fertility rate is one of the core reasons for economic backwardness.

In Asia, it is found that as the fertility rate fell down and maternal mortality declined, education in women also rises (Task force, 2005). It is also observed that two factors permitted a faster expansion of educational systems and enrollment rates in East Asia: faster economic growth and a more rapid decline of fertility (Birdsall et al, 2005). There is a bi-directional relationship between economic development and women’s empowerment. According to Esther Duflo women’s empowerment will “cause development” and economic growth will lead to women’s empowerment (2011). Economic growth with lower poverty and increasing opportunity have positive role to play on gender equality. Economic development reduces vulnerabilities to women and when mentality of abundance takes place, women are benefited the most.

5. Conclusion and Recommendations

Sustainable development plays a crucial role for long term economic growth of a country. To ensure sustainable social development and to reduce poverty, it is needed to focus on an integrated approach of development where education, public health, gender equality, good governance, environmental sustainability and economic growth with equality should be under consideration. Additionally, to promote economic growth sustainable social development should be taken under
consideration. Millennium Village project in Africa is a great example of the success of the integrated approach, where social development ultimately propagated economic growth by reducing inequality and substantially improved the living standard of the poor people. Finally it can be said that quantitative economic growth alone cannot promise social development in the long run, thus it is important to view economics from development perspective which incorporates values and ethics.
References


Ethical Issues in Maternal Health Care:  
A Study of Community Based Health Organization in  
Rural Bangladesh

JANI PARVIN*

Abstract: Women living in Bangladesh are at high risk due to maternal mortality and morbidity in the prenatal and postpartum period. Issues like inadequate health service providing; poor antenatal and postpartum care are concerned as the major causes of high mortality rate and morbidities during pregnancy period in rural Bangladesh. Community based health services (CBH) providers are facing ethical issues possibly because of their interactions with patients in the reproductive age groups. The objective of this study is to evaluate whether and how the community-based health service providers, ethically supply maternal health service to the disadvantaged women. Both primary and secondary data are used in this paper. Primary data is collected through semi-structured questionnaires from the selected number of mothers and health care service providers under the coverage of ‘LAMB Community Health and Development program’ of Badarganj upazila in Rangpur district. A total of 150 respondents, 100 reproductive age of mothers and 50 LAMB health care providers are randomly selected from this study area. A multiple linear regression model is used to estimate the influencing elements for antenatal care including ethics in treatment-seeking behaviors. The regression result of antenatal care (ANC) shows that providing ANC by health care givers to mother; place of ANC care, cost of ANC, and level of trust have significant influence on the frequency of ANC care during pregnancy as a indicator of maternal death prevention and age, education of mother, education of respondents’ husband, income level of household, distance to service center are insignificant on ANC care.

Keywords: Ethical issues, Health care provider, Community health organization, ANC care, Trust, Rural sector.

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Introduction

Across the world ethical issues remain a challenge for maternal health services providers. The level of trust on maternal health care givers positively influences the health outcome and a problem for decision making which need to be aware.

In this paper, primary data is collected from 100 reproductive age of mother and 50 health care givers using simple random sampling method from the coverage of LAMB community health and development programs in Rangpur. Multivariate analysis using a multiple linear regression model is employed to estimate the influencing factors for the antenatal including ethics in the tobacco yield. Tabular method is used to describe the socio-economic profile and explore ethical consideration of tobacco farmers regarding its cultivation.

The regression result of ANC care show that provided ANC by givers to respondent mother, place of ANC care, cost of ANC and level of trust on health provider have significant influence on the frequency of ANC care during pregnancy as indicator of maternal death prevention and age, education level of mother, education level of respondents husbands, income of household, distance to service center are insignificant on ANC care.

To find out the determinants of the maternal health relating to community based maternal health organization a multiple linear regression model is used.

Women living in Bangladesh are at high risk for maternal mortality and morbidity in the prenatal and postpartum period. Issues like inadequate health service providers, poor antenatal and postpartum care, and nutritional deficiencies are concerned as the major causes of high mortality rate and morbidities during pregnancy or childbirth period in rural Bangladesh. Community based health services (CBH) providers particularly, MBBS doctors, nurses, skilled birth attendant, Family welfare visitors (FWV) face ethical issues possibly because of their interactions with patients and clients in the reproductive age groups. Socio-economic barriers during the pregnancy period is other important ethical issues for improving maternal health care that need to be addressed. The objective of this study is to evaluate whether and how the community based health service givers ethically provide maternal health service to the disadvantaged women? This paper also tried to find out the essential elements of maternal health care under CBHO activities.

This study is based on primary date collected through semi-structural questionnaires from the selected number of mothers and health care service provider under the coverage of ‘LAMB Community Health and Development
program’ in Rangpur. A total of 120 respondents, 100 reproductive age of mother and 20 LAMB health care providers are randomly selected from this study area. In Bangladesh, both formal and informal sectors provide maternal health services. Non-public services are well-used and must be widely available, including private care providers (for-profit and not-for-profit) in the formal sector and in the non-formal sector, e.g. traditional birth attendants (TBAs) (52% of all institutional deliveries took place in community based organizations and private health facilities in 2007 while 82% of all deliveries were with a TBA or other untrained care providers)

Bangladesh is a poor country in South Asia, with a projected population of 135.43 million in 2007, 74 percent of whom live in rural areas. The crude birth rate was 20.8 per 1,000 people, and the crude death rate was 5.8 per 1,000 people while the average literacy rate was only 46 percent (male 50%, female 42%).

Bangladeshi women report low but increasing use of antenatal care, as well as low rates of delivery in a health facility or with the assistance of a skilled provider. Although almost half of women reported having one or more complications during pregnancy that they perceived as life threatening, only one in three sought treatment from a qualified provider. More than three-fourths of women with the time-sensitive complications of convulsions or excessive bleeding either failed to seek any treatment or sought treatment from an unqualified provider. The principal reason cited for failing to seek care for life-threatening complications was concern over medical costs, and pronounced socioeconomic disparities were found for maternal care-seeking behavior in both urban and rural Bangladesh.

To determine the specific needs of this community, it is important to understand the medical needs, local practices, and perceptions of pregnancy, birth, and the postpartum period and how they are affected by culture, religious beliefs and by the economic condition. In Bangladesh, social, health, nutrition, and economic opportunities are severely diminished for many women (Iyenger, 2012). Therefore, research is needed to determine the specific pregnancy-related health care needs of women living in Bangladesh provided by CBHO because community based organizations achieved considerable progress in the health indicators over the last decade through expanding the coverage of essential services to the disadvantaged women. The paper shows the delivery of primary health care through a region wide network called “LAMB Community health and development program” started in 1979.
The objectives of the study are:

- To investigate the role of community based health provider to improve maternal health care in view of LAMB Community Health and Development Program.
- To find out the indicators for the antenatal care, postnatal care, neonatal care etc. for the promotion of maternal health.
- To evaluate the treatment-seeking behavior of the community health givers for decision making.

**Literature review**

Different aspects and issues of the role of community based organization to improve maternal health care have been done by extended studies. Most of the studies tried to show the socio-economic condition to improve maternal health care. Usually the researchers used different technique of tabular analysis of comparison previous and present condition of health care service. This study also found that community based organization like (LAMB) has increased health care service for antenatal, postnatal, neonatal care. Two thirds (63%) of mothers do not receive antenatal care that is influencing maternal mortality ratio. Urban area health care service is very. 59% urban mothers receive antenatal care while in rural area is only 28 percent (NIPORT 2001) post natal care is one of the most risky periods for occurrence of life threatening complication. The ratio of mother seeking postnatal care is professionally very low.

Bangladesh Maternal Mortality Survey 2010 (NIPORT 2011) showed that maternal mortality declined from 322 in 2001 to 194 in 2010 which was showing a 40 percent decline that gives an average rate of decline of about 3.3 percent per year. The overall proportion of births attended by skilled health personnel increased by more than eight-folds in the last two decades, from 5.0 percent in 1991 to 43.5 percent in 2012-2013. The first MDG Progress Report published in 2005, the MMR in 1990 was 574 per 100,000 live births in Bangladesh. However, according to Bangladesh Maternal Mortality Survey (BMMS) 2010 (NIPORT 2011), maternal mortality declined from 322 in 2001 to 194 in 2010, a decline of about 40 percent. The average rate of decline was about 3.3 percent per year, compared with the average annual rate of reduction of 3.0 percent required for achieving the MDG in 2015.

According to BDHS 2011, 67.7 percent of women with a birth in the three years preceding the survey received antenatal care at least once from any provider. Most of the women (54.6 percent) received care from a medically trained provider, e.g.,
doctor, nurse, midwife, family welfare visitor (FWV), community skilled birth attendant (CSBA), medical assistant (MA), or sub-assistant community medical officer (SACMO). The urban-rural differential in antenatal care coverage continues to be large: 74.3 percent of urban women receive antenatal care from a trained provider, compared to only 48.7 percent of rural women. In the public sector, 63 percent of the total workforce is involved in providing health services.

Human resources for maternal healthcare include specialist doctors, general physicians, nurses, medical assistants, pharmacists, medical technologists, family welfare visitors, community-based skilled birth attendants, family welfare assistants, and health assistants. Bangladesh, 53 female community health volunteers and 53 female traditional birth attendants have been trained on maternal and newborn care and are doing home visits to pregnant women to educate them on eating nutritious foods, going for antenatal care visits, making birth preparedness plans and watching for danger signs that indicate a need to go to the health facility. These volunteers are currently doing home visits to 3,325 households. 106 informal service providers have been trained to reduce harmful practices and to increase appropriate referrals for mothers and newborns. 35 percent of deliveries were attended by SBAs: 22.8 percent at health facilities and 12.4 percent at home. Of the 22.8 percent facility-deliveries, 12.9 percent took place at private facilities, 9.1 percent in government facilities, while only 0.8% was in community based organization facilities. About two-thirds of all deliveries took place at home with unskilled birth attendants. Caesarean sections were performed on 10.8 percent of the study population, while 93 percent and 28 percent had at least one antenatal and postnatal care visit respectively. Of all caesarean deliveries, 73 percent took place at private facilities, 13 percent in government facilities, and the remaining 14 percent were in community-based facilities.

Most of the rural expected women who received antenatal care, 32 percent had their last visit at government facilities, 16 percent at community clinics, 24.5 percent at private facilities, and the remaining 27.5 percent were at home. By type of service providers, 32.5 percent received their last antenatal-care visit from qualified physicians, 36 percent from community based paramedics (including home-based SBAs), 25.4 percent from government paramedics, and 6.1 percent from informal providers (including TBAs and village doctors). Of those who received postnatal care, their mean number of visits was 1.8. Only 5.5 percent of mothers received postnatal care within 48 households and 14 percent within 1 week after giving birth. Even though Community Clinic maternity-care services make up a small proportion of those used by Bangladeshi women, use of maternal
health-care services in the home-based Community-Based Organizations areas in Bangladesh is higher than national averages (35% versus 13% skilled attendance), and increases with use of antenatal care. Inequities in the NGO areas were not equal for all indicators: they varied by the type and place of services. Higher-level costlier services were more inequitably distributed than front-line, less-expensive, preventive services.

About 82 percent of women deliver at home, and the programme has tried to increase access through trained community skilled birth attendants (CSBAs) which is a community-based programme. As yet, available data does not enable an analysis of how effective this intervention has been. Only about 43 percent of the estimated requirement of 15,000 CSBA has been trained, but the pool of eligible candidates from the public sector is almost exhausted.

Research Methodology

In this study both the qualitative and quantitative approaches will be used to collect and analyze data. To collect information and data from both the primary and secondary sources, multiple methodologies will be used in this study. These are as follows:

Sampling Method: Selection of sampling design

Primary data will be collected through personal interview with the respondents. To attain accuracy and reliability of data, care and caution will be taken in data collection. Before interviewing, the aims and objectives of the study will be explained to each and every mother. The secondary sources include govt. publications; seminar papers, journals, published a thesis and topic reelected various books, BBS, web sites etc. Rangpur division is selected purposively as a study area as one of the notable areas in Bangladesh for development of women’s maternal health through community based organizations Programs in Bangladesh.

Population of the research: The women having child under the year 5 in Rangpur will be considered as the population of the research.

To collect data and information sampling is very important. It is a tool which helps to know the characters of the population by examining only a small part of it. As time and budget is limited, purposive Sampling will be used here. About 100 women (70 baby caring mother and 30 baby carrying mother) under community based organization LAMB health programs will be selected here as sample.
Survey Method

The Role of community based organizations health service programs in women maternal health is enormous. Survey method is used to collect data from the selected number of mothers and their children under the coverage of ‘LAMB Community Health and Development program’ in Rangpur. Structured, open-ended, closed-ended, contingency questionnaires are used here to collect data.

Analytical framework

In this study, tabular technique was used to illustrate the overall socio-economic characteristics of the samples. Tabulated data were analyzed by using frequencies, percentages etc. An econometric model such as linear regression model was used to find out the level of maternal health indicators.

Regression models for maternal care

To find out the determinants of the maternal health relating to community based maternal health organization, the following linear regression model was applied

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon \]

Where, \( Y \) = Number of ANC checking providing to the responding mother.
\( X_1 \) = Age of respondent mother (In Years)
\( X_2 \) = Education level of respondent mother
\( X_3 \) = Income level of respondent’s household
\( X_4 \) = Education level of respondent’s husband
\( X_5 \) = Distance from home to community center. (Respondent’s home far from LAMB community health center).
\( X_6 \) = Provided ANC by home to the respondent mother
\( X_7 \) = ANC cost of respondent mother
\( X_8 \) = ANC checking place related to respondent mother
\( \varepsilon \) = Disturbance term

\( \beta_0, \beta_1, \dots, \beta_8 \) are known as the parameters of the model or intercept and slope coefficients respectively. There are seven explanatory variables. Here the independent variable is respondent home LAMB Community health and development programme.

We also utilize the SPSS method to measure the maternal care by various aspects.

Data and Result Analysis

Maternal health services in Bangladesh are delivered through both community-based and facility-based approaches. The emphasis on community-based approaches was initiated in 1978 to reach the goal—‘Health for All by the Year
2000’. The facility-based approach gained momentum in 1987 only after the commencement of the safe motherhood initiative.

For field-data collection, self-weighted cluster sampling was used. Selection of clusters was with equal probability and a take-all strategy was followed at the second stage. A list of primary sampling units was generated after reviewing the population distribution in each study area. To reduce the workload, populations of study survey area were divided into segments according to the union perished with each segment consisting of about 1000 people or even more. Each segment was considered a primary sampling unit. In each study area, an exhaustive list of primary sampling units was generated with the help of local LAMB personnel. Six primary sampling units were then selected randomly.

Seven qualified interviewers collected data by use of a structured questionnaire. The questionnaire gathered information on background, use of antenatal care, use of SBA, use of postnatal care, perceived quality of care and cost of services. In total, 100 women were interviewed. The non-response rate was 0 percent.

Antenatal care was measured in number of visits to any provider whether formal or informal. Outcome measures focused on whether an SBA (doctor, nurse or midwife, including trained or untrained traditional birth attendant) was present at delivery, whether caesarean section was used, or whether any postnatal care was received. Home-based attendants with 6 months or 18 months midwifery training in this study, respectively, were considered SBAs in this study which is main concern of this study.

Most respondents were Muslims (87%) and housewives (95%). Average household size was 6.3 people, and daily household expenditure approximately US$ 1.50. More than 80 percent of households had sanitary latrines, 86 percent had mobile phones, and 51 percent had electricity. At least 1 year of schooling had been completed by 86 percent of respondents, while the rate was 72 percent among their husbands. Of the respondents, 15% were less than 20 years old while 85% were in 20 to 35 years old. About 17 percent were in their first pregnancy and 10% of women had had five or more pregnancies.

In the case other parts of the world, women in Bangladesh are relatively disadvantaged in terms of their economic, social, educational and health conditions. The survival probability of females beyond the age of 30 years is significantly lower than males. The strong patriarchal structure of society has resulted in poor status of women in family and society. This is reflected in restrictions on women’s movements, low self-esteem, a culture of acceptance, early marriage, lack of effective community support structure, and inappropriate
allocation and utilization of resources. The employment opportunities for women also remain quite restricted in the country.

**Age of Respondent Mother**

From this table it shows that age of respondent mothers are 100. The age of respondent mother less than 20 years is 26 percent, 20-25 years is 60 percent respectively 31-35 years is 3 percent. Finally we can say that the age of respondents mother 20-25 years id 60 percent which is very high.

<table>
<thead>
<tr>
<th>Age of Respondent</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 20 years</td>
<td>26</td>
<td>26.0</td>
</tr>
<tr>
<td>20 to 25 years</td>
<td>60</td>
<td>60.0</td>
</tr>
<tr>
<td>26 to 30 years</td>
<td>11</td>
<td>11.0</td>
</tr>
<tr>
<td>31 to 35 years</td>
<td>3</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Education Level of Respondent Mother**

From the above table 2, it shows that education level of respondents mother none level is 3 percent, primary non –completed level is 10 percent, primary completed education level is 22 percent respectively Honor’s and above education level is 2 percent. Carefully we saw that secondary completed; education level is 33 percent which is very high for collecting respondent mother education level randomly.

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>3</td>
<td>3.0</td>
</tr>
<tr>
<td>Primary non-completed</td>
<td>10</td>
<td>10.0</td>
</tr>
<tr>
<td>Primary completed</td>
<td>22</td>
<td>22.0</td>
</tr>
<tr>
<td>Secondary non-completed</td>
<td>24</td>
<td>24.0</td>
</tr>
<tr>
<td>Secondary completed</td>
<td>33</td>
<td>33.0</td>
</tr>
<tr>
<td>Higher secondary completed</td>
<td>6</td>
<td>6.0</td>
</tr>
<tr>
<td>Hon's and above</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>


Education Level of Respondent’s Husband

From the above table 3 we carefully saw that the total the education level of respondents husband is 100. None level of respondents husbands is 12 percent primary non completed is 13 percent, primary completed is 21 percent, secondary non-completed 11 percent, secondary completed 21 percent, higher secondary completed is 10 percent. Finally, we can say that primary completed and secondary completed the education level of respondents husbands percentage rate is same.

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>12</td>
<td>12.0</td>
</tr>
<tr>
<td>Primary non-completed</td>
<td>13</td>
<td>13.0</td>
</tr>
<tr>
<td>Primary completed</td>
<td>21</td>
<td>21.0</td>
</tr>
<tr>
<td>Secondary non-completed</td>
<td>11</td>
<td>11.0</td>
</tr>
<tr>
<td>Secondary completed</td>
<td>21</td>
<td>21.0</td>
</tr>
<tr>
<td>Higher secondary completed</td>
<td>10</td>
<td>10.0</td>
</tr>
<tr>
<td>Hon’s and above</td>
<td>12</td>
<td>12.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Occupation of Respondent’s Husband

From the above table it shows that the occupation of the most of the respondents’ husband is farmer, which is 25 percent. In the second position, the occupation of respondent’s husbands is business. 16 percent respondents’ husbands are day laborer and 17 percent is NGO employee. A few respondents husbands occupation is govt. service. Others belong to other occupation like clerical.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmer</td>
<td>25</td>
<td>25.0</td>
</tr>
<tr>
<td>Businessman</td>
<td>21</td>
<td>21.0</td>
</tr>
<tr>
<td>Day laborer</td>
<td>16</td>
<td>16.0</td>
</tr>
<tr>
<td>Govt. employee</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>NGO employee</td>
<td>17</td>
<td>17.0</td>
</tr>
<tr>
<td>Other employee</td>
<td>16</td>
<td>16.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Respondent’s household Income Category (in Taka)

From the above table it’s shown that most of the respondents household income is in the range of 5000 -10000 TK in month. The 26 percent respondents’ family income is in the range of 10000-15000TK in month. 2 percent family has monthly income to 1000-5000 TK. And other 14 percent family has 15000-20000 TK in month. Only few families earn 20000 to more in a month which is 3 percent.

The above graph demonstrates the same characteristics of respondent’s household income category in thousand in a bar graph snapshot.

Antenatal care provided to the rural mothers

The LAMB community based maternal health care system aiming to reduce morbidity and mortality related to pregnancy must focus on maternal and newborn health. The health care that a woman receives during pregnancy, at the time of delivery, and soon after delivery is important for the survival and well-being of both the mother and the child. The health care that a woman receives during the pregnancy until the delivery is known as antenatal care.

Antenatal care (ANC) from a medically-trained provider is important to monitor the status of a pregnancy, identify the complications associated with the pregnancy, and prevent adverse pregnancy outcomes. To be most effective, there should be regular ANC throughout pregnancy. Information on ANC was assessed for women who gave birth in the five years preceding the survey as well as baby carrying mother. Among women with two or more live births during the three-year period, data refer to the most recent live birth only.

The below table shows that about 98.57 percent baby caring mother have been provided antenatal care and 100% baby carrying mother get antenatal care either by themselves or by the health workers. So it is clear that the rural mother is aware of their health condition.

<table>
<thead>
<tr>
<th>Respondent’s household income</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 to 5000 tk. in month</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>5000 to 10,000 tk. in month</td>
<td>55</td>
<td>55.0</td>
</tr>
<tr>
<td>10,000 to 15,000 tk. in month</td>
<td>26</td>
<td>26.0</td>
</tr>
<tr>
<td>15,000tk. to 20,000tk. in month</td>
<td>14</td>
<td>14.0</td>
</tr>
<tr>
<td>20,000tk. to more</td>
<td>3</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>
No. of Respondents’ children
The respondents selected randomly for measuring the contribution of the community based maternal health organization like LAMB community and development programme have 2 children mostly and the percentage is 42.38 percent respondents have 1 child. 3 children belong to 15 percent respondents only. 4 children belong to 5 percent respondents only.

No of ANC checking
In table 7, most of the respondents have checked their physical condition during pregnancy time which is called ANC checking 4 times which is in percentage 36.

<table>
<thead>
<tr>
<th>No. of Children</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Child</td>
<td>38</td>
<td>38.0</td>
</tr>
<tr>
<td>2 Children</td>
<td>42</td>
<td>42.0</td>
</tr>
<tr>
<td>3 Children</td>
<td>15</td>
<td>1.0</td>
</tr>
<tr>
<td>4 Children</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>
20 respondents have 5 time ANC checking. 2 times ANC checking belong to 3 percent respondent. 1 time ANC checking has been visited only 5 respondents.

The above pie chart also shows the same result of respondents’ ANC checking.

**ANC checking provider**

From the above table it shows that most of the respondents mother have checked their health condition by skilled birth attendant which percentage rate is 48 percent. We also see that the respondent mother have checked their physical condition by family welfare visitors that is 43 percent. The remaining amount of respondent mothers have checked their health condition by MBBS doctor which percentage rate is 9 percent

**ANC checking place**

From the above table 9 it shows that total number of respondent mothers is 100 percent. Most of the respondent mothers have checked their physical condition by community clinic which percentage rate is 48 percent. In the first position of private clinic has 4 percent checking their ANC place of respondent mothers.
ANC checking Cost

The above table shows that 43 respondents don’t have ANC cost though they have checked their physical condition during pregnancy. And they have received ANC checking from the family welfare centre. 48 respondents checked their physical condition during pregnancy bearing the cost 60-100 TK and they received ANC checking from LAMB community health and development programme. Other 9 percent has received ANC checking from government as well as public hospital and bore the cost 500 to 2000.

Table 8: Provided ANC Checking by Whom to the Respondent Mother

<table>
<thead>
<tr>
<th>ANC by whom</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBBS doctor</td>
<td>9</td>
<td>9.0</td>
</tr>
<tr>
<td>Family welfare visitor(FWV)</td>
<td>43</td>
<td>43.0</td>
</tr>
<tr>
<td>Skilled birth attendant</td>
<td>48</td>
<td>48.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

ANC checking: ANC cost and by whom

The above graph shows that 43 percent respondents received ANC checking from family welfare visitor spend no money. 48 percent respondents received ANC checking spend 60-100 TK and other 9 percent respondents received ANC checking from MBBS doctor and their ANC checking cost depends on their ANC category.

Table 9: ANC Checking Place of The Respondent Mother

<table>
<thead>
<tr>
<th>ANC checking place</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private clinic</td>
<td>4</td>
<td>4.0</td>
</tr>
<tr>
<td>Govt. Hospital</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>Community clinic</td>
<td>48</td>
<td>48.0</td>
</tr>
<tr>
<td>Family welfare centre</td>
<td>43</td>
<td>43.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mother’s thought about ANC checking time

51 percent respondents’ mothers think that a pregnant woman should check up her physical condition at least 3 times. 39 percent and 5 percent respondents think that a pregnant should check up at least 4 and 5 times respectively. Only few 5% women think that a woman should checked up 2 times ANC checking during her pregnancy.
Table 10: ANC Checking Cost of Respondent Mother

<table>
<thead>
<tr>
<th>ANC checking cost</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Taka</td>
<td>43</td>
<td>43.0</td>
</tr>
<tr>
<td>60 Taka</td>
<td>21</td>
<td>21.0</td>
</tr>
<tr>
<td>80 Taka</td>
<td>17</td>
<td>17.0</td>
</tr>
<tr>
<td>100 Taka</td>
<td>10</td>
<td>10.0</td>
</tr>
<tr>
<td>500 Taka</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>1000 Taka</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>1500 Taka</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>2000 Taka</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Respondent’s delivery place

From the above table, it shows that most of the respondent mother 41 percent have given birth their child at home with the help of traditional birth attendant as well as charlatan. 37 respondent mother have given birth their child at community clinic. 13 percent women have gone to private clinic to give birth. And other 7 percent and 2 percent respondent mother have gone to family welfare center and government hospital to give a birth respectively.
Table 11: Mother's Thought About ANC Checking Time

<table>
<thead>
<tr>
<th>ANC checking time</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Times ANC checking</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>3 Times ANC checking</td>
<td>51</td>
<td>51.0</td>
</tr>
<tr>
<td>4 Times ANC checking</td>
<td>39</td>
<td>39.0</td>
</tr>
<tr>
<td>5 Times ANC checking</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Respondent's delivery type

In the above table 13, 81 percent respondent mother has normal delivery and other 14 percent and 5 percent went through by operation and apparatus to give a birth.

Assistance during delivery

From the above table 14, it is shown that 39 percent women have given birth with the assistance of community skilled birth attendant who belongs to community clinic of LAMB community health and development program. 37 percent respondent mother has given birth with the help of traditional birth attendant at home. 14 percent women have been given their birth by M.B.B.S. doctor. The remaining number 6 percent and 4 percent went through by family welfare visitor and charlatan.

Table 12: Delivery Place of Respondent Mother

<table>
<thead>
<tr>
<th>Delivery Place</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>At home</td>
<td>41</td>
<td>41.0</td>
</tr>
<tr>
<td>private clinic</td>
<td>13</td>
<td>13.0</td>
</tr>
<tr>
<td>Govt. hospital</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>Community clinic</td>
<td>37</td>
<td>37.0</td>
</tr>
<tr>
<td>Family welfare centre</td>
<td>7</td>
<td>7.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The above graph shows the same result of the assistance of during delivery service respondent mother in a snapshot.

Appropriate delivery birth attendant

In the above table 15, 61 percent respondent mother thinks that skilled birth attendants are appropriate for delivery service. 26 percent respondent mother thinks about M.B.B.S. doctor to give a birth. 7 percent women think that a woman
needs traditional birth attendant to give a birth. The remaining number 4 and 2 women think that a pregnant woman needs to have family welfare visitor and others (nurse, BRAC HA and relatives) to give a birth successfully.

**Table 13: Delivery Type of Respondent Mother**

<table>
<thead>
<tr>
<th>Delivery Type</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal delivery</td>
<td>81</td>
<td>81.0</td>
</tr>
<tr>
<td>By operation</td>
<td>14</td>
<td>14.0</td>
</tr>
<tr>
<td>By apparatus</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Table 14: Assistance during Delivery of Respondent Mother**

<table>
<thead>
<tr>
<th>Assistant during delivery</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBBS doctor</td>
<td>14</td>
<td>14.0</td>
</tr>
<tr>
<td>Family welfare visitor(FWV)</td>
<td>6</td>
<td>6.0</td>
</tr>
<tr>
<td>Skilled birth attendant</td>
<td>39</td>
<td>39.0</td>
</tr>
<tr>
<td>Traditional birth attendant</td>
<td>37</td>
<td>37.0</td>
</tr>
<tr>
<td>Charlatan</td>
<td>4</td>
<td>4.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**PNC checking**

Postnatal care is a crucial component of safe motherhood. Postnatal checkups provide an opportunity to assess and treat delivery complications and to counsel mothers on how to care for themselves and their babies. A large proportion of maternal and neonatal deaths occur during the 24 hours following delivery. In addition, the first two days following delivery are critical for monitoring complications arising from the delivery.

**Table 15: Respondent’s Thought About Appropriate Delivery Birth Attendant**

<table>
<thead>
<tr>
<th>Appropriate Delivery Birth Attendant</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBBS doctor</td>
<td>26</td>
<td>26.0</td>
</tr>
<tr>
<td>Family welfare visitor(FWV)</td>
<td>4</td>
<td>4.0</td>
</tr>
<tr>
<td>Skilled birth attendant</td>
<td>61</td>
<td>61.0</td>
</tr>
<tr>
<td>Traditional birth attendant</td>
<td>7</td>
<td>7.0</td>
</tr>
<tr>
<td>Others(nurse, BRAC HA and relatives)</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>
To assess the extent of postnatal care utilization, this survey asked the respondent whether she and her child had received a health checkup after the delivery, the timing of the first check, and the type of health provider for the last birth in the five years preceding the survey.

In the above table 16, 92 percent respondent mother has received their PNC checking and other 8 percent haven’t received their PNC checking after delivery.

**No of PNC checking**

From the above table 17, 67 percent respondent mother have received PNC checking 4 times, 20 percent received 5 times and other 13 percent received 3 times PNC checking after delivery.

**PNC checking provider to respondent mother**

In the above table 18, 32 percent respondent mother received PNC checking skilled birth attendant, 20 percent from traditional birth attendant, 16 percent from family welfare visitor, and 15 percent from M.B.B.S. doctor. And others 8 percent and 9 percent received PNC checking from Charlatan and others (nurse, BRAC HA and relatives).

**PNC checking: By whom and in where**

From the above graph, it is cleared that, 32 percent respondent mother received their PNC checking from community skilled birth attendant at community clinic. 36 percent respondent mother received their PNC checking at home by traditional
birth attendant, charlatan and others. 15 percent respondent mother received PNC checking from M.B.B.S. doctor either at private clinic or government hospital. 16 percent respondent mother received PNC checking from family welfare center.

**PNC checking cost**

In the above table, 19.76 percent respondent mothers have received PNC checking by spending below 100 taka. 16 percent respondent mothers have received PNC checking spent 300 to 2000 taka in different cases. Remaining 10 percent spent for PNC checking above 2500 taka according to their demands.

**Table 16: PNC Checking of Respondent Mother**

<table>
<thead>
<tr>
<th>PNC Checking</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>92</td>
<td>92.0</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Distance between respondent’s home and community clinic**

The pie chart shows that, respondent’s home far from LAMB Community Clinic within 2 k.m. is 40 percent and others respondent’s home far from 3-5 k.m. Only 18 percent respondent’s home belong to within 6 to more k.m.

**Table 17: No. of PNC Checking Provided to the Respondent Mother**

<table>
<thead>
<tr>
<th>PNC Checking</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Times PNC checking</td>
<td>13</td>
<td>PN13.0</td>
</tr>
<tr>
<td>4 Times PNC checking</td>
<td>67</td>
<td>67.0</td>
</tr>
<tr>
<td>5 Times PNC checking</td>
<td>20</td>
<td>20.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Table 18: Provided PNC Checking by Whom to the Respondent Mother**

<table>
<thead>
<tr>
<th>PNC Checking Provider</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBBS doctor</td>
<td>15</td>
<td>15.0</td>
</tr>
<tr>
<td>Family welfare visitor(fwv)</td>
<td>16</td>
<td>16.0</td>
</tr>
<tr>
<td>Skilled birth attendant</td>
<td>32</td>
<td>32.0</td>
</tr>
<tr>
<td>Traditional birth attendant</td>
<td>20</td>
<td>20.0</td>
</tr>
<tr>
<td>Charlatan</td>
<td>8</td>
<td>8.0</td>
</tr>
<tr>
<td>Others(nurse, BRAC HA and relatives)</td>
<td>9</td>
<td>9.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
Breast-feeding time

From the above table 20, 94 percent respondent mother have practiced breast feeding to their children till to 6 months after given birth. And 6 percent respondent mothers have practiced breast feeding to their children till to 5 months after given birth.

Table 19: PNC Checking Cost of Respondent Mother

<table>
<thead>
<tr>
<th>PNC Checking Cost (in Tk.)</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Taka for PNC checking</td>
<td>24</td>
<td>24.0</td>
</tr>
<tr>
<td>10 Taka for PNC checking</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>60 Taka for PNC checking</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>80 Taka for PNC checking</td>
<td>26</td>
<td>26.0</td>
</tr>
<tr>
<td>100 Taka for PNC checking</td>
<td>23</td>
<td>23.0</td>
</tr>
<tr>
<td>300 Taka for PNC checking</td>
<td>8</td>
<td>8.0</td>
</tr>
<tr>
<td>500 Taka for PNC checking</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>1000 Taka for PNC checking</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>2000 Taka for PNC checking</td>
<td>4</td>
<td>4.0</td>
</tr>
<tr>
<td>2500 Taka for PNC checking</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>3000 Taka for PNC checking</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>4000 Taka for PNC checking</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>5000 Taka for PNC checking</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Naval cutting tool

In the above table 21, 62 percent respondent mother told that a pair of Scissors was used to cut their new born baby’s naval. And 38 percent have used new blade to cut their new born baby’s naval.

![Pie chart showing percentages of different methods of cutting the naval.]

Taking the first bath of new-born baby

In the above table 22, 57 percent respondent mother have made a bath their children within 7 days or more and 31 percent respondent mother made their children taken a bath within 2 to 3 days. And other 12 percent practiced to make a bath after giving birth or within 6 hours.

Knowledge of first aid of child-common diseases

From the above graph, it has been shown that 93% women know the first aid when their children fall in heavy fever, vomiting several times and shortness of breath and other 7 percent knows nothing.

<table>
<thead>
<tr>
<th>Table 20: Duration Of Breast-feeding Of Respondent Mother To Her Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration Of Breast-feeding in Month</td>
</tr>
<tr>
<td>-------------------------------------</td>
</tr>
<tr>
<td>5 Months breast feeding</td>
</tr>
<tr>
<td>6 Months breast feeding</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 21: Tools For Cutting Naval of New-born Baby</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutting tool</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>New blade</td>
</tr>
<tr>
<td>Scissors</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
This table shows that age of respondent mother significance level is 6.8 percent. This significant level is not accepted to the age of respondent mother. Education level of respondent mother significance level is 7.2 percent which is not accepted to the education level of respondent mother. Education level of respondent husband significance level is 49.9 percent which is not accepted. Income level of household significance level is 34.3 percent which is not accepted. Provided ANC by who to the respondent mother significance level is 0 percent which is accepted to the respondent mother. ANC place of the respondent mother significance level is 0 percent which is accepted to the respondent mother. ANC cost of respondent mother significance level is 0. 1 percent. Which is accepted? Respondent’s home far from LAMB community clinic significance level is 38.8 percent which is not accepted.

**Table 22: Time of Taking A First Bath For A New-Born Baby**

<table>
<thead>
<tr>
<th>Taking a first bath</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>After giving birth</td>
<td>11</td>
<td>11.0</td>
</tr>
<tr>
<td>After 6 hours</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Within 2 to 3 days</td>
<td>31</td>
<td>31.0</td>
</tr>
<tr>
<td>Others</td>
<td>57</td>
<td>57.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Conclusion**

This analysis on the role and impact of community based maternal health organization in capacity development has been explored with one main question in mind: Has community based health organization’s action evolved with the improvement of maternal health program implementation more beneficial? Our findings can be summarized systematically by recalling the objectives presented at the outset of the paper:

Community based maternal health organizations are moving towards increased involvement in capacity development for maternal health. The capacity development approach is gaining attention among field working by providing ANC and PNC in improvement maternal health assuming capacity development activities. Community based maternal health organizations, the focus of this study, is quite clearly influenced by the international development discourse and is adapting their activities accordingly. Even though capacity development has always existed, it is gaining ground on the national level as an overarching concept promoted by the multilateral aid agenda. As a result, community based
<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of respondent mother</td>
<td>-4.766</td>
<td>1.480</td>
</tr>
<tr>
<td>Education level of respondent mother</td>
<td>-216</td>
<td>.117</td>
</tr>
<tr>
<td>Education level of respondent’s husband</td>
<td>-.143</td>
<td>.079</td>
</tr>
<tr>
<td>Income level of household</td>
<td>.044</td>
<td>.065</td>
</tr>
<tr>
<td>Provided ANC by whom to the respondent mother</td>
<td>3.250E-5</td>
<td>.000</td>
</tr>
<tr>
<td>ANC place of the respondent mother</td>
<td>1.075</td>
<td>.191</td>
</tr>
<tr>
<td>ANC cost of respondent mother</td>
<td>1.441</td>
<td>.230</td>
</tr>
<tr>
<td>Respondant’s home far from LAMB community clinic</td>
<td>.002</td>
<td>.001</td>
</tr>
<tr>
<td>- .091</td>
<td>.105</td>
<td>-.067</td>
</tr>
</tbody>
</table>

Model (Constant) | B | Std. Error | Beta | t | Sig. |

a. Dependent Variable: No. of ANC provided to the respondent mother

maternal health organizations constitute important resources for capacity development, and vice versa.

This involvement changes the ways in which community based maternal health organizations operate. Whereas an increasing number of communities based maternal health organizations are involved in capacity development, many still remain committed to education provision and replacing the state on the ground.
Capacity development activities compliment this traditional area of community based maternal health organization intervention and constitute a way of scaling up in a qualitative sense by enhancing the sustainability of community based maternal health organization efforts. As a result, community based maternal health organizations action is increasingly diversified.

Through their involvement, they have an impact on the interpretation of capacity development. Community based maternal health organizations do have an influence on the concept and content of capacity development. Community based maternal health organizations are to a large extent influenced by the rural women’s health development discourse and as a result, adapt their activities and strategies to accommodate external demands concerning capacity development. However, through their actions, and by making new activities complementary to and coherent with traditional ones, they engage in a process of shaping the meaning of capacity development.
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5. Maternal Healthcare in Bangladesh and Gender Equity: A Review Article Lori Maria Walton DPT, Ph.D Andrews University, loriptdoc@gmail.com Bassima Schbley MSW, Ph.D. Washburn University, bassima.schbley@washburn.edu.


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Evolving Imbalances and Thoughts on Ethics  
[Future of Economic Sciences: From Ethical Perspective]

WALI-UL-MAROOF MATIN*

Abstract: Forecasting is an inaccurate science. Revolution are almost impossible to predict but it happens. Revolutions take place suddenly and often violently. The industrial revolution leads to paradigm shifts for economist, and right in this current decades we are going through a new, unprecedented industrial revolution. This shift eliminates jobs, displace people and poised to create imbalance of power: economic, social, military and especially intellectual wealth. This article argues a few technological issues which are the seed to this apparently non-violent revolution. The economics, as a discipline of study requires to address the philosophical dilemma in new schools of thought. There is a high probability that the current process of model of development and its study will pivot on developed countries, but the developing economies will be the engine of growth and hub for the intellectual evolution.

“Man is an anxious animal”, stated Adam Smith. Attempts to look into the future is normal. However, the distance of Future from Now, has always been a question and the answer will depend on the visibility of the fortune teller and the life expectancy of the subject. Until the nineteenth century, academics considered Economics as a branch of philosophy. Economics branched out from “moral science” in Cambridge in 1903. Despite a fast growth of Economics as an academic discipline, the roots must remain in communal sense of ethics, psychology, logic and religion. The life expectancy of these inner human issues is infinitive, or matching to the life expectancy of whole human race vis-à-vis a finite life span of individual economists and the wealth of the nations. The bumpy and curvy roads of human economic life give us a vision very limited to new modes of production and consumption. The evolving definition of moral must increase further the anxieties of economists.

* Managing Director of Maslin Capital Limited.
Today’s capitalist society, which is centring on limited liability transnational companies, appear to be very futuristic. Craftily worded vision statements always indicate perpetuity. However, desperate capitalists look at quarterly (¼th of One year) corporate data and share prices largely depend on that data. Corporate CEOs are hyper to increase the value of share at the earliest, prepared for any blue-moon chance to make profit. Postponement of immediate harvest visualising a greater future is not any corporate mission. For a longer vision, a longer history has to be evaluated. Companies ignore this logic.

Future prediction depends on the past and the present facts whose impacts are known. Tsunami warnings are issued after an earthquake in the ocean. The shaking event of the current world is undoubtedly the fourth industrial revolution ushering the age of Internet of Things (IoT) and Big Data. The drivers of the future include autonomous vehicles, 3D printing, advanced robotics and new materials. Advent of these almost miraculous technology in the greatly divided world is full of uncertainty one may think of, especially in the light of ethics. A disaster warning may be issued now.

In an interview with Bloomberg, Google Ventures’ president Bill Maris said he thought it was possible to live to 500 years old. Maris himself is not a health scientist nor is he talking to a health institution, but to Bloomberg, a major commercial news maker. This news is yet to stimulate the health economists. More reliable are the journals of the scientists. The Lancet published that there is more than 50% probability that by 2030, national (UK) female life expectancy will break the 90-year barrier, a level that was deemed unattainable by some at the turn of the 21st century. Projections show continued increases in longevity, and the need for careful planning for health and social services and pensions. Google’s 500-year vision is a commercial dream. But an economic fortune-teller can believably predict human lives to extend to 150 years or so, in next 50 years.

The escalation of median age followed by reduced fertility rate in, for example the US, Europe, Korea and Japan may be focused in the light of another fact in the other parts of the world. The population of many countries are getting younger. Human morbidity is compressed. A great number of chronic diseases are postponed and prevented. Nevertheless, the vitality of population has not been elongated significantly as yet. Performance of athletes hardly continue beyond 30 years.

Desk workers can contribute for almost four decades after completion of education and training. While ability to work can be extended for some few years, the willingness to work is decreasing spectacularly. The French has a weekly
working hour of 35 hours and a reduction of working days to 4 days are under consideration by left wing politicians. There are mainly two rationales. First is that reduction of working hour of existing workforce will create new jobs for younger population, especially when new generation is receiving very focussed skills, precious division of labour is inevitable. Second logic is that the lesser working hour will provide the ageing population with better quality of life and more time to serve the societal purposes. Both are humanitarian morals. Maintenance of this moral obligation may not be simple and easy for the policymakers.

The mode of production and consumption pattern do need a discussion. The 4th industrial has changed the mode of production unpretendingly. In the post computer era, this age is termed as the age of Industrial Internet of Things (IIoT) by General Electric. Cisco termed it as the Internet of Everything (IoE). World Economic Forum popularised the term Fourth Industrial revolution. The first Industrial Revolution (18th and 19th century) created steam engine for fast production cycle and transportation. It facilitated urbanisation of civilisation in Europe and US. The Second revolution (1870 to 1920) produced electric bulb, combustion engines and numbers of electronics and ushered more time to spend out of work and comfort at home. The Third revolution (the 80s) replaced analogue calculation to digital method. Internet, Emails are gift of the third revolution. But the fourth revolution is machine learning and the supremacy of mathematics. Machines create machines, the result is invention of cure for many critical diseases, fast transportation of information. Digital money gave rise to the concept of private money.

The earlier revolutions took longer time. The later ones are quick. We can expect the tsunami of changes in no time. This changes will affect different classes of people in different ways.

The middle class, that is the class of people with tertiary education and modern skills work hard, practices delayed gratification, is going to face a paradigm shift in the job market. Frey and Osborne predicted 10 jobs which may die in the IoT age that includes: Telemarketer, Tax preparers, insurance appraisers, umpires, legal secretaries, restaurant hosts, brokers, labour contractors, administrative executives and couriers. This reference is made for the countries who are excited about “robotonomics”.

However, this is significant for the population of countries like Bangladesh where young people are the most important asset, both as producers and consumers. A foresight to the death of the above mentioned jobs must change the education and
skill development schemes in Bangladesh, proactively to the change internationally. There is no sense in debating on the ethical issues asking on replacement of human power by robot. This is happening and the ethics recognising the superiority and dignity of artful skill of human being is under grave threat.

It is believed by many that Robotics and Internet of Things will change human job nature only. There will be a greater need for skills to develop robots and artificial intelligence. However, in February 2015, Deep Mind scientists revealed how a computer had taught itself to play almost 50 video games. Human intervention is hardly required. Young middle-class brainpower has to be hired by aged upper-class, will face tremendous ethical questions. If the human moral is not refined in favour of the human being, peace and conflict will take an unmanageable shape.

Peace and conflict in Economic context have always been integral part of the human history. We may hate wars and invasions. But the history is full of horrendous wars. No space in history is available without war. Warfare is an integral part of states. Men fight and give life for independence, for conquering other’s land out of the taught belief that they are superior thus deserve more resources. Except warriors own tribe, all others are “barbarians”. People fight as mercenaries as it is one of the job that pays high premium and bonus in exchange of life risk. Booty includes cash, tangible property and women. The concept of war crime evolved only a modern day. War itself is not a crime. A few supplementary actions are declared war crime and individual general and statesmen. The Geneva Conventions are 60 years old while the history of war does not have a beginning date. Ethics are evolving. This time it will be faster.

Battle results depend on investment. Horses, chariots, swords, canons, missiles, chemical weapons and everything are expensive. Military workforce often are more expensive than civilian workforce. Military training, practice and motivation have always costed money. But in money terms, it was never more than what it is now. However, war result also significantly depends of the intangible motivation of the soldiers.

Globalisation had been a very well touted term that was accepted by many of us in the last decades. Small countries with numerous problems welcomed the concept of globalisation, possibly thinking of a wider liberty of movement without war. Post 2nd World War led the traumatised policy-makers to think of growth and development of wealth without war. The 2nd world war had proved that the world was far from the morality to understand the value of peace. Transnational businesses welcomed the theory as a blessing as the markets could be
elongated beyond borders. Many politicians thought of ‘national houses’ in the ‘global village’ of the 21th century. The global peace and the conflict free trade has been a hope since the Bretton Wood. In the concluding remarks in the UN conference in Bretton Wood, Keynes hoped and advised to the subjugated nations by saying that “It has been our task to find a common measure, a common standard, a common rule applicable to each and not irksome to any”. IMF and World Bank thus were created.

The beginning of the end of the Bretton Woods was triggered by Richard Nixon. Nixon Shock came on 22 July 1971 when US unliterary severed their currency from Gold. Like US President Donald Trump, Richard Nixon was a nationalist. While most of the world policy makers think, very wrongfully though, that US is the sovereign power on earth. However, Nixon, Trump et al clearly mentioned that all their actions do hinge on their own country’s interest. Nixon and Trump, both overladen by scams, are laudable for their transparency. It is very clearly seen how the American presidents openly throw away moral and ethics. Human rights, respect to others and their very own commitments often have been cancelled in the name of God and People.

Donald Trump and his lady plagiarised speeches among applauds of the US citizens. News makers and news casters alike, the CNN news anchor Fareed Zakaria caught 24 times (as of March 2017) for plagiarism. He keeps his job and earns millions of dollar from CNN, one of the movers and shakers of the modern world. The creativity of the scholars is undermined, stolen and thus, the whole innovative world in the 4th Industrial revolution is at stake. This is an ethical attack on the economic revolution.

The USA, however is the largest financier of the international organisation who are supposed to help the world for sustainable development. These organisations include the United Nations, WTO, IMF and the World Bank.

The WTO, along with IMF and World Bank has dramatically failed in implementing globalisation. The process they followed earned the Trio a name as bad as “unholy trinity”. The Trinity although spends billions of dollars, have miserable failed to eliminate hunger from the destitute countries. It is suggested that this Trinity must come out of the influence of big countries and big corporations and above all they have to shun the “unrealistic mathematical elegance”.

Within nations’ boundary, the stock exchanges and the trading activities in the light of perfect competition is one keystone for financial capitalism. Stock exchanges manage significant amount of the nation’s wealth. However,
governance in the stock markets have always been a question. Among the crimes in the market, Insider Trading is the most mischievous. However, Larry Sayler challenges if Insider Trading is unethical at all. He argues in the debate – if insider trading is acceptable ethically? Or we have to refute it? Sayler finds it to be a dilemma, not a straight forward refusal or acceptance of Insider trading. He examined the “dilemma” by Kant’s two Categorical imperatives and four distributive justice models. This challenge is supported by few other moral economists too. This is a sign of paradigm shift in the ethical thinking process of the economists. Definition of Competition has to be rewritten in the light of new definition of ethics.

The ethics that says of equal flow of information as a precondition of successful perfect competition, is already been challenged when all SECs and other regulators are fighting tooth and nail against insider trading.

The time the 4th Industrial revolution has come in the age of democracy and free market economy. Democracy is the most lobbied political form of the era. Hardly any academics or media talk about any alternative of democracy. It is believed that democracy includes everyone in governance. Nevertheless, democracy gave way to the rise of political elites finely mutilating democracy. The economic Intelligence Unit proclaims that a popular revolt took place in 2016 against the political elites. EIU refers to UK and USA have been successfully upholding the Greek-styled democracy for decades. EIU suggests that democracy is in peril as they surveyed 167 countries. 19 countries have full democracy, 57 have flawed democracy, 40 have hybrid and 51 have authoritarian regime. Without democracy, the 4th industrial revolution will have a fragile platform.

The fast decline of Greek-style democracy which is a pre-requisite for the success of Keynesian economics clubbed with the decline of financial capitalism obviously indicate change in the definition of ethics. The ethical norms are changing in the western hemisphere more visibly. It will raise the conflicts between the civilisations. And each civilisation will call others the barbarians, as always. Financial Capitalism and nationalism are bound to face another shock – massive migration wave. The reason is not only the demographic imbalance, but also it is due to the impact of 4th Industrial revolution. Nabil Al-Kho waiter wrote in Al Jazeera that Artificial Intelligence will delete nationalism. Al-Khawaiter opined. “even as social and political scientists struggle to understand the impact of internet and the social media platforms it has spawned on human societies around the world, a vast new communication revolution is about to burst on humanity within five to 10 years”.

Language is a barrier for the migrants and their receiving countries for absorbing and naturalisation of migrants. Al-Khowaiter argued, if an Albanian is able to understand the most obscure German phrase and reply to it in perfect German, what power on earth will stop him leaving a job paying an average wage of less than $3,200 a year, when he can travel to Germany and potentially qualify for a job with an average wage of 32,000 a year”? The example of Albanian migrant to Germany is not random. Germany is planning well ahead for the adverse impact of his population decrease. Piketty opines that “the drama of the refuses in an opportunity for Europeans to restart the continent’s economy. Germany’s attitude makes it a model to emulate”.

We, at the middle of the fourth industrial revolution, continue to have basic primitive crisis. There are 900 million people are going to bed hungry. UN estimates that there are 27 to 30 million slaves in modern days and the slavery industry fetches 35 billion dollars. Global defence budget amounted to 1.57 trillion dollars. 1.2 billion People are without electricity, meaning no telephone or TV.

Many hi-tech and chemical weapons are gift of the fourth industrial revolution. A bit chemical dash can kill a person within minutes without giving the killer any moral stress, because she does not know at all that she is a killer. Military labour force will have less trauma because most of them will operate keyboard to kill people as trained by the video games. Moral and ethical hazards will thus be less visible, camouflaged by technology. An epidemic like Ebola in the west coast in Africa might have been originated from US Bio-warfare laboratories. Economic science will hence take a new shape in light of new ethical demonstration.

Nevertheless, what is obvious is obviously wrong, proclaimed Joseph Granville, a most famous technical analyst. No forecast can be obviously made. It is not any smoothened trend. The always changing technology for production and demography that consume the products determine the leaps and bounds of the ensuing decades. Every day is a new day. Human race has been living in uncertainly from the beginning of time. We can only hope and pray and the uncertainty will not turn unreasonable.
References

9. Nabil Al-Khowaiter is a Saudi business development consultant living in Riyadh. The article is published and viewed 17 March 2017 http://aje.io/e283
Abstract: Poverty eradication is one of the main conditions for the progress of a society like ours. This progress remains incomplete without improving the conditions of the poor. It is generally agreed that incidence, intensity and inequality are three important aspects in poverty measurement. These factors indicate that eradication of poverty means more than showing a large reduction in overall poverty; to improve the lives of the extreme poor as this will have the same poverty impact at a lower cost than addressing those experiencing the severest poverty. A number of poverty measures have been developed using the assimilated approach in the context of uni-dimensional poverty measurement as well as multidimensional poverty measurement following a growing consensus that poverty is not just a reflection of deprivation in any single dimension. Despite hindering factors such as poor infrastructure, political instability, corruption, and insufficient power supplies, recent growth of our economy is 5-6% per year. With time, our economy has the momentum and is the second fastest growing major economy of 2016. Though Bangladesh is the world’s 44th country considering GDP and 32nd largest in terms of purchasing power parity, we have been known as poor country in the world. However, steps have been taken by the present government of Bangladesh to boost-up our economy and eradicate poverty. It will not be overstated if we say we are on the way to be role model in poverty eradication. Even after considering the odd results, the positive outcomes of strategies, owned for poverty eradication, still hold the claims of their role in poverty eradication. They are the better alternatives showing the pathway for far better ones.

* Authors are respectively Executive Director (on PRL), Joint Director and Deputy Director of Bangladesh Bank. Opinions expressed in this paper are their own, and in no way reflect the official position of Bangladesh Bank.
1.0 Introduction

Just prior to President Obama’s 2014 State of the Union Address, media\(^1\) reported that the top wealthiest 1% possess 40% of the nation’s wealth; the bottom 80% own 7%; similarly, but later, the media reported, the “richest 1 percent in the United States now own more additional income than the bottom 90 percent”\(^2\). The gap between the top 10% and the middle class is over 1,000%; that increases another 1,000% for the top 1%. The average employee “needs to work more than a month to earn what the CEO earns in one hour.”\(^3\) Although different from income inequality, the two are related. In Inequality for All—a 2013 documentary with Robert Reich in which he argued that income inequality is the defining issue for the United States—Reich states that 95% of economic gains went to the top 1% net worth (HNWI\(^4\)) since 2009 when the recovery allegedly started.\(^5\) More recently, in 2017, an Oxfam study found that eight rich people, six of them Americans, own as much combined wealth as “half the human race”. Pre-Poverty eradication is one of the main and must conditions for the progress of a society. This progress remains incomplete without improving the conditions of those stricken with poverty. It is generally agreed that there are three important aspects in poverty measurement, known as three Is – incidence, intensity and inequality.\(^6\) These three factors indicate that the term eradication of poverty means more than showing a large reduction in overall poverty, to improve the lives of the least poor as this will have the same poverty impact at a lower cost than addressing those experiencing the severest poverty. A number of poverty measures have been developed using the assimilated approach in the context of uni-dimensional poverty measurement as well as multidimensional poverty measurement following a growing consensus that poverty is not just a reflection of deprivation in any single dimension.\(^7\)

\(^3\) Marsden, William (January 26, 2014), Obama’s State of the Union speech will be call to arms on wealth gap, retrieved January 26, 2014.
\(^4\) A classification used by the financial services industry to denote an individual or a family with high net worth.
\(^6\) Jenkins and Lambert (1997) refer to these three aspects as ‘three I’s of poverty.
2.0 Identification of Deprivations And of Poverty

Direct measures of poverty that look at deprivation and living standards have a very long history, particularly in Britain. From Charles Booth and before, through to Seeholm Rowntree and Peter Townsend in the twentieth century, the living conditions of the poor have been investigated to establish those who live in poverty. Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the types of diet, participate in the activities, and have the living conditions and amenities, which are customary, or at least widely encouraged or approved, in the societies to which they belong. Their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary patterns, customs and activities.

Measures of deprivation are not the same as measures of income – they relate to how people live. Deprivation is the consequence of a lack of income and other resources, which cumulatively can be seen as living in poverty. The relative deprivation approach to poverty examines the indicators of deprivation, which are then related back to income levels and resources. Internationally, a lack of or non-participation in indicators like diet, clothing, fuel and light, home amenities, housing and housing facilities, the immediate environment of the home, the general conditions and security of work, family support, recreation, education, health and social relations are seen as an indicator of deprivation.

There are levels of income below which consumption and participation fall well below what might be seen as normal or acceptable in an increasingly affluent society. This group is seen to be in poverty. As mentioned in previous portion - incidence, intensity and inequality – are the measures of poverty.

3.0 Who are Considered to be Stricken by Poverty

Mostly accepted idea of being poor is to lack income. Income is not the only thing people care about and it varies a lot from one person to another. For example, a chronically sick person needs more income than the healthy one to lead an equally fulfilling life. It is not easy, however, to turn these philosophical musings into workable measurements. One valiant effort is the Multi-Dimensional Poverty Index (MPI), devised by Sabina Alkire and her colleagues at the Oxford Poverty and Human Development Initiative. It begins with ten questions that appear in

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surveys carried out sporadically by USAID, America’s aid agency, and UNICEF. Two of the questions cover education, two address health and the remaining six assess a household’s standard of living.\textsuperscript{10} The table below may be considered:

**Rich dataset**
The multi-dimensional poverty index

<table>
<thead>
<tr>
<th>Dimension of poverty</th>
<th>Indicator by household</th>
<th>Weight in index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>No one has complete five years of schooling</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>A child is not attending primary school</td>
<td>1/6</td>
</tr>
<tr>
<td>Health</td>
<td>A child has died</td>
<td>1/6</td>
</tr>
<tr>
<td></td>
<td>Anyone is malnourished</td>
<td>1/6</td>
</tr>
<tr>
<td>Living standard</td>
<td>No electricity</td>
<td>1/18</td>
</tr>
<tr>
<td></td>
<td>No decent toilet or latrine</td>
<td>1/18</td>
</tr>
<tr>
<td></td>
<td>No easy access to drinking water</td>
<td>1/18</td>
</tr>
<tr>
<td></td>
<td>Has a dirt, sand or dung floor</td>
<td>1/18</td>
</tr>
<tr>
<td></td>
<td>Cooks with dung, wood or charcoal</td>
<td>1/18</td>
</tr>
<tr>
<td></td>
<td>No car or truck and only one out of a radio, TV, telephone, bike,</td>
<td>1/18</td>
</tr>
<tr>
<td></td>
<td>motorbike or refrigerator</td>
<td></td>
</tr>
</tbody>
</table>

Source: Oxford Poverty & Human Development Initiative

Each of these ten deprivations is given a weight in the overall index. A household is deemed poor if its deprivations, duly weighted, add up to at least 33%. Thus an uneducated family that has lost a child is regarded as poor no matter how many consumer durables it owns. A country’s MPI is the product of both the breadth of poverty (the proportion of people whose score is over 33%) and its depth (the average score of the poor). This broader brush paints a different picture of hardship than narrower measures based only on income or consumption. Uganda and Cambodia, for example, have been notably successful in cutting the proportion of people living on less than US$1.25 a day (adjusted for purchasing power), the World Bank’s global poverty standard. However, Nepal and Rwanda have done markedly better at reducing “multi-dimensional” poverty.

\textsuperscript{10} Published in the Economist, published on 23 March 2013 captioned ‘Poverty - The decathlon of deprivation’
4.0  Steps Taken So Far in this Regard

Poverty occurs in both developing countries and developed countries, while poverty is much more widespread in developing countries, both types of countries undertake poverty reduction measures. Poverty has been historically accepted in some parts of the world as inevitable as non-industrialized economies produced very little while populations grew almost as fast, making wealth scarce. Geoffrey Parker wrote that “In Antwerp and Lyon, two of the largest cities in western Europe, by 1600 three-quarters of the total population were too poor to pay taxes, and therefore likely to need relief in times of crisis.” Poverty reduction has been largely because of overall economic growth. Food shortages were common before modern agricultural technology and in places that lack them today, such as nitrogen fertilizers, pesticides and irrigation methods. The dawn of industrial revolution led to high economic growth, eliminating mass poverty in what is now considered the developed world. World GDP per person quintupled during the 20th century. In 1820, 75% of humanity lived on less than a dollar a day, while in 2001, only about 20% do.

Today, continued economic development is constrained by the lack of economic freedoms. Economic liberalization requires extending property rights to the poor, especially to land. Financial services, notably savings, can be made accessible to the poor through technology, such as mobile banking. Inefficient institutions, corruption and political instability can also discourage investment. Aid and government support in health, education and infrastructure helps growth by increasing human and physical capital. Poverty alleviation also involves improving the living conditions of people who are already poor. Aid, particularly in medical and scientific areas, is essential in providing better lives, such as the Green Revolution and the eradication of smallpox. Problems with today’s development aid include the high proportion of tied aid, which mandates receiving nations to buy products, often more expensive, originating only from donor countries. Nevertheless, some believe (Peter Singer in his book The Life You Can Save) that small changes in the way each of us in affluent nations lives our lives could solve world poverty.

Strategies/concepts owned to eradicate poverty are discussed below:

04. A) Global Strategies: Eradication of extreme poverty and hunger by 2015 was a Millennium Development Goal. In addition to broader approaches, the Sachs Report (for the UN Millennium Project) proposes a series of “quick wins”, approaches identified by development experts which would cost relatively little but could have a major constructive effect on world poverty. The quick wins are:
Access to information on sexual and reproductive health; Action against domestic violence; Deworming school children in affected areas; Drugs for AIDS, tuberculosis, and malaria; Eliminating school fees; Ending user fees for basic health care in developing countries; Free school meals for schoolchildren; Legislation for women’s rights, including rights to property; Planting trees; Providing soil nutrients to farmers in sub-Saharan Africa; Providing mosquito nets; Access to electricity, water and sanitation; Supporting breast-feeding; Training programs for community health in rural areas; Upgrading slums, and providing land for public housing. Some strategies/concepts owned globally to eradicate poverty are discussed below:

04. A.1) Economic liberalization: one of the most important poverty reduction strategies a nation can implement is extending property rights protection to the poor. Securing property rights to land is vital to economic freedom. The World Bank mentioned this as the key to reducing poverty because land rights greatly increase poor people’s wealth, in some cases doubling it. It is estimated that state recognition of the property of the poor would give them assets worth 40 times all the foreign aid since 1945. In China and India, noted reductions in poverty in recent decades have occurred mostly as a result of the abandonment of collective farming in China and the cutting of government red tape in India.

04. A.2) Capital, Infrastructure and Technology: Long run economic growth per person is achieved through increases in capital, both human and physical, and technology. Improving human capital, in the form of health, is needed for economic growth. Nations do not necessarily need wealth to gain health. For example, Sri Lanka had a maternal mortality rate of 2% in the 1930s, higher than any nation today. However, it was spending less each year on maternal health because it learned what worked and what did not. Knowledge on the cost effectiveness of healthcare interventions can be elusive but educational measures to disseminate what works are available, such as the disease control priorities project. Promoting hand washing is one of the most cost effective health intervention and can cut deaths from the major childhood diseases of diarrhea and pneumonia by half.

Human capital, in the form of education, is an even more important determinant of economic growth than physical capital. Deworming
children costs about 50 cents per child per year and reduces non-attendance from anemia, illness and malnutrition and is only a twenty-fifth as expensive to increase school attendance as by constructing schools.

UN economists argue that good infrastructure, such as roads and information networks, helps market reforms to work. China claims it is investing in railways, roads, ports and rural telephones in African countries as part of its formula for economic development. It was the technology of the steam engine that originally began the dramatic decreases in poverty levels. Cell phone technology brings the market to poor or rural sections. With necessary information, remote farmers can produce specific crops to sell to the buyers that bring the best price. Such technology also helps bring economic freedom by making financial services accessible to the poor. Those in poverty place overwhelming importance on having a safe place to save money, much more so than receiving loans.

Also, a large part of microfinance loans are spent on products that would usually be paid by a checking or savings account. Mobile banking addresses the problem of the heavy regulation and costly maintenance of saving accounts. Mobile financial services in the developing world, ahead of the developed world in this respect, could be worth US$5 billion by 2012. Safaricom’s M-Pesa launched one of the first systems where a network of agents of mostly shopkeepers, instead of bank branches, would take deposits in cash and translate these into a virtual account on customers’ phones. Cash transfers can be done between phones and issued back in cash with a small commission, making remittances safer.

04. A.3) Employment and Productivity: Economic growth has the indirect potential to alleviate poverty, because of simultaneous increases in employment opportunities and labor productivity. A study by researchers at the Overseas Development Institute (ODI) of 24 countries that experienced growth found that in 18 cases, poverty was alleviated. The ODI study showed that other sectors were just as important in reducing unemployment, as manufacturing. The services sector is most effective at translating productivity growth into employment growth. Agriculture provides a safety net for jobs and economic buffer when other sectors are struggling.
04. A.4) Using mix of different approaches for poverty eradication: A 2012 World Bank research article, “A Comparative Perspective on Poverty Reduction in Brazil, China, and India,” looked at the three nations’ strategies and their relative challenges and successes. During their reform periods, all three have reduced their poverty rates, but through a different mix of approaches. The report used a common poverty line of US$1.29 per person, per day, at purchasing parity power for consumption in 2008. Using that metric and evaluating the period between 1981 and 2005, the poverty rate in China dropped from 84% to 18%; India from 80% to 42%; and Brazil from 17% to 8%.

04. A.5) Welfare Aid to eradicate poverty: Aid in its simplest form is a basic income grant, a form of social security periodically providing citizens with money. In pilot projects in Namibia, where such a program pays just $13 a month, people were able to pay tuition fees, raising the proportion of children going to school by 92%, child malnutrition rates fell from 42% to 10% and economic activity grew 10%.

Aid could also be rewarded based on doing certain requirements. Conditional Cash Transfers, widely credited as a successful anti-poverty program, is based on actions such as enrolling children in school or receiving vaccinations. In Mexico, for example, the country with the largest such program, dropout rates of 16- to 19-year-olds in rural area dropped by 20% and children gained half an inch in height. Initial fears that the program would encourage families to stay at home rather than work to collect benefits have proven to be unfounded. Instead, there is less excuse for neglectful behavior as, for example, children are prevented from begging on the streets instead of going to school because it could result in suspension from the program.

Welfare states have an effect on poverty reduction. Currently modern, expansive welfare states that ensure economic opportunity, independence and security in a near universal manner are still the exclusive domain of the developed nations that commonly constitute at least 20% of GDP, with the largest Scandinavian welfare states constituting over 40% of GDP. These modern welfare states, which largely arose in the late 19th and early 20th centuries, seeing their greatest expansion in the mid-20th century, and have proven themselves highly effective in reducing relative as well as absolute poverty in all analyzed high-income OECD countries.
04. A.6) **Good Institutions:** Efficient institutions that are not corrupt and obey the rule of law make and enforce good laws that provide security to property and businesses. Efficient and fair governments would work to invest in the long-term interests of the nation rather than plunder resources through corruption. The United Nations Development Program published a report in April, 2000 which focused on good governance in poor countries as a key to economic development and overcoming the selfish interests of wealthy elites often behind state actions in developing nations. The report concludes that “Without good governance, reliance on trickle-down economic development and a host of other strategies will not work.” Examples of good governance leading to economic development and poverty reduction include Thailand, Taiwan, Malaysia, South Korea, and Vietnam, which tend to have a strong government, called a hard state or development state. These “hard states” have the will and authority to create and maintain policies that lead to long-term development that helps all their citizens, not just the wealthy. Multinational corporations are regulated so that they follow reasonable standards for pay and labor conditions, pay reasonable taxes to help develop the country, and keep some of the profits in the country, reinvesting them to provide further development.

04. A.7) **Women Empowerment and Gender Equality:** The empowerment of women has relatively recently become a significant area of discussion with respect to development and economics. However, it is often regarded as a topic that only addresses and primarily deals with gender inequality. Because women and men experience poverty differently, they hold dissimilar poverty reduction priorities and are affected differently by development interventions and poverty reduction strategies.

In response to the socialized phenomenon known as the feminization of poverty, policies aimed to reduce poverty have begun to address poor women separately from poor men. In addition to engendering poverty and poverty interventions, a correlation between greater gender equality and greater poverty reduction and economic growth has been illustrated by research through the World Bank, suggesting that promoting gender equality through empowerment of women is a qualitatively significant poverty reduction strategy.
Addressing gender equality and empowering women are necessary steps in overcoming poverty and furthering development as supported by the human development and capabilities approach and the Millennium Development Goals. Disparities in the areas of education, mortality rates, health and other social and economic indicators impose large costs on well-being and health of the poor, which diminishes productivity and the potential to reduce poverty. The limited opportunities of women in most societies restrict their aptitude to improve economic conditions and access services to enhance their well-being.

Other Approaches

a. Another approach that has been proposed for alleviating poverty is Fair Trade which advocates the payment of an above market price as well as social and environmental standards in areas related to the production of goods. The efficacy of this approach to poverty reduction is controversial.

b. Community and monetary economist Thomas H. Greco, Jr. has argued that the mainstream global economy with its debt-based currency has built-in structural incentives that create poverty through keeping money scarce. Greco points to the success of modern barter clubs and historical local currencies such as the Wörgl Experiment at revitalizing stagnant local economies, and calls for the creation of community currency as a means to reduce or eliminate poverty.

c. The Toronto Dollar is an example of a local currency oriented towards reducing poverty. Toronto Dollars are sold and redeemed in such a way that raise funds, which are then given as grants to local charities, primarily ones, oriented towards reducing poverty. Toronto Dollars also provide a means to create an incentive for welfare recipients to work: Toronto dollars can be given as gifts to welfare recipients who perform volunteer work for charitable and non-profit organizations, and these gifts do not affect welfare benefits.

d. Some have argued for radical economic change in the system. There are several fundamental proposals for restructuring existing economic relations, and many of their supporters argue that their ideas would reduce or even eliminate poverty entirely if they were implemented. Such proposals have been put forward by both left-wing and right-wing
groups: socialism, communism, anarchism, libertarianism, binary economics and participatory economics, among others.

e. Inequality can be reduced by progressive tax.

f. In law, there has been a move to establish the absence of poverty as a human right.

g. The IMF and member countries have produced Poverty Reduction Strategy Papers (PRSPs).

h. In his book “The End of Poverty”, a prominent economist named Jeffrey Sachs laid out a plan to eradicate global poverty by the year 2025. Following his recommendations, international organizations such as the Global Solidarity Network are working to help eradicate poverty worldwide with intervention in the areas of housing, food, education, basic health, agricultural inputs, safe drinking water, transportation and communications.

i. The Poor People’s Economic Human Rights Campaign is an organization in the United States working to secure freedom from poverty for all by organizing the poor themselves. The Campaign believes that a human rights framework, based on the value of inherent dignity and worth of all persons, offers the best means by which to organize for a political solution to poverty.

j. Also one approach to reduce poverty was with Norplant, a form of birth control, which was approved in the United States on December 10, 1990. Norplant prevents pregnancy for up to five years by gradually releasing a low dose of the hormone into the blood stream. In an article in the Philadelphia Inquirer entitled “Poverty and Norplant: Can Contraception Reduce the Underclass?”, deputy editorial-page editor Donald Kimelman proposed Norplant as a solution to inner-city poverty, arguing that “the main reason black children are living in poverty is that people having the most children are the ones least capable of supporting them. Kimelman claimed in his article “it’s very tough to undo the damage of being born into a dysfunctional family. So why not make a major effort to reduce the number of children, of any race, born into such circumstances?”According to Dorothy Roberts book “Killing the Black Body: Race, Reproduction, and the Meaning of Liberty”, within two years of Norplant being approved thirteen state legislatures had proposed some twenty measures to implant poor women with Norplant.
and a number of these bills would pressure women on welfare to use the device either by requiring implantation as a condition of receiving benefits or by offering them a financial bonus. Every state made Norplant available to women for free through Medicaid or other forms of public assistance and to teenage girls through school programs that presented Norplant as the most reasonable option. Efforts were also made to provide Norplant to women without Medicaid. As Roberts stated, “California governor Pete Wilson allocated an extra US$5 million to reimburse state-funded clinics for Norplant going to women without Medicaid or Medical coverage.”

04. B. Criticism of the strategies

The strategies mentioned above definitely played significant role in poverty eradication. But the results were not pleasant every time. Sometimes, the outcomes of these exposed them under question. This will be clear in the discussion below:

04.B.1) Economic liberalizations sometimes provide negative impacts. Some examples are given below:

a. New enterprises and foreign investment can be driven away by the results of inefficient institutions, corruption, the weak rule of law and excessive bureaucratic burdens. The result varies economy to economy. For example - it takes two days, two bureaucratic procedures and US$280 to open a business in Canada while an entrepreneur in Bolivia must pay US$2,696 in fees, wait 82 business days, and go through 20 procedures to do the same. Such costly barriers favor big firms at the expense of small enterprises where most jobs are created. In India before economic reforms, businesses had to bribe government officials even for routine activities, which was in effect a tax on business. 3

b. However, ending government sponsorship of social programs is sometimes known as a free market principle with tragic consequences. For example, the World Bank presses poor nations to eliminate subsidies for fertilizer that many farmers cannot afford at market prices. The reconfiguration of public financing in former Soviet states during their transition to a market economy called for reduced spending on health and education, sharply increasing poverty.

c. Trade liberalization increases total surplus of trading nations. Remittances sent to poor countries, such as Bangladesh or India, are
sometimes larger than foreign direct investment. However, trade rules are often unfair as they block access to richer nations’ markets and ban poorer nations from supporting their industries. Processed products from poorer nations, in contrast to raw materials, get vastly higher tariffs at richer nations’ ports.

d. A University of Toronto study found the dropping of duty charges on thousands of products from African nations because of the African Growth and Opportunity Act was directly responsible for a “surprisingly large” increase in imports from Africa. Deals can sometimes be negotiated to favor the developing country such as in China, where laws compel foreign multinationals to train their future Chinese competitors in strategic industries and render themselves redundant in the long term. In Thailand, the 51% rule compels multinational corporations starting operations in Thailand give 51% control to a Thai company in a joint venture.

04. B.2. Employment is no guarantee of escaping poverty, the International Labour Organisation (ILO) estimates that as many as 40% of workers are poor, not earning enough to keep their families above the $2 a day poverty line. For instance, in India most of the chronically poor are wage earners in formal employment, because their jobs are insecure and low paid and offer no chance to accumulate wealth to avoid risks. This appears to be the result of a negative relationship between employment creation and increased productivity, when a simultaneous positive increase is required to reduce poverty. According to the UNRISD, increasing labour productivity appears to have a negative impact on job creation: in the 1960s, a 1% increase in output per worker was associated with a reduction in employment growth of 0.07%, by the first decade of this century the same productivity increase implies reduced employment growth by 0.54%. Increases in employment without increases in productivity leads to a rise in the number of “working poor”, which is why some experts are now promoting the creation of “quality” and not “quantity” in labour market policies. This approach does highlight how higher productivity has helped reduce poverty in East Asia, but the negative impact is beginning to show. In Viet Nam, for example, employment growth has slowed while productivity growth has continued. Furthermore, productivity increases do not always lead to increased wages, as can be seen in the US, where the gap between productivity and wages has been rising since the 1980s. The ODI study
suggests a more nuanced understanding of economic growth and quality of life and poverty alleviation.

04. B.3. The WB report on poverty eradication of China, Brazil and India sketches an overall scorecard of the countries on the two basic dimensions of pro-poor growth and pro-poor policy intervention: China clearly scores well on the pro-poor growth side of the card, but neither Brazil nor India do; in Brazil’s case for lack of growth and in India’s case for lack of poverty-reducing growth. Brazil scores well on the social policies side, but China and India do not; in China’s case progress has been slow in implementing new social policies more relevant to the new market economy (despite historical advantages in this area, inherited from the past regime) and in India’s case the bigger problems are the extent of capture of the many existing policies by non-poor groups and the weak capabilities of the state for delivering better basic public services.

04. B.4. A major proportion of aid from donor nations is ‘tied’, mandating that a receiving nation buy products originating only from the donor country. This can be harmful economically. For example, Eritrea is forced to spend aid money on foreign goods and services to build a network of railways even though it is cheaper to use local expertise and resources. Money from the United States to fight AIDS requires it be spent on U.S brand name drugs that can cost up to $15,000 a year compared to $350 a year for generics from other countries. Only Norway, Denmark, Netherlands and Britain have stopped tying their aid. Some people disagree with aid when looking at where the development aid money from NGO’s and other funding is going. Funding tends to be used in a selective manner where the highest ranked health problem is the only thing treated, rather than funding basic health care development.

Funds from aid and natural resources are often diverted into private hands and then sent to banks overseas because of graft. If Western banks rejected stolen money, says a report by Global Witness, ordinary people would benefit “in a way that aid flows will never achieve”. The report asked for more regulation of banks as they have proved capable of stanching the flow of funds linked to terrorism, money laundering or tax evasion.

04. B.5. The increase in extreme weather events, linked to climate change, and resulting disasters is expected to continue. Disasters are a major cause
of impoverishment and can reverse progress towards poverty reduction. It is predicted that by 2030, 325 million (plus) extremely poor people will be living in the 49 most hazard prone countries. Most of these are located in South Asia and Sub-Saharan Africa. A researcher at a leading global think-tank, the Overseas Development Institute, suggests that far more effort should be done to better coordinate and integrate poverty reduction strategies with climate change adaptation. The two issues are argued to be currently only dealt with in parallel as most poverty reduction strategy papers ignore climate change adaptation altogether, while National Adaptation Programs of Action (NAPAs) likewise do not deal directly with poverty reduction. Adaptation-poverty linkages were found to be strongest in NAPAs from sub-Saharan Africa LDCs.

Even after considering the odd results, the positive outcomes of these strategies still hold the claims of their role in poverty eradication. They were the better alternatives showing the pathway for far better ones.

5.0 Poverty Situation in Bangladesh

In spite of problems such as poor infrastructure, political instability, corruption, and insufficient power supplies, our economy has grown 5-6% per year since 1996. With time, our economy has the momentum and according to the IMF, Bangladesh’s economy is the second fastest growing major economy of 2016, with a rate of 7.1%. Considering GDP, Bangladesh is the world’s 44th country. To the world, we have been known as poor country, even though the situation is on a rising mood, presently. Main causes of poverty in our country are:

- Widespread corruption and inadequate efforts from relevant authorities do little to build infrastructure and good law, which causes poverty.
- Geographical and demographic characteristics of Bangladesh also are responsible for poverty in this country. With 80% of the country situated on the flood plains of the Ganges, Brahmaputra, Meghna and those of several other minor rivers, the country is prone to severe flooding. Therefore, a large proportion of the country is low-lying, and thus is at a high risk to flooding which cause huge damage to their crops, homes and livelihoods. On average, 16% of household income per year is lost due to flooding, with roughly 89% of the loss in property and assets. They often have to resort to moneylenders, and that causes them to fall deeper into poverty. Flooding also leads to these natural disasters (cholera, dengue,
malaria, etc.) outbreak, which affects them physically and lower their productivity levels.

- Poverty in rural areas of our country occurs due to the fast-growing population rate, which places huge pressure on the environment, causing problems such as erosion and flooding, which in turn leads to low agricultural productivity. Urban poverty takes place due to the limited employment opportunities, degraded environment, and bad housing and sanitation. The urban poor hold jobs that are labor demanding, thus affecting their health conditions.

The following graph shows how sharing of poverty in Bangladesh compares to rest of South Asia11:

![Graph showing the percentage of poverty in different countries.](image)

Education has an important contribution to the social and economic development of a country. Poverty, in particular, has strong link with education and employment. Research papers published by the Bangladesh Institute of Development Studies (BIDS) have shown that poverty acts as both a cause and effect of a lack of education and have adverse relation with employment opportunities. We have an unskilled workforce that decreases the productivity of the workforce significantly, which hinder sustainable economic growth. However,

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the situation is somewhat better now because ADB study shows 56.6% of the population aged 15 years and above is employed in Bangladesh.

On the other hand, rising landlessness has been another consequence of poverty in Bangladesh. Ours is a highly densely populated country that experience strong pressures on land. The inequality of land ownership and the lack of production factors affect food security and food sovereignty. In rural areas, 89% of landowners have less than one ha in their possession and 39% has less than 0.2 ha. Many of the rural poor in Bangladesh are either landless, have only small plots of land, or are depending on tenancy, or sharecropping. High tenure insecurity due to out-dated and unfair laws and policies results in increasing conflicts over land rights and wide spread land grabbing. The growing rural inequalities and instability also generate migration to towns, increasing the rates of urban poverty.12

Moreover, issues such as food security and health hamper social mobility for the chronic poor. According to a study done by the World Bank on Dhaka, the poor suffers from a lack of proper healthcare in their areas due to the expensive and poor quality health care services. The poverty-stricken areas either face unavailability of facilities, or can only afford low quality healthcare. The problem has worsened for the urban poor as they can only afford to stay in slums, which have overcrowding problem along with unhygienic living conditions. These two factors results in the spread of diseases amongst the poor whom cannot afford better healthcare. Thus, poverty matters as it affects the social welfare of citizens.

A study CIDA showed that The Gross National Income (GNI) per capita measured in 2008 prices is a staggering low of US$520 while GNI Purchasing Power Parity per capita is US $1440.13 Even though the poverty rate in Bangladesh has been decreasing, it is doing so at a slow rate of less than 2% per year, 49% of the population still remains below the poverty line.14 Poverty matters because it affects many factors of growth – education, population growth rates, health of the workforce and public policy. Poverty is most concentrated in the rural areas of Bangladesh, hence creating disparities between the rural and urban areas. In April 2016, as estimated by the Asian Development Bank, 31.5% of the 157.90 million

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people living in Bangladesh live below the national poverty line. The last information shows a good sign, no doubt.

6.0 What Bangladesh have Done for Poverty Eradication

By 2021, the 50th anniversary of its independence, Bangladesh has set an ambitious goal to become a middle-income country. Equally important to achieving the coveted middle income status is pushing towards the accelerated growth required to achieve this goal, particularly the poverty eradication. Vision 2021 and the associated Perspective Plan 2010-2021 of the Government of Bangladesh demand a series of development targets that must be achieved if Bangladesh wants to transform itself to a middle-income country. Among the core targets, attaining a poverty head-count rate of 14% by 2021 is one. Assuming population growth continues to decline at the same rate as during the 2000-2010 period, achieving this poverty target implies lifting approximately 15 million people out of poverty in the next 8 years. A simple continuation of the policies and programs that have proven successful in delivering steady growth and poverty reduction in the past decade will not be sufficient to achieve the poverty target set for 2021.

Over the 2000 to 2010 decade, Bangladesh experienced steady and strong GDP growth, averaging 6% per year. During the same period, poverty rates have also demonstrated steady improvement, with an average decline of 1.7% per year. Although not quite as rapid as the remarkable 2.5% per year decline that China experienced during this period, Bangladesh’s rate of poverty reduction was nevertheless almost twice as fast as that experienced by the rest of the world. Between 1999 and 2008, the poverty headcount rate in India and the rest of the developing world, excluding China, fell by an estimated 0.9% points per year. The number of poor in Bangladesh has substantially declined over this period from nearly 63 million in 2000 to 47 million in 2010 – a reduction of 26%. An extraordinary feature of this poverty reduction experience is that the real per capita consumption increased proportionally across all income groups thereby keeping inequality stable.

This impressive trend in poverty reduction has helped Bangladesh achieve

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16 Three steps to reduce poverty in Bangladesh; Dean Jolliffe is a Senior Economist in the Development Research Group of the World Bank. Iffath Sharif is the Program Leader for Social Inclusion for the Bangladesh, Bhutan and Nepal country work programs.
the Millennium Development Goal (MDG) on poverty two years ahead of schedule. The MDG stipulates that the proportion of people living in poverty that prevailed in 1990 (57%) must be reduced by at least one-half by the year 2015. Under all realistic growth scenarios, the 2015 poverty headcount for Bangladesh will fall well below the MDG target of 28.5%. Even under a pessimistic scenario of 3.8% GDP growth rate per annum, the poverty headcount projection will still surpass the MDG target by two percentage points. The same poverty projections show that attaining the Vision 2021 poverty target of 14%. However, required growth of Bangladesh’s GDP is at least at 8% per annum, in this case. Achieving a growth rate which is at least 2% points higher than that observed in recent years requires raising the bar on Government’s current modus operandi. Prudent macroeconomic management and unleashing growth in three areas – exports, remittances and public investment – are expected to help shift the 6% average growth trajectory to that of 8%. But to meet the poverty goals, the poor must share in this growth. Fortuitously for Bangladesh, interventions to help increase the growth rate can also maintain the pace of poverty reduction.

Millennium Development Goals (MDGs) have been included in UN Millennium Declaration to ensure sustainable growth and economic sustainability as a part of it. Bangladesh embedded Millennium Development Goals in its developmental agenda be it Poverty Reduction Strategy Papers or Five Year Plans (FYPs). Since the terminal year of MDGs and 6th FYP coincides, implementing one, ultimately paves the way for implementing the other, as both are strategically well tuned. The pro-poor and inclusive growth strategy has paid off, reducing both absolute and extreme poverty while empowering the poor.17 As per the report, Bangladesh has made commendable progress in respect of eradication of poverty and hunger. The sustained growth rate in excess of 6% achieved in recent years has played positive role in eradicating poverty. The robust growth has been accompanied by corresponding improvements in several social indicators such as increased life expectancy and lower fertility rate. The inclusive growth has resulted in significant poverty reduction from 56.7% in 1991-92 to 31.5%. The latest HIES 2010 data show that the incidence of poverty has declined, on an average, 1.74% in Bangladesh during 2000 to 2010 against the MDG target of declining 1.20% is in each year. The estimated poverty headcount ratio for 2015 is 24.8%. Bangladesh has already met one of the indicators of target-1 by bringing down the poverty gap ratio to 6.5, against the MDG target of 8.0 in 2015. Since the trend of

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sustained GDP growth over 6% is continuing, the MDG target of halving the population living under the poverty line (from 56.7% to 29%) has already been achieved by 2012.\textsuperscript{18}

Unemployment as well as underemployment is still persistent especially among the young people between 15 to 24 years of age. This age group comprises nearly 8.5% of the country’s total population and 22% of the total labor force. Moreover, while Bangladesh has demonstrated its capacity for achieving the goal of poverty reduction within the target timeframe, attaining food security and nutritional wellbeing for a populous country like Bangladesh still remains as a challenge. The challenges with regard to reducing income inequality and the low economic participation of women also remain as matter of concerns. The proportion of the population below the national poverty line (2,122 kcal/day) is a proxy indicator under this target because of non-availability of data on those who earn $1 (PPP) per day in Bangladesh. The Household Income and Expenditure Survey (HIES) of Bangladesh Bureau of Statistics (BBS) has been providing data on the incidence of poverty by using the Cost of Basic Needs (CBN) method only. The proportion of population below $1.25 (PPP) per day is shown in Figure below based on information from the World Bank.

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{poverty_graph.png}
\caption{Head Count Ratio following $1.25 (PPP).}
\end{figure}

It is observed that the head count ratio has reduced, on an average, at 1.49 percentage points per year during 1992 to 2010 period as against the required rate of 1.53 percentage points. Thus it can be seen that poverty has been consistently declining in Bangladesh by almost similar rates when poverty is measured by national poverty line using $1.25 PPP per day although the levels vary due to absolute differences in the poverty line measures.

Bangladesh has been successful in achieving significant reduction in poverty since 1990. This is shown in Figure below.

\textsuperscript{18} Millennium Development Goals : Bangladesh Progress Report 2015.
National poverty headcount ratio declined from 56.7 percent in 1991-92 to 31.5% in 2010. A notable feature of poverty reduction between 2005 and 2010 was a significant decline in the incidence of extreme poverty. The percentage of population under the lower poverty line, the threshold for extreme poverty, decreased by 29.6% (or by 7.4%), from 25% of the population in 2005 to 17.6% in 2010. The incidence of extreme poverty declined by 47% in urban areas and 26% in rural areas. The decline in headcount ratio was greater than population growth during 2005-2010 period which led to a decline in the absolute number of the poor people. The size of the population below the upper poverty and the lower poverty lines declined by nearly 8.58 million and 8.61 million respectively during the period. The level and distribution of consumption among the poor improved as well, as is evident from reductions in the poverty gap and squared poverty gap measures by 28% and 31% respectively. Real per capita consumption expenditure during the 2005-2010 period increased at an average annual rate of 16.9%, with a higher rate of increase in rural areas as compared with the urban areas. This shows that the economic conditions and incomes of the rural people, especially the poor, have improved significantly as a result of the pro-poor and pro-rural policies of the government.

To ensure implementation of SDGs, which emphasize significantly on poverty eradication, government has already formed a committee. This committee is working to fix-up the responsibilities at different relevant authorities/agencies as well as to set a scale to measure the implementation of SDGs. The last budget considered the development of the poor of the poorest (including the retarded/disables, Dalits, cleaners, tea labors, residents of haor areas, beggars, hijras, etc.; of about 6.5 million in number). Moreover, government has introduced a program to provide rice at a price of Tk. 10 to 5 million poor peoples, which is an important steps for eradicating poverty.

In June 2013, Bangladesh received the ‘Diploma Award’ from Food and Agriculture Organization (FAO) for achieving the MDG-1 target of halving the
poverty well ahead of the deadline set by the world community. Besides this, Bangladesh was honored with the ‘special recognition’ for their outstanding progress in fighting hunger and poverty. In September 2013, Hon’ble Prime Minister was awarded with ‘South-South Award’ for her Government’s achievements in alleviating poverty. She was awarded ‘UNESCO Peace Tree Award’ in 2014 for her commitment to women’s empowerment and girls’ education. Bangladesh MDGs Progress Report 2015 shows that Bangladesh has already met most important targets of MDGs like reducing Poverty Gap Ratio. However, while Bangladesh has demonstrated its capacity for achieving the goal of poverty reduction within the target timeframe the challenges with regard to reducing income inequality and the low economic participation of women also remain as matter of concerns. If we fail in this case, then achievement so far will turn into nothing.

7.0 Role of Ethics in Poverty Eradication

Poverty eradication was among the other main themes of speech for declaration of independence, made by the father of the nation, on 07 March 1971. Afterwards, consequently, it has been a priority in Bangladesh’s development plans and programs since 1972 because poverty is one of the biggest problems facing our society today. Though a lot of organizations; including NGOs, MNCs, banks, insurances, regional & international organization and government; are engaged to accelerate poverty reduction in Bangladesh. Some of them try to gear up it through performing the Corporate Social Responsibility (CSR).

Corporate Social Responsibility is the commitment of businesses to behave ethically and to contribute to sustainable economic development by working with all relevant stakeholders to improve their lives in ways that are good for business, the sustainable development agenda, and society at large (World Bank, 2001). Kolodner (1994) suggested that the private sector through their CSR programs can sufficiently impact whole nations in reducing poverty. A case study Poverty eradication through the corporate social responsibility (CSR) initiatives\textsuperscript{19} shows that some organizations try to gear up it through performing the CSR. Question has been raised about whether the CSR agenda can be extended to incorporate poverty reduction as a key element, along with labor rights and environmental protection. The issues raised in this regard are i) CSR prioritizes the business which is difficult to be related with poverty reduction, ii) there is some debate on

\textsuperscript{19} Poverty eradication through the corporate social responsibility (CSR) initiatives: A case study on two selected banks in Bangladesh; Md. Kamrujjaman and Jakia Akter Nisa; International Journal of Applied Research 2016; 2(9): 43-50
to suppose that a positive relation will exist between company actions to reduce poverty, iii) limitation lies in the origins of the current CSR movement as a response to criticism of the environmental and social impacts of the organization, etc.

Allegations have been raised regarding programs introduced by governments, which is a hindering factor for proper implementation of projects related to poverty eradication. But strict steps are being taken to prevent unethical activities. Recent militant activities in our country have been another worrying factor, which is being dealt strictly by the law enforcing agencies.

A number of multidimensional poverty measures have recently been proposed, within counting approach framework, respecting the ordinal nature of dimensions. Besides ensuring a reduction in poverty, however, it is important to monitor distributional changes to ensure that poverty reduction has been inclusive in reaching the poorest. Distributional issues are typically captured by adjusting a poverty measure to be sensitive to inequality among the poor. This approach however has certain practical limitations. It conflicts, for example, with some policy-relevant measurement features, such as the ability to decompose a measure into dimensions post-identification, and does not create an appropriate framework for assessing disparity in poverty across population subgroups.20

8.0 Comments and Recommendations

For many years the World Bank, donor nations, various aid agencies, national governments and civil organizations have fought to eradicate poverty, but the result is discouraging. However, positive sign related to poverty eradication is that human wellbeing on global and national scales is improving. But it is important to monitor the regional progress of human wellbeing and Millennium Development Goals (MDGs) to ensure poverty eradication. An assessment of Bangladesh by analyzing Household Expenditure Survey (HIES) and Demographic Health Survey (DHS) data from 1995 to 2010, performed considering indicators selected based on the five dimensions including health, material condition, personal security and freedom of choice and actions shows that we have achieved substantial progress for ‘poverty alleviation’ (17%) and ‘education’ (23%). Incomes from fishery and ‘non-ecosystem’ based livelihood have increased 76% and 8% respectively, whereas income from shrimp and agriculture show declining trends. Production costs have increased substantially

since 1995 in response to a rise in GDP. At a household level, proxy indicators of provisioning services, such as crop production, are positively correlated with poverty alleviation. Overall, greater attention on education and sustainable land use is required if Sustainable Development Goals (SDGs) are to be achieved by 2030.

The market-based economy of Bangladesh is the 44th largest in the world in nominal terms, as mentioned earlier, and 32nd largest by purchasing power parity; it is classified among the next 11 emerging market economies and a frontier market. According to the IMF, Bangladesh’s economy is the second fastest growing major economy of 2016, with a growth rate of 7.1%. Since 2004, Bangladesh averaged a GDP growth of 6.5%. In 2016, per-capita income was estimated as per IMF data at US$3,840 (PPP) and US$1466 (Nominal). Bangladesh will need to maintain growth in income, which continues to be one of the two key drivers of poverty reduction.

- We would like to place for consideration of appropriate relevant authorities:
  - MDG has expired on 31 December 2015 and SDG has started from 01 January 2016. MDGs were for developing countries and LDCs, but all the countries are included in SDGs. As achievement against MDGs was significant, poverty has been reduced markedly in the world. SDGs have commitment to eradicate poverty by 2030. Bangladesh is among the 17-18 countries which showed significant progress regarding poverty eradication in MDG era. To ensure continuation of this success in case of SDGs, a combined effort is required from the state-top level to local level.
  - Emphasizing dependence on own sources is a must for poverty eradication. Moreover, acceleration in investment is also important to ensure growth and thus to eradicate poverty. In addition, we have to ensure the prevention of negative unethical factors like corruption and militant activity.
  - CSR agenda can be extended to incorporate poverty reduction. CSR in Bangladesh can also contribute a lot to community development. The corporate house can develop the community by creating employment, providing primary education, contribution to infrastructure development like road and high-ways and addressing environmental concerns. This is more relevant for a country like Bangladesh where the government interventions in these fields being augmented by corporate alliance can go a long way in developing the economy, society and environment. CSR can be considered as a long time investment in Poverty eradication. In the
In the context of Bangladesh, it is more relevant for the export-oriented industry. For example, a percentage of the revenue of the corporation can be spent for activities related to poverty eradication. OT analysis

- Empowered women can be a striking force against poverty and can help us to eradicate it. In order to end poverty, we must empower women to transform their lives. This can be done through business training and mentoring. Women need confidence and business skills to successfully move out of poverty. Women entrepreneurship - allows women to solve their own problems; creates dignity, ownership and self-sufficiency; creates lasting opportunities for women to lift their families out of poverty. This will increase women’s income, which will play a significant role in poverty eradication.

- To maintain growth in income, one of the key drivers of poverty reduction, Bangladesh will require public investments to help increase agricultural productivity and to promote growth in the demand for salaried work in manufacturing and services. Immediate investments in improving transport, power and gas, supporting entrepreneurship by reducing the transaction costs of doing business, and strengthening the transparency and accountability of both the public and private sectors are critically important for this.

- Bangladesh should have a more aggressive approach to the skills development of its growing youth population to fully harness the “demographic opportunity” resulting from the falling fertility rates, another key driver of poverty reduction. Linking this labor, the majority of which is in the informal economy, to productive employment in both domestic and global labor markets will help with both poverty reduction and increase the flow of remittances.

- Bangladesh can make better use of its vast social safety net expenditures through improvements in program designed to emphasize human capital accumulation and productive employment.
References

Poverty Eradication and Ethics
Relational Study on Service Quality, Customer Behavioral Intention and Customer Loyalty:
A Study on Grameen Bank

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Abstract: This research tries to investigate the relationship between banks’ overall service quality and customer behavioral intention (word-of-mouth) as well as customer loyalty within the context of Grameen Bank of Bangladesh. Here, banks’ overall service quality (reliability, responsiveness, assurance, empathy, tangibles) is considered as the independent variable and customer behavioral intention as well as customer loyalty are considered as dependent variables. The survey administered 102 questionnaires given to clients of Grameen Bank, Aukpara Branch, Savar, Dhaka. The SPSS version 16 software was employed in this study for data analysis. Correlation analysis and stepwise regression analysis were performed to assess the hypothesis. The correlation analysis produced precise support to prove almost all the hypotheses but the stepwise regression provided partial support to the hypothesis. After successfully analyzing the gathered information, it was found that the measured independent variable (i.e., overall service quality,) was statistically correlated with bank’s customer behavioral intention as well as customer loyalty.

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1. Introduction

Despite many fundamental banking reformations, domestic banks are lagging behind foreign commercial banks of capitalization, overseas network, modern management expertise, experience, technological advancement, etc. That result in the relative weakness in service quality and product quality as delivered to customers by domestic banks. So there is a competition between domestic and foreign banks with special reference to customer services. The domestic banks management are now strictly focusing on improved service quality and product quality to build positive reputation for increasing profits. Because reputation plays an important strategic role in service markets since the pre-purchase evaluation of service quality is increasingly vague, and incomplete.

According to Parasuraman et al. (1988), service quality has become a significant differentiator and the most powerful competitive weapon, which many leading service organizations possess.

The results of the initial published application of the service quality indicated that five dimensions of service quality emerged across a variety of services which include tangibles, reliability, responsiveness, assurance, and empathy (Carman, 1990; Parasuraman et al. 1985, 1988; Parasuraman et al. 1991). In a market which becomes increasingly competitive, service quality as a critical measure of organizational performance continues to compel the attention of banking institutions and remains at the forefront of services marketing literature and practice.

The dimensions of service quality introduced by Parasuraman, op.cit. (1988) form the basis of the majority of studies related to assurance on service quality and also combines assurance with the other four dimensions, reliability, responsiveness, empathy and tangibles. Research conducted in the domain of financial services lends credit to this observation and shows that favorable perceptions of service quality lead to positive word-of-mouth (WOM), lessening of complaint tendencies and continuity in employee-customer relationships (Cadotte, & Turgeon,1988;).

In the pre-purchase stage, as a risk reducing strategy, consumers seek product information by participating in the WOM (word-of-mouth) process services. Positive and negative WOM are examples of exit behaviors exhibited by consumers at the conclusion of a service encounter or usage of a product (Baker, and Lamb, 1993).
According to Carman (1990), positive word-of-mouth is at the root of the service quality. Positive word-of-mouth is often viewed as an effective tool for management, but there are ways to help maximize the impact of positive word-of-mouth on the customers (Singh, 1990).

The relationship between service quality and customer preference loyalty has been examined, among others, by Boulding et al. (1993) and Cronin and Taylor (1992). Cronin and Taylor (1992) focused solely on repurchase intentions, where as Boulding et al. (1993) focused on the elements of repurchasing and willingness to recommend. In the study by Cronin and Taylor, service quality did not appear to have significant (positive) effect on repurchase intention (in contrast to significant positive relation between Loyalty and repurchase intention), while Boulding et al. (1993) found positive relationships between service quality and repurchase intentions and willingness to recommend.

Furthermore, it has been argued that actually responding to dissatisfaction (e.g. complaining directly to the company or complaining to a third party) is negatively related to the level of service quality. Rust and Zahorik (1993) related service quality perceptions to consumer loyalty in banking, Crosby and Stephens (1987) investigated loyalty in the insurance industry and with regard to retailing; customer patronage was investigated in relation to service encounter failures by Kelly et al. (1993).

Business organization’s success is recognized as the dominant factor of the loyalty of the customer/client towards the brand or organization. It is commonly known that customer satisfaction is related to customer loyalty, which in turn is related to profitability (Storbacka et al, 1994). The study will make the following significant contribution in the context of banking industry in Bangladesh.

First, this study will help the researchers to extend their understanding of the relationship between bank’s overall service quality and customer loyalty. The results of this study will expose the importance and impact of their relationship in the banking sector in Bangladesh. Second, the present study will help the bank’s manager to better understand of how to hold loyal clients by satisfying their overall needs, and hold the client’s trust upon the banks which thus results in good profit, and enhances reputation as well.

Third, no such study was conducted earlier to address this concern in the context of Grameen bank in Bangladesh and the study results developed a methodology which can be imitated by other study also. Finally, as the researchers considered only
bank, there is always scope for further study in other service organizations in Bangladesh like hospitals, hotels, telecommunication companies, etc.

2. Research Questions

This study proposed to investigate the following research questions:

1. Is there a significant relationship between service quality (reliability, responsiveness, assurance, empathy and tangibles) and customer behavioral intention (word-of-mouth communication), in the context of Grameen bank?

2. Is there a significant relationship between service quality (reliability, responsiveness, assurance, empathy and tangibles) and customer loyalty, in the context of Grameen bank?

3. Organization of the Paper

In this regard, the paper is organized as: Section 1 highlights the introductory part and this is followed by research questions and literature review as shown in section 2 and 3. This is followed by operational definitions, hypothesis and methodology of the study as shown in section 4, 5 & 6. Section 7 and 8 discusses the results & discussions & assessments of hypotheses of the study. The paper concludes with some policy implications which are shown in section 9.

4. Review of literature related to service quality and customer behavioral intention

Service quality has been defined as customers’ overall impressions of services in terms of relativity that is considered to be beyond the customer expectations. Customers generally evaluate banks’ performance mainly on the process of their interpersonal contacts and interactions (Grönroos, 1990). Service quality arises from a comparison of the difference between service expectations developed before an encounter with banks and the performance perceptions gained from the service delivery based on the service quality dimensions (Bloemer et al., 1998).

Quality of service is essential for customer satisfaction (Cronin and Taylor, 1992; McAlexander et al. 1994), repeat purchases (Schneider and Bowen, 1995) & winning customer loyalty (Zeithaml et al. 1996), and customer retention (Zeithaml et al. 1996). It also affects companies’ market share, and thus profitability (Schneider & Bowen, 1995).
In recent years, Service quality has been the subject of interest by both practitioners and researchers as found in the works of Parasuraman, Zeithaml & Berry, (1985). The important reason for the interest was that it has a beneficial effect on bottom line performance for the organization. Again the issue of service quality is the result of comparison between customer’s expectations of a service and their perception about it (Lewis and Booms, 1983; Lehtinen & Lehtinen, 1982; Gonoroos, 1984; Parasuraman et al. 1985, 1988, 1991, 1994). Lehtinen & Lehtinen (1982) gave a three dimensional view of service quality such as interaction, physical and corporate quality. Traditionally, service quality has been defined as the difference between customer’s expectation of service to be received and perception of service actually received (Gonoroos, 1984; Parasuraman et al. 1988, 1991). Furthermore, Dabholkher et al. (2000) suggested that it is better to consider factors associated with service quality like reliability and responsiveness as being antecedents of customer’s perceptions of service quality as dimension and components of the construct. Wang et. al, (2003) measured service quality by customer perception only through the SERVPERF model which proposed that tangibility, reliability, responsiveness, assurance and empathy of service have a positive impact on customer perception of service quality (Cronin & Taylor, 1992).

Furthermore, service quality is often conceptualized as the difference between customer’s expectation of service to be received and perception of service actually received (Gonoroos, 1984; Parasuraman et al. 1988, 1991). According to Wang, et.al. (2003), quality has been viewed in terms of products attribute as per marketing and economic literature. In the field of operations management, quality is defined as having multiple dimensions such as fitness of use and, reliability i.e., to what extent the product is free from deficiencies.

From the service point of view Parasuraman et al. (1988) defined product quality as an overall assessment where as Garvin (1988) defined product quality which comprises eight attributes such as performance, features, conformance, reliability, durability, serviceability, aesthetics, and customer perceived quality.

4.1 Service Quality Dimensions

Service quality is an achievement in customer service. The SERVQUAL Model is an empiric model by Zeithaml, Parasuraman and Berry to compare service quality performance with customer service quality needs. One of the important issues related to service quality is the dimensions of service quality and the measurement
tool, SERVQUAL developed by Parasuraman et al. (1988) has been the starting point of the controversy in this area. Parasuraman et al. identify five quality dimensions which link specific service characteristics to consumer expectations of quality. These five basic dimensions are Tangible, Reliability, Responsiveness, Assurance and Empathy.

Customer Loyalty basically depends on various factors. Customers will be loyal with the bank when they will get excellent and quality services from employees of bank on a continuous basis. There are different factors that influence customer’s loyalty level. In this research, the researcher has tried to find out customer’s loyalty on five important dimensions of SERVQUAL model.

**Reliability**

Customers store up their wealth towards bank, so it is bank’s responsibility to ensure proper management of that precious wealth. So reliability means capability to perform the promised service consistently and accurately. Employees should always try to serve customer first and at the right time, so that customers can rely on that bank.

**Responsiveness**

Responsiveness is the willingness to help customers and provide prompt service. Keeping customers’ informed about the particular time, when the service will be performed as it is their responsibility. So employees will have to be very proactive and will have to come forward to perform their duty.

**Assurance**

Assurance can be defined as the knowledge and courtesy of employees and their ability to convey trust and confidence among customers. So employees will have to assure that no matter whatever customers are, relationship will always remain constant and flawless as long as they visit the branch and it will help to instill confidence among customers.

**Empathy**

Empathy is the caring, individual attention that a firm provides to its customers. Employees will have to understand customer’s demand and will have to provide service so that every single customer feels himself important and valuable for the bank.
Tangibles

Tangible is the appearance or visibility of a branch. It also includes physical facilities, equipment, appearance, and communication material of an organization is the tangibles. As for example, modern equipment, well-furnished desks or table. Also employees’ dress code and behaviors also generate positive impression to customers.

4.2 Customer Behavioral Intentions

Behavioral intentions are an outcome of the satisfaction process. Customer behavioral intentions consist of five dimensions, word-of-mouth, namely loyalty to company, propensity to switch, willingness to pay more, external response to problem, and internal response to problem. Customer behavioral intentions state that consumer doing behave about the brand, feeling about the service, perception about the service and acceptance of the service. It is essential to know to the degree of customer intentions towards the service to meet their expectations by gathering information company changes its operation by the influence of customer behavioral intentions. Certain consumer behavioral responses provide a strong indication that they are becoming bound to the organization.

4.3 Word of Mouth

Anderson (1986) defines Word-of-mouth communications as informal, person-to-person communication between a perceived noncommercial communicator and a receiver regarding a brand, a product, an organization, or a service. Word of mouth is referred to as product-related conversation, personal recommendations, informal communication, and interpersonal communication. It is also a consumer-dominated channel of information, and the communicator is thought to be independent of the marketer.

In the banking sector, administrators can typically recount examples of customers’ outcomes that result in favorable or unfavorable word of mouth. If the outcomes of the customer are positive, word of mouth will be favorable. But, if the outcomes are negative, word of mouth will be unfavorable. Even though the banking provider may have quality service for his customers, the word of mouth generated from the customers can be extremely significant for the provider’s image. The response of management will often dictate the duration of consumer reaction. As a result, it is perceived as a more reliable, credible, and trustworthy source of information.
4.4 Customer Loyalty

Customer loyalty can be measured as repeat sales, positive feeling about the service, long term choice, better perception about the brand, positive feeling about the brand, recommend to other to receive the service resulting of which the company makes financial gain. Improvements in retention and increasing in the share of the company are the economic benefits to customer loyalty.

4.5 Relationship Between Service Quality and Customer Behavioral Intentions

Service quality is focused on repurchase intentions, and willingness to recommend. If a customer is dissatisfied, he/she will express his feeling negatively. Service quality would make customer loyal because when a customer gets better service, she/he will come to take the service again. When a customer is satisfied to take the service, she/he takes the service again and again. Customer will loyal to the service. Because customers believe that they will get better service from service provider. So there has been seen that between service quality and customer behavioral intentions have significant relationship with them.

4.6 Relationship between Service Quality and Word of Mouth

Word-of-mouth (WOM) is important to consumer specially in service market. Word-of-mouth have significant impact to consumer purchase behavior and loyalty with service. Consumers prefer to rely more on personal source of information for service and they want to know the information from their friends, relative, colleague etc.. Positive and negative WOM are examples of exit behaviors exhibited by consumers at the conclusion of a service encounter or usage of a product. The meaning of WOM suggests that keeping promises to do something by a certain time, telling customers when services will be performed and delivering the services at the promised time. At least two important inferences can be made from a previous result. First, as demonstrated in prior research, service quality is at the root of consumers’ satisfaction and is linked to such behavioral outcomes as WOM, complaint, recommending and switching. Second, however, different aspects of service quality and different consumer characteristics seem to be associated with different outcomes. For instance, the results here suggest that being a female is more closely associated with such behavioral outcomes as positive word of mouth and commitment. In the banking sector, consumers are frequently transacted with bank. This frequently transitions have made a good relation with customer that resulted in favorable word of mouth. Positive WOM
is often viewed as an effective tool for management, but there are ways to help maximize the impact of positive WOM on the customers. Similarly, dissatisfied customers can contribute to poor quality of care.

4.7 Relationship Between Service Quality and Customer Loyalty

The relationship between service quality and customer preference loyalty has been examined, among others, by Boulding et al. (1993) and Cronin and Taylor (1992). Service quality focuses on repurchase intention, willingness to recommend. If customers are dissatisfied, their response will negative. Service quality are made customer loyal. Because when a customer gets better service, he/she will come to take the service again. When a customer is satisfied, she/he will take the service continue. When a customer take the service continue, she/he may be loyal to the brand. Customers believe that they get better service from the brand. so there has been seen that there is a significant relationship among them.

The results of the review revealed that the studies were conducted in different contexts and the present study was conducted more fully on Bangladesh context the results of which would be different from the earlier context which lays the justification of the study.

4. Operational Definitions

Summaries of the operational definitions of the measured variables that have been used are listed in Table 1.

5. Research hypotheses

To give effect to the problem statement and research questions, a number of alternative as well as null hypotheses were formulated stating that relationship exist among variables:

<table>
<thead>
<tr>
<th>Measured Variable</th>
<th>Operational Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank’s overall service quality</td>
<td>Will be operational defined by Gronroos (1984);</td>
</tr>
<tr>
<td>Bank’s overall Product quality</td>
<td>Will be operational defined by Garvin (1988);</td>
</tr>
<tr>
<td>Customer behavioral intention</td>
<td>Will be operational defined by Helm &amp; schle (1998); word of mouth</td>
</tr>
<tr>
<td>Customer loyalty</td>
<td>Will be operational defined by Barker (1993);</td>
</tr>
</tbody>
</table>
Hypothesis 1

**H_0**: There is no relationship between service quality (reliability, responsiveness, assurance, empathy and tangibles) and customer behavioral intention (word-of-mouth communication), in the context of Grameen Bank.

**H_a**: There exists a relationship between service quality (reliability, responsiveness, assurance, empathy and tangibles) and customer behavioral intention (word-of-mouth communication), in the context of Grameen Bank.

Hypothesis 2

**H_0**: There is no relationship between service quality (reliability, responsiveness, assurance, empathy and tangibles) and customer loyalty in the context of Grameen Bank.

**H_a**: There exists a relationship between service quality (reliability, responsiveness, assurance, empathy and tangibles) and customer loyalty in the context of Grameen Bank.

6. Methodology

6.1 Research Design

This study was designed to identify the research questions and to test the hypotheses by conducting a co-relational research. In this study the researchers have investigated the relationship between overall service quality, customer behavioral intention and customer loyalty in the context of Grameen Bank in Bangladesh. According to Cooper & Schindler (2003), the research that studies the relationship between two or more variables is referred to as a co-relational study. That is why a co-relational research design has been adopted in this study in order to detect the appropriate answers of research question and to test the hypotheses. The purpose of this study is to investigate the causal relationship among the measured variables. Here banks’ overall service quality (reliability, responsiveness, assurance, empathy, tangibles) is considered as the independent variable and customer behavioral intention as well as customer loyalty are considered as dependent variables. A co-relational study provides a measure of the degree between two or more variables. Therefore, the present study was characterized as a co-relational study.

6.2 Sampling Method

The sample of this study was chosen from clients who had taken service from
Grameen Bank Aukpara Branch, Savar, Dhaka during the data collection period. The researchers used systematic sampling method to determine the sample size from the population. The sampling frame was the client database of the bank branch. And from this database the researchers collected the name of clients, and from them information was received during the survey period. The list covers all clients under five Centers of the bank branch who transacted micro credit on a regular basis. Out of 510 clients, every five were selected for the study and by using the formula \( K = \frac{N}{n} \) the sample size was found to be 102.

6.3 Data Collection and Analysis

The questionnaire was distributed among the clients through the researchers. There are various reasons behind the selection of this method. First, it allows large amounts of information to be obtained at a relatively low cost. Second, more accurate responses are obtained because interviewer bias is avoided. Finally, the number of non-usable questionnaires was reduced since the personal contracts tend to make respondents more cooperative in completing the question arise. Pearson’s Correlation analysis was used to find out whether any relationship exists between the independent and dependent variables. After collecting the data, correlation matrix for the variables was prepared and the researchers used stepwise regression to test the strength of associations between the study variables. The Statistical Package for Social Science (SPSS) version 16 was employed to analyze the data collected from the survey.

7. The Results and Discussions

7.1 Reliability Coefficient and Descriptive Statistics

The researchers computed the reliability coefficients, means and standard deviations which are displayed in Table 2. According to the suggestion of Nunnally (1978), a reliability of 0.50-0.60 is sufficient for any research. The reliabilities found in this study are above the standard set of 0.50-0.60.

Number of respondents = 102

The researchers computed the mean scores by equally weighting the mean scores of all the items. On a five-point scale, the mean score for tangible is 4.20 (SD = 0.52). The mean score for reliability is 4.35 (SD = 0.53). The mean score for responsiveness is 4.35 (SD = 0.60). The mean score for assurance is 4.38 (SD = 0.48). The mean score for empathy is 4.39 (SD = 0.58). The mean scores of service quality of Grameen Bank Aukpara branch ranged from 4.20-4.39
indicating that the consumers of Grameen Bank, Aukpara Branch, have a high perception about the quality of service provided by Grameen Bank, Aukpara Branch. On the other hand, the mean score for word-of-mouth is 4.36 (SD = 0.52). The mean score for customer loyalty is 4.42 (SD = 0.48). These two dependent variables have mean scores ranged between 4.36-4.42 that suggested that the clients of Grameen Bank, Aukpara Branch recommended others to use the services of Grameen Bank and those clients are quite loyal towards the Bank.

<table>
<thead>
<tr>
<th>Scales</th>
<th>number of item</th>
<th>Alpha</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibility</td>
<td>4</td>
<td>.51</td>
<td>4.20</td>
<td>0.52</td>
</tr>
<tr>
<td>Reliability</td>
<td>4</td>
<td>.54</td>
<td>4.35</td>
<td>0.53</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>3</td>
<td>.53</td>
<td>4.36</td>
<td>0.6</td>
</tr>
<tr>
<td>Assurance</td>
<td>4</td>
<td>.52</td>
<td>4.38</td>
<td>0.49</td>
</tr>
<tr>
<td>Empathy</td>
<td>3</td>
<td>.55</td>
<td>4.39</td>
<td>0.58</td>
</tr>
<tr>
<td>Word of mouth</td>
<td>4</td>
<td>.53</td>
<td>4.36</td>
<td>0.52</td>
</tr>
<tr>
<td>Loyalty</td>
<td>4</td>
<td>.56</td>
<td>4.42</td>
<td>0.42</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of respondents =102

indicating that the consumers of Grameen Bank, Aukpara Branch, have a high perception about the quality of service provided by Grameen Bank, Aukpara Branch. On the other hand, the mean score for word-of-mouth is 4.36 (SD = 0.52). The mean score for customer loyalty is 4.42 (SD = 0.48). These two dependent variables have mean scores ranged between 4.36-4.42 that suggested that the clients of Grameen Bank, Aukpara Branch recommended others to use the services of Grameen Bank and those clients are quite loyal towards the Bank.

<table>
<thead>
<tr>
<th>Number of respondents</th>
<th>Very weak, negligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 to 0.2</td>
<td>Weak, low</td>
</tr>
<tr>
<td>0.2 to 0.4</td>
<td>Moderate</td>
</tr>
<tr>
<td>0.4 to 0.7</td>
<td>Strong, high marked</td>
</tr>
<tr>
<td>0.7 to 0.9</td>
<td>Very strong, very high</td>
</tr>
</tbody>
</table>

Table 3: Correlation Matrix for Service Quality (Tangible, Reliability, Responsiveness, Assurance, Empathy), Word-of-Mouth, and Customer Loyalty

<table>
<thead>
<tr>
<th>Tangi</th>
<th>Reli</th>
<th>Res</th>
<th>Assure</th>
<th>Empathy</th>
<th>WOM</th>
<th>Customery</th>
</tr>
</thead>
<tbody>
<tr>
<td>23**</td>
<td>44**</td>
<td>23**</td>
<td>38**</td>
<td>30**</td>
<td>21**</td>
<td></td>
</tr>
<tr>
<td>71**</td>
<td>25**</td>
<td>78**</td>
<td>74**</td>
<td>53</td>
<td>53*</td>
<td></td>
</tr>
<tr>
<td>36**</td>
<td>85**</td>
<td>.89</td>
<td>.69**</td>
<td>.44**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32**</td>
<td>.34**</td>
<td>.44**</td>
<td>.68**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85**</td>
<td>.85**</td>
<td>.76**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2 tailed)
7.2 Correlation Analysis

A correlation analysis was conducted on all the variables to explore the relationship between variables. In interpreting the strength of relationships between variables, the guidelines suggested by Rowntree (1981) were followed. His classification of the correlation coefficient (r) is as follows:

The bivariate correlation procedure was a subject to a two tailed test of statistical significance at two different levels highly significant (p<.001) and significant (p<.01) or (p<.05). The results of the correlational analysis are shown in Table 3.

The result of correlation analysis for all the variables is shown in Table-3. It examines the correlation among tangible, reliability, responsiveness, assurance, empathy, word-of-mouth and loyalty. The variables significantly correlated with customer behavioral intention (word-of-mouth) were tangibles (r=.30, p<.01), reliability (r=.74, p<.01), responsiveness (r=.89, p<.01), assurance (r=.34, p<.01), and empathy (r=.85, p<.01). The variables significantly correlated with customer loyalty were tangibles (r=.21, p<.01), reliability (r=.53, p<.01), responsiveness (r=.69, p<.01), assurance (r=.44, p<.01), and empathy (r=.76, p<.01).

7.3 Stepwise Regression on Customer Behavioral Intention (Word-of-Mouth)

Table-4 depicts that in Grameen Bank Responsiveness (p<.001), Empathy (p<.001), and Tangibility (p<.001), were found to be statistically significantly related with customers behavioral intention (word of mouth). Assurance and Reliability, failed to enter into the regression equation, which indicates that they were not significantly related with customers’ behavioral intention (word of

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>R²</th>
<th>ΔR²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.766</td>
<td>.040</td>
<td>886</td>
<td></td>
<td>.786</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.520</td>
<td>.071</td>
<td>601</td>
<td>.817</td>
<td>.031</td>
</tr>
<tr>
<td>Empathy</td>
<td>.300</td>
<td>.073</td>
<td>336</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.564</td>
<td>.071</td>
<td>652</td>
<td>.828</td>
<td>.011</td>
</tr>
<tr>
<td>Empathy</td>
<td>.302</td>
<td>.071</td>
<td>338</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tangibility</td>
<td>.120</td>
<td>.047</td>
<td>.119</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
mouth). These results provided a partial support for hypothesis. These three predictor variables together explained 83% of the variance in customers’ behavioral intention (word of mouth). Responsiveness, Empathy and Tangibility explained about 79%, 3% and 1% of the variance in customers’ behavioral intention (word of mouth), respectively.

7.4 Stepwise Regression on Customer Loyalty

Table 5 depicts that in Grameen Bank Responsiveness (p < .01), Assurance (p < .01) and Empathy (p < .01), were found to be statistically significantly related with customer loyalty. Tangibility, Reliability failed to enter into the regression equation, which indicates that it was not significantly related with customer loyalty. These results provided a partial support for hypothesis. These three predictor variables together explained 55% of the variance in customer loyalty. Responsiveness, Assurance, and Empathy explained about 48%, 4%, and 3% of the variance in customer loyalty respectively.

9. Conclusion

In the context of service oriented organization Responsiveness, Assurance, and Empathy have a great importance in the service sector to ensure loyalty. Therefore from this study, Grameen Bank can get the indications on which of the issues they have to pay more attention to ensure effective customer loyalty and positive behavioral intentions. Finally, this research will encourage further study and useful guidelines for these types of researches.

Table 5: Stepwise Regression on Customer Loyalty

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>R2</th>
<th>Δ R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.475</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.556</td>
<td>.058</td>
<td>.689</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td>.516</td>
<td>.041</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.493</td>
<td>.060</td>
<td>.612</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assurance</td>
<td>.220</td>
<td>.076</td>
<td>.217</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
<td></td>
<td>.545</td>
<td>.029</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.272</td>
<td>.106</td>
<td>.337</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assurance</td>
<td>.215</td>
<td>.074</td>
<td>.212</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>.271</td>
<td>.108</td>
<td>.325</td>
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</tbody>
</table>
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Appendix 1

A Corelational Study on Grameen Bank in Bangladesh

(Questionnaire)

Name:  Age:  Anguses with GB:

Tangibles
1) Grameen bank’s center gives a warm friendly atmosphere
2) Grameen bank’s reception desk employees are neat appearing.
3) Grameen bank center has enough facilities to perform its services.
4) Grameen bank center has adequate space.

Reliability
5) When Grameen bank promises to do something by a certain time, it does so.
6) When you have a problem, Grameen bank shows a sincere interest in solving it.
7) Grameen bank performs the service right the first time
8) Grameen bank provides its service at the time it promises to do so.

Responsiveness
9) Employees in Grameen bank tell you exactly when Services will be performed.
10) Employees in Grameen bank are always willing to help you.
11) Employees in Grameen bank are never too busy to respond to your request.

Assurance
12) The behavior of employees in Grameen bank instills confidence in you.
13) You feel safe in your transaction with Grameen bank.
14) Employees in Grameen bank area consistently courteous with you.
15) Customer service staffs of Grameen bank are polite.

**Empathy**

16) Grameen bank has employees give you personal attention.
17) Grameen bank has your best interest at heart.
18) The employees of Grameen bank understand your specific needs

**Word-of-mouth**

19) I say positive things about Grameen bank services to other people.
20) I recommend others to go to Grameen bank customer care centres.
21) I always notify my friends and relatives about the new services of Grameen bank.
22) I feel encouraged when people inform me about the positive aspects of Grameen bank.

**Customer Loyalty**

23) You will trust the Grameen bank.
24) You are likely to recommend to Grameen bank others
25) You are likely to purchase new services from Grameen Bank again
26) You are not switch to a different bank
## Correlations Analysis

<table>
<thead>
<tr>
<th></th>
<th>Tangibility_mean</th>
<th>Reliability_mean</th>
<th>Responsiveness_mean</th>
<th>Assurance_mean</th>
<th>Empathy_mean</th>
<th>Word_of_mouth_mean</th>
<th>Loyalty_mean</th>
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<td>0.234**</td>
<td>0.379**</td>
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<td>Sig. (2-tailed)</td>
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<tr>
<td>Reliability_mean</td>
<td>Pearson Correlation</td>
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<td>0.254**</td>
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*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).
Model Summary

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<th>Adjusted R Square</th>
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a. Predictors: (Constant), Responsiveness mean 
b. Predictors: (Constant), Responsiveness mean, Empathy mean 
c. Predictors: (Constant), Responsiveness mean, Empathy mean, Tangibility mean

Coefficients\(^*\)

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Stepwise regression on Customer loyalty

Model Summary

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a. Predictors: (Constant), Responsiveness mean 
b. Predictors: (Constant), Responsiveness mean, Assurance mean 
c. Predictors: (Constant), Responsiveness mean, Assurance mean, Empathy mean
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a. Dependent Variable: Loyalty_mean
Ethical Banking: Bangladesh Perspectives

M. KABIR HASSAN*
MD GOLZARE NABI**
RAFIUN NABI***

Abstract: Ethical banking has drawn worldwide attention following concerns resulting from acute financial crisis, environmental problems, financial exclusion and lack of socially responsible investment. Environment has become a key focus for banks wishing to appear more ethically oriented or adopt more environmental practices. Ethical banking that emphasizes socially responsible or sustainable finance has become a significant issue in the financial industry in Bangladesh like other countries of the world. Since ethical banking plays vital role in attaining objectives towards sustainable development, Bangladesh has introduced sustainable finance and related programs for financial industry in recent years. Given this, the present study aimed to investigate the status of commercial banks in Bangladesh from ethical perspectives.

Keywords: Ethics, ethical banking, green banking, corporate social responsibility and financial inclusion, JEL Classification: G21, O16, Q01

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Corresponding Address: Research Department, Bangladesh Bank, Central Bank of Bangladesh, Dhaka, Bangladesh. E-mail: golzare@gmail.com or golzare.nabi@bb.org.bd Cell: 88-02-01716480. Views expressed in the article are authors’ own and do not reflect the views of the institutes in which they work.

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1. **Introduction**

Ethical banking has drawn worldwide attention following concerns resulting from acute financial crisis, environmental problems, financial exclusion and lack of socially responsible investment. Leading researchers like King and Levine (1993), Beck and Demirgue-Kunt (2004) and Demirgüç-Kunt et al., (2008) find positive association between an efficient financial system and its benefits to the real economy. Well-performing commercial banks allocate financial resources efficiently among competing economic agents for promoting savings and investments aiming at higher growth and poverty alleviation. However, only well-performing banks can intermediate funds between savers and investors efficiently which affects investment and growth positively. Inefficient banks incur wastages of resources and create pressure on public expenditures which may trigger financial instability. Now, it is also recognised that banks need to be ethical for supporting the financing of environmental friendly productive activities, encouraging small enterprises of low capital people and promoting corporate social responsibility for poor and destitute people viz-a-viz maintaining financial efficiency. Ethical banking that emphasizes socially responsible or sustainable finance has become a significant issue in the financial industry in Bangladesh like other countries of the world. In order to promote ethical banking, Bangladesh has undertaken various steps relating to sustainable finance, financial inclusion and corporate social activities. Given this, the present paper will examine current status of ethical banking in Bangladesh in order to derive necessary policy options for promoting ethical banking.

In Bangladesh, the commercial banks play significant roles as major sources of financing economic activities in private sectors due to underdeveloped capital market. Banking sector in Bangladesh has shown significant progress in terms of financial deepening, growth in assets, number of bank, expansion of branches and number of account holders. The key indicator of financial development, the ratio of broad money (M2) to GDP stood 53 in FY16 which was 30 in 1990, 32 in 2000 and 45 2010. The banking sector comprise 56 banks with assets of BDT 12326.4 billion (71.13% of GDP), 9453 branches and account holders of 78.81 million in FY16 (Bangladesh Bank, 2016b and Bangladesh Bank, 2016d). Bangladesh belongs to a dual banking system comprising interest based conventional banks and interest free Islamic banks. Despite robust progress, the banking sector faces some key problems such as such as higher lending rate, growing amount of non-performing loan, higher interest spread, and concentration of loan in trading sector and lower investment in socially desirable sectors such as agriculture, poverty alleviation, education and health.
Though the banking firm is not a philanthropic organization and it is a risk-oriented business or commercial entity, it should not focus only on profit motive. Profit is necessary to satisfy depositors and other suppliers of funds. Profit is also necessary for survival of the bank that has to operate in a highly competitive environment. However, banks cannot ignore demands of the community in which they operate. In addition to normal business of financial intermediary based on trust and profit motive, banks need to focus on ethical banking for promoting sustainable finance, small business, women entrepreneurship, and corporate social responsibility and avoiding money laundry, terrorist financing and other related harmful activities. Alamgir, M (2015) rightly argues that ethical banking is what follows all rules and regulations of environment, social justice and investment process maintaining good governance and not just focusing on profit alone at the cost of public interest. Given this, the present study would investigate the status of commercial banking activities in Bangladesh from ethical perspectives.

The objectives of the paper are two-fold: firstly, examining status of commercial banks in Bangladesh from ethical perspectives and secondly, to provide policy inputs for improving ethical banking in Bangladesh. To derive the objectives, the paper uses descriptive analytical tools.

The paper has been organized in eight sections. After introductory first section, the second section reviews literatures on ethics, business ethics and banking; the third section explains concepts of ethics, business and banking business and focuses on significance of ethics in banking; the fourth section presents an overview of banking in Bangladesh; the fifth section focus on present status of ethical banking in Bangladesh and finally, the sixth section analyses challenges and policy options for promoting ethical banking in Bangladesh.

2. Literature Review

Though ethical banking is gaining popularity, only few literatures are available on the issue. Rahman, Muhammad Habibur (1999) provides definition of ethics, its sources and significance in banking in the context of Bangladesh and other countries. The author simply defines ethics as ‘good behavior that recognize the rights and interest of others as well as society as a whole’. The author mentions that religion and law are major sources of ethical conduct meaning that both religion and law influence ethics. The author recommends for social and legal steps for maintaining ethical standards in banking sector in Bangladesh.
Mahmud, W. (2005) focuses on roles of ethics in the functioning of banking business that are special kind of public companies securing depositors’ interest. The author argues that the act of investment is at the heart of capitalism which involves one party lending money to another in the hope of a fair return. The system cannot function without trust -trust that the money so lent will not be stolen or diverted to illegal purposes. The author terms the ‘financial markets’ as the “brain” of the economic system; its failures do not only affects the sector’s profit, but it also influences the performance of the entire economic system adversely.

Graafland, J. J. (2007) analyzes the relationship between neoclassical economics and ethics. The author critically examines the core assumptions that underpin the economic defense of free market operation, and highlights the characteristics of different ethical theories that can be used to evaluate the free market and demonstrates how these can be applied to economics.

Islam, A. B. Mirza Md. Azizul (2011) offers excellent insights on roles of ethics in banking. He defines ethics as the study and philosophy of man with emphasis on the determination of right and wrong and also as the basic principles of right action, moral principles, moral philosophy etc. The author examines four pillars of ethics in banking: (i) comply with all laws, rules and regulations to ensure soundness of operations. (ii) fair and equitable treatment of all stakeholders, (iii) full, truthful and transparent disclosure of their financial health, and (iv) behave as socially responsible corporate citizens.

Gomez-Mejia, L. R., & Balkin, D. B. (2012) mention that ethics are principles that explain what is good and right and what is bad and wrong and that prescribe a code of behavior based on these definitions. The authors opine that personal experiences and religious, educational and family training affect ethical value systems. The authors mention that there are four key ethical approaches that can affect in making business decisions. The four key ethical approaches include utilitarianism, individualism, the rights approach, and the justice approach.

The authors observed that under utilitarianism, decisions are made on the basis of what is good for the greatest number of people; in individualism, personal self-interests play the key role. The right approach pays importance on fundamental human rights in taking business decision. The justice approach treats all people fairly and consistently in making business decisions. The authors mention that the use of ethical approaches depends on the degree of economic freedom in society and the degree of concern for the community.
Alamgir, M. (2015) examines roles of ethics in banking and presents ethical banking status in Bangladesh including different financial scams in home and abroad. The author defines ethics as the discipline and practice of applying value to human behavior that represents the basic concepts and fundamental principles of decent human contact and conduct. The author recommends policy options for maintaining ethical standard in banking sector.

3. Ethics, Business and Banking

3.1 Concepts of Ethics

The English word ‘ethics’ is derived from the ancient Greek word, the adjective “ethikos” which is itself came from another Greek word, the noun “ethos” meaning “habit, custom, character, disposition”. Though there are diverse views regarding ethics expressed by many scholars, it is not difficult to have a simple understanding of ethics from literatures reviewed in earlier section and other sources.

According to definition of Merriam-Webster Dictionary, ethics are rules of behavior based on ideas about what is morally good and bad. Ethics is an area of study that deals with ideas about what is good and bad behavior. Rahman, Muhammad Habibur (1999) opine that ethics expressed by good behavior recognize the rights and interest of others as well as society as a whole. Velasquez, Manuel G. (2011) defines ethics as the study of morality that is concerned with the standards that an individual or a group has about what is right and wrong or good or evil. Inspired by Jeremy Bentham’s and John Stuart Mill’s utilitarian view of ethics, Islam, A. B. Mirza Md. Azizul (2011) opine that ethics implies the greatest good for the greatest number. According to Alamgir, M. (2015), ethics is based on value system which refers to important and lasting beliefs pertaining to right and wrong, fair and unfair, good and bad and desirable and undesirable handed down in society through customs, tradition, religion and anchoring these families.

3.2 Business and Ethics

A business firm is a commercial entity that is established to produce goods and services in order to earn profit. In a modern economy, a business firm is a form of cooperation engaging production, exchange and distribution of goods and services. Different business firms ranging from agricultural, industrial and service oriented firms produce many goods and services in order to cater the diverse demands of customers. Though a business firm is profit oriented, it has to follow
ethical standards and consider social implication of its activities in order to survive in a highly competitive corporate world. This implies that ethical issues play vital roles in shaping practices and decision-making process in business. During 1960s business ethics as a vital concept arose following emergence of consumer-based society and rising concerns on environment, social causes and corporate responsibility.

Business ethics is the study of proper business policies and practices on corporate governance, corporate social responsibility and fiduciary responsibilities. In democratic countries, business firms have to follow ethical practices codified as laws and regulations that encourage businesses to conform to society’s standards, values, and attitudes (Ferrell, O. C., Hirt, G., and Ferrell, L., 2012). They often declare ethical standards/codes/statements to gain public acceptance. Business ethics is now not just a moral code of right and wrong; it goes beyond that limit to meet legal, regulatory and professional standards, maintain promises and commitments and abide by general principles like truth, fairness, and honesty in production, exchange and distribution of goods and services. Thus ethics play significant roles in modern day business world (Ghosh et al., 2011; Oluwafisoye, O., & Akande, O., 2013; Donaldson & Walsh 2015).

3.3 Banking Business in Brief

Concepts and Roles of Banking: Banking business is regarded as the financial intermediary that mobilizes funds from savers to allocate the gathered funds as loans among deserving economic entities (Figure 1). Banks play crucial roles in the economy to keep its wheel moving forward by accelerating saving-investment process, smoothing payment system, promoting domestic and international trade and working as conduit for implementation of monetary policy. The channeling of funds from surplus units to deficit units causes growth and welfare in the economy by providing investors’ funds for financing productive projects and helping people purchases of consumer goods.

![Figure 1: Flows of Funds from Surplus to Deficit Units](source: Matthews, K. and J. Thompson (2008))
In a fact, banks are the backbone of modern economy; no modern economy can go even a day without bank. Without a well-functioning set of financial intermediaries, an economy cannot reach its full potential of resource utilisation. A growing number of literatures also supported the fact that financial sector development causes growth (King & Levine 1993a, 1993b and Beck, T., & Levine, R. 2004). On the other hand, inefficient and fragile financial intermediation can create financial instability causing increase in non-performing loan and public debt and falling in GDP growth (Reinhart, C. M., & Rogoff, K. S. 2013).

We observe presence of banking since ancient times when banks as financial intermediaries took deposits from households having surplus funds and made loans to economic agents having interest to invest in productive projects. As time passes, the nature of jobs of banks and its operational procedures have also changed to cater the diversified demand of depositors and investors. The intermediation theories have evolved over the years to provide insights on the nature and process of financial intermediation in resources allocation.

The theoretical literature on financial intermediation has revealed that transaction costs, asymmetric information and risk diversification have acted as the key factors behind the emergence and existence of banks to play roles as financial intermediaries (Bhattacharya and Thakor 1993; Diamond, D.W. 1996; Allen and Santomero 1997; Matthews, K. and J. Thompson, 2008, and Mishkin, F. S. 2015). The importance and roles of banks and other financial intermediaries in financial markets can be realized by understanding how they reduce transaction costs, manage risk, and solve problems created by asymmetric information in financial markets. Lowering transaction costs drastically, managing risk prudently and solving asymmetric information problems have innovatively worked as the key drivers for emergence and functioning of modern commercial banks.

**Objectives of Commercial banks:** Commercial banks run banking business with the objective of maximizing profits for the shareholders. To obtain this object, commercial banks collects funds either taking deposits from individuals and institutions or borrowings from money markets and provide loans with collected funds to productive projects. Commercial banks charges higher interest on funds disbursed as loans as compared to interest paid on deposits and borrowed funds.

Banks incur profit by a positive spread between the expected return on loan projects and expected interest cost of funds and other operation costs. In addition, banks earn non-interest income in the form of fee and charges by providing different services to their clients. Thus, commercial banks are profit-seeking
business firms, dealing in money and credit. In recent times, commercial banks focus on social issues beyond profit motive.

**Functions of Conventional Commercial Banks:** The analysis of theoretical background of commercial banking upholds that the key function played by commercial banks as financial intermediaries lies in channeling funds from savers to investors aiming at keeping the wheel of the economy moving forward. In addition to financial intermediation, commercial banks also perform other important jobs to remain competitive and responsive to public needs arising from changing of time. In the light of Rose, P., & Hudgins, S. (2013), functions of commercial banks are depicted in Figure 2.

**Primary or Intermediary Function:** Banks mobilizes deposits from savers and provides loans with the funds gathered as deposits to business houses and other needy economic agents for investment in productive projects, trade and other necessary works. In a fact, the job of financial intermediary i.e, channeling funds from savers to investors has been dubbed as the key function of commercial banks.

**Smoothing Payments Services:** The theories of financial intermediary reveal that banks emerge for lowering transaction costs. Banks play key role in smoothing payments services by carrying out payments for goods and services on behalf of their customers at lower cost. To perform such jobs, banks issue and clear checks, remit funds and provide ATM services for 24 hours in a day.

**Managing Risk:** As theories of financial intermediary also find that commercial banks act as risk manager in investing savers’ funds at lower cost compared to individuals can do following expertise and economies of scale. In this regard,
banks monitor and control risks in managing deposits, loan portfolio and off-
balance activities. The core risks include credit risks, liquidity risk, market risk,
money laundering risk, technology risk, environmental risk and compliance risk.

**Implementing monetary policy:** Banks serve as a conduit for implementing
monetary policy in order to manage money supply and liquidity of the economy
for attaining higher growth, price stability and employment generation.

**Playing guarantor role:** Commercial bank issues letter of credit on behalf of its
customers to facilitate foreign trade and finances foreign trade by accepting
foreign bills of exchange.

**Performing agency services:** Commercial banks perform various agency
functions on behalf of customers which includes collecting and clearing cheque,
dividends and interest warrant, making payment of rent, insurance premium,
dealing in foreign exchange transactions, purchasing and selling securities, acting
as trusty, attorney, correspondent and executor, accepting tax proceeds and tax
returns etc.

**General services:** The general functions performed by banks include providing
safety locker facility to customers, issuing travelers cheque, acting as referees and
accepting various utility bills for payment e.g phone bills, gas bills, water bills,
etc.

**Remittance service:** Commercial banks provide internal and external money
transfer services. Banks play crucial roles in mobilizing foreign remittances that
contribute a lot in building foreign exchanges reserves and ensuring BOP
stabilization.

In fine, major functions of bank includes intermediation, maturity transformation,
credit allocation and facilitation of payment flows that affect the functioning of
the entire economy by augmenting saving-investment process to keep the wheel
of the economy moving forward.

### 3.4 Ethics in Banking Business and its Significance

As banking is a part and parcel of modern economy, it has to consider social
ramifications of its operations beyond profit and obey laws and regulations
relating to business ethics. It is clear from the operational procedures of banking
firms that banks deal in with public money with a commitment of return on
demand with fair earning. Obviously, banking operation is based on trust between
depositors and banks and banks and investors. There are several potent reasons
which underlie the importance of ethics in banking across the world.
Cowton, C. J. (2002) opines that banking, common in other areas of finance is often considered an amoral field that focuses purely on risk and return. However, the author thinks that ethics have links to banking that can be explained with applying three terms such as integrity, responsibility and affinity. Integrity plays vital role generating the trust necessary for any banking system to flourish, responsibility points out contemporary banks’ need to take into account the consequences of their lending policies, and affinity represents a set of relatively novel ways which can bring depositors and borrowers close together. However, such trend is not found in conventional western banking.

Islam, A. B. Mirza Md. Azizul (2011) opines that banking sector activities are characterized by pervasive asymmetry of information. On the liability side, the depositors are not fully aware of the liquidity and asset quality of the banks in which they keep their deposits. The depositors cannot be entirely sure about the safety of their deposits or of a fair return on the deposits. On the asset side, banks cannot be fully confident about the ability of the borrowers to repay in due time in spite of all the safeguards that may be put in place by way of collaterals and/or rigorous screening of loan proposals. Such asymmetry of information implies that banks can take depositors for a ride. The borrowers, on the other hand, can take the banks for a ride. The banks could also deliberately engage in loose lending practices with a view to favouring particular parties connected to sponsors, directors, senior bureaucrats, political parties etc. or simply out of greed at the cost of basic principles of prudence. Clearly, trust is a vital ingredient of the banking system; breach of trust by any party would affect the banking system negatively.

### Table 1: Structure of Banking System in Bangladesh (2016)

<table>
<thead>
<tr>
<th>Bank Types</th>
<th>No. of Banks</th>
<th>No. of Assets (BDT in)</th>
<th>Percent of Industry</th>
<th>Deposits (BDT in)</th>
<th>Percent of Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCBs</td>
<td>96</td>
<td>3700</td>
<td>3219.1</td>
<td>26.1</td>
<td>2447.4</td>
</tr>
<tr>
<td>DFIs</td>
<td>02</td>
<td>1407</td>
<td>302.2</td>
<td>2.5</td>
<td>247.4</td>
</tr>
<tr>
<td>PCBs</td>
<td>39</td>
<td>4271</td>
<td>8254.6</td>
<td>67.0</td>
<td>5382.3</td>
</tr>
<tr>
<td>FCBs</td>
<td>09</td>
<td>75</td>
<td>550.6</td>
<td>4.5</td>
<td>358.9</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>9453</td>
<td>12326.4</td>
<td>100.0</td>
<td>8436.0</td>
</tr>
</tbody>
</table>

*Source: Bangladesh Bank (2016b).*

Alamgir, M (2015) defines ethics in banking as trust, efficiency, openness, transparency and accountability, development and community involvement. Trust brings savers and borrowers together through bank’s intermediation. Trust allows banks to borrow short and lend long. Trust bestows authority in banks to allocate
resources to alternative uses albeit with some prompting from policy makers and supervisory authorities. Trust underwrites banks’ role in payments and fund flow.

The author also opines that efficiency is at the core of sound and ethical banking which can be attained through efficient mobilization of deposits and use of funds efficiently. All payments and charges, advances and investments and annual audited financial accounts and statements should be transparent and available in public domain should. Openness and transparency will enhance public trust in banks. Alamgir, M (2015) also opine that ethical banking is also about inclusive growth and socioeconomic development that is environmentally sustainable. In other words, focus of ethical banking is on triple bottom line: financial return for investors, real delivered value for customers, and sustainable social value for society.

It is evident that ethical issues have emerged to play important roles in shaping modern banking following worldwide increasing focus on human banking, financial inclusion, sustainable finance and corporate social activities.

4. An Overview of the Banking System in Bangladesh

Bangladesh Bank, the central bank is at the top of the financial system in Bangladesh. The other members of the financial system comprise commercial banks, non-bank financial institutions, microfinance institutions, insurance companies, co-operative banks, credit rating companies, merchant banks, brokerage houses and stock exchanges (Bangladesh Bank, 2015a).

However, the banking sector dominates heavily in the financial sector in Bangladesh which includes 6 state-owned commercial banks, 2 government-owned specialized development banks, 39 domestic private commercial banks, and 9 foreign commercial banks in FY16 (Table 1). Domestic private commercial banks are the major players among all types of banks in Bangladesh. (Bangladesh Bank, 2016b).

Financial development indicators such as M2-to-GDP (53%), private credit-to-GDP (35%) and total deposits-to-GDP (49%) have risen significantly following adoption and implementation of market based Financial Sector Reform Programs and augmentation of private banking activities. Though the banking sector in Bangladesh has made progress in terms of assets and financial deepening, it confronts some major challenges such as higher interest/profit rate spread (above 5%), growing amount of non-performing loan (over 10% of loan portfolio), concentration of loan in trading sector (35.81% of loan portfolio) and lower
investment in socially desirable sectors such as agriculture, poverty alleviation, education and health (only 5%-6% of loan portfolio) (Bangladesh Bank (2015d)).

5. Present Status of Ethical Banking in Bangladesh

Ethical banking means conducting banking operations maintaining trust among stakeholders, promoting sustainable banking with financial inclusion and corporate social activities, expanding microfinance for microenterprises and encouraging women entrepreneurship.

5.1 Maintaining trust with stakeholders

Banks offer deposit services among different types of customers including corporate entities. Deposit services provide both saving and safety facilities to customers. Bank deposits stood BDT 8474538 million in end-June 2016 which shows deep trust between banks and customers. Bank deposits are regarded as blood of banking system that is also the main source of financing economic activities of Bangladesh. Bangladesh Bank as the watchdog of banking system issued various guidelines for protection of public deposits. Deposit insurance scheme is also introduced in the interests of depositors.

Banks offer loan services among different sectors such as agro loan, industrial loan, trade loan, working capital loan and consumer finance etc. Bank advances stood BDT 6215565.9 million in end-June 2016 which contributes to promote economic activities and GDP of the country. In a fact, bank advance may be treated as engine of growth. However, the success of bank depends on the quality of advance. The quality of advance also works as a bulwark for financial stability.

Though Bangladeshi banks have attained immense success in credit delivery, there are two concerns. Firstly, banks have concentration of loan in trading sector (35.81% of loan portfolio) and lower investment in socially desirable sectors such as agriculture, poverty alleviation, education and health (only 5%-6% of loan portfolio) (Bangladesh Bank, 2016d). Secondly, existence of 10 percent non-performing loans (NPLs) remains as great concerns for all stakeholders. The NPL in banking sector of Bangladesh at end-June 2016 stood at 10.1 percent which is much higher than India (4.34%), Hong Kong (0.9%), China (1.74%), Malaysia (1.65%), Thailand (2.88%) and Philippines (1.95%) (World Bank, 2016). Non-performing loans reduce income of banks, increases loan loss provisions, brings down profit, erodes capital and creates credit crunch. This implies that higher level of non-performing loans do not only affects efficiency performance of banks adversely, they pose serious threat to the financial stability (Adhikary, B. K. 2006).
5.2 Sustainable Banking

With a view to integrating sustainability into overall credit management of banks and FIs, Bangladesh Bank issued Guidelines on Environmental Risk Management (ERM) in 2011 which has been the pioneering initiative from any central bank or financial sector regulator. The objective was to establish a minimum standard to incorporate the active evaluation of environmental and social issues in assessing PD of credit/investments of banks and FIs to promote sustainable business practices in Bangladesh. As sustainability has been increasingly being recognized as central tenant to the growth of emerging market economies including Bangladesh, Bangladesh Bank issued new guidelines on ‘Environment and Social Risk Management (ESRM)’ for banks and financial institutions in 2017 and developed new standards and codes of conduct to promote corporate accountability and transparency on the impacts of businesses on environment and society.

Bangladesh Bank (BB) has been integrating ‘sustainability’ into core banking practices through green banking, corporate social responsibility, financial inclusion and financial education. The society and environment oriented banking practices gradually created the concept of sustainable banking. Thus BB has been pursuing policy and instructions in all possible areas of sustainable banking for banks and non-bank financial institutions (NBFIs). Sustainable banking mainly focuses on three broad categories-green banking, corporate social responsibility and financial inclusion (Bangladesh Bank, 2016b).

5.2.1 Green Banking

Following immense importance of green financing, Bangladesh Bank, the Central Bank of Bangladesh, has introduced green banking activities in 2009 and issued guidelines on green banking in 2011. This type of initiative in Bangladesh has been first in South Asia. Green banking activities include financing green projects, using climate fund, turning bank branches online, enhancing CSR activities, promoting mobile banking etc. Provision of loans with financial concession for environment friendly products and projects has been adopted to promote green banking in Bangladesh.

To expedite the ongoing initiatives of banks and NBFIs at faster pace for sustaining the environment compatible to climate change risk, minimum target of

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direct green finance has been fixed as 5% of total funded loan to be disbursed/invested in each year effective from January 2015 onwards. All Scheduled banks except Shimanto Bank Ltd. (Scheduled from July 21, 2016 through BRPD Circular Letter 10/2016) and 32 out of 33 FIs have formed their own Green Banking Policy.

**Green Finance:** Major Green projects financed by banks and other financial institutions include renewable energy, energy efficiency, solid waste management, liquid waste management, alternative energy, fire burnt brick, non fire block brick, recycling and recyclable product, green industry, safety and security of factory and others. A total amount of Taka 504.22 billion has been disbursed during FY16 by all banks and 30 NBFIs having exposure in green finance. Sector-wise contribution of the total green finance shows that the PCBs play the main role (80.4 percent) followed by FCBs (15.6 percent), NBFIs (3.4 percent), SCBs (0.6 percent) and SDBs (0.01 percent). Direct and indirect green finance by banks are given in Table 2.

<table>
<thead>
<tr>
<th>Types of banks</th>
<th>2014-15</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct green finance</td>
<td>Indirect green finance</td>
</tr>
<tr>
<td>SCBs</td>
<td>30.7</td>
<td>0.9</td>
</tr>
<tr>
<td>SDBs</td>
<td>0.1</td>
<td>0.3</td>
</tr>
<tr>
<td>PCBs</td>
<td>20.1</td>
<td>346.1</td>
</tr>
<tr>
<td>FCBs</td>
<td>3.3</td>
<td>68.2</td>
</tr>
<tr>
<td>NBFIs</td>
<td>8.3</td>
<td>15.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>34.8</td>
<td>431.0</td>
</tr>
</tbody>
</table>

*Note: Figures are in billion Bangladesh Taka.*

*Source: Bangladesh Bank, Annual Report, 2014-15 and Sustainable Finance Department*

**Environmental Risk Management (ERM):** Environmental risk can be a facilitating element of credit risk because of its connectivity with environmental condition and climate change. Environmental Risk Rating (ERR) is obligatory above the threshold as mentioned in Guidelines on ERM for banks and NBFIs. ERR is applicable for the projects as well as the credit facility that fall above the threshold limit. According to guidelines, all banks and NBFIs have started environmental risk rating for projects. Total amount of Taka 1242.76 billion was disbursed in 52776 rated projects out of 60175 rated projects in FY16 (Table 3).
Climate Risk Fund and Green Marketing: Total amount of utilization from climate risk fund by twenty two banks and for green marketing by 29 banks were Taka 455.7 million and Taka 53.5 million respectively in FY16. For the financial institutions total amount of utilization from climate risk fund was Taka 3.9 million and total expenditure for green marketing was Taka 2.7 million in FY16.

Online Banking and Energy Efficiency: 55 banks out of 56 banks have online branches in FY16 whereas the number of banks was same in FY15. Online branches are 75.1 percent of total branches in FY16 which were 68.1 percent in FY15. Green banking policy has pursued the banks to establish branches powered by solar energy. The number of branches powered by solar energy stood at 493 in FY16 and this was 416 in FY15.

BB’s Refinance Schemes for Green Products/Sectors: To promote renewable energy and environment friendly financial activity of Bangladesh, BB has formulated a revolving refinance scheme from its own source amounting Taka 2.0 billion in 2009. To avail refinance facility till 30 June 2015, 37 banks and 15 NBFIs have signed participation agreement with BB. BB has increased the green product lines under the scheme to 50 in FY16. BB segregated these products into 11 categories which are: renewable energy, energy efficiency, solid waste management, liquid waste management, alternative energy, fire burnt brick, non fire block brick, recycling and recyclable product, green industry, ensuring safety and work environment of factories and miscellaneous. The disbursement trend of this fund is given in Table 4 and Chart 1.
Green industry accounts for highest share among all green products (44%) followed by HHK technology (19%) and bio-gas (9%). The shares of financing among green products have been depicted in Figure 1.

### Table 4: Utilization trend of BB refinance scheme for green products

<table>
<thead>
<tr>
<th>Green products</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio gas</td>
<td>133.2</td>
<td>113.6</td>
<td>212.8</td>
<td>83.3</td>
<td>84.8</td>
</tr>
<tr>
<td>Solar home system</td>
<td>10.5</td>
<td>40.2</td>
<td>32.2</td>
<td>87.5</td>
<td>114.7</td>
</tr>
<tr>
<td>Solar irrigation pump</td>
<td>8.4</td>
<td>0</td>
<td>17.9</td>
<td>26.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Solar assembly plant</td>
<td>248.8</td>
<td>122.7</td>
<td>49.6</td>
<td>148.1</td>
<td>16.3</td>
</tr>
<tr>
<td>Solar mini-grid</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Effluent treatment plant</td>
<td>22.2</td>
<td>57.4</td>
<td>10</td>
<td>0</td>
<td>58</td>
</tr>
<tr>
<td>HHK technology in brick kiln</td>
<td>55</td>
<td>172.2</td>
<td>59</td>
<td>47</td>
<td>177.8</td>
</tr>
<tr>
<td>Vermi compost</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.1</td>
<td>1.6</td>
</tr>
<tr>
<td>Green industry</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>400</td>
</tr>
<tr>
<td>Safe working environment for textile and garments industry workers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>35.7</td>
</tr>
<tr>
<td>Organic manure from slurry</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.2</td>
</tr>
<tr>
<td>Paper waste recycling</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>478.1</td>
<td>506.1</td>
<td>381.5</td>
<td>393.5</td>
<td>919.7</td>
</tr>
</tbody>
</table>

Note: Figures are in billion Bangladeshi Taka.
Source: Bangladesh Bank, Annual Report, 2014-15 and Sustainable Finance Department

**Some policy initiatives for Sustainable financing:** To improve the efficiency of the brick kiln through efficient use of technology and energy including reducing Green House Gas (GHG) and Suspended Particulate Matter (SPM) on lending facilities namely “Financing Brick Kiln Efficiency Improvement Project”, has been established in BB financed by Asian Development Bank (ADB) in 2012.
In this disbursement process, total amount of loan from ADB is about USD 50.0 million or equivalent Taka. It has two parts: Part-A: USD 30.0 million (approximately)/equivalent Taka will be provided for conversion of Fixed Chimney Kiln (FCK) to improved zigzag kiln and Part-B: about USD 20.0 million/equivalent Taka for establishment of new Vertical Shaft Brick Kiln (VSBK), Hybrid Hoffman Kiln (HHK) and Tunnel Kiln. On lending facilities are extended to the PFI in this purpose. Till 30 June 2016, 35 banks and 19 NBFIs have signed participation agreement with BB. Up to June 2016, USD 16.21 million has been disbursed under this project.

In September 2014, BB has introduced a refinance scheme funded by liquidity of Shariah based banks and NBFIs in excess of their requirement which will be explicitly utilised for direct green finance of the said banks and NBFIs. These banks and NBFIs can utilise this fund for financing in the 50 products identified under BB refinance scheme.

Bangladesh Bank (BB) intends to provide long term financing for private sector firms, mainly midsize manufacturing firms under the Financial Sector Support Project (FSSP) financed by the International Development Association (IDA). An Environmental and Social Management Framework (ESMF) has been developed to ensure the sustainability of financing of this facility (FE Circular No. 18/2015).

The latest step of Bangladesh bank in fostering sustainable finance is to create Green Transformation Fund. In February 2016, BB has announced its intention to create a new longer term refinancing window naming Green Transformation Fund (GTF) of 200 million USD. The fund will be used to ensure sustainable growth in export oriented textile and leather sectors conducive to transformation of green economy in the country (FE Circular No. 02/2016). To further fortify the financing arrangement under GTF, it has been decided to provision for a Participation Agreement to be signed between Bangladesh Bank and intended AD branches. Under this scheme, 6 banks have signed participation agreement with BB till December 31, 2016.

**Trend of Green Financing as Share of Total Bank Advances:** The share of green financing to total bank advances was 1.68 percent in first quarter of 2013. Then it started increasing gradually and reached at 2.83 percent in q4 of 2014. Later it showed mixed trend. It stood at 2.23 at the end of q2 of 2016. Green financing as a share of total bank advances and its trend are depicted in figure 2.

**Corporate Social Responsibility:** On 22 December 2014, BB issued an indicative guideline for allocation and end use monitoring of CSR engagements
of the financial sector. The guideline clearly states the administrative setup, budgetary allocation, expected range/coverage of CSR activities and end use monitoring process of CSR expenditures and activities. BB has also established ‘Bangladesh Bank Disaster Management and Corporate Social Responsibility Fund’ by transferring Taka 50 million from its annual profit each year to conduct its own CSR activities in different areas such as education, health, environment, empowerment, human resources development, etc. Later the fund was extended to Taka 100 million in 2015.

BB has sanctioned Taka 75.9 million (contribution from BB profit and bank interest) in FY16 from the fund which was Taka 51.3 million in FY15. Total amount of CSR expenditure by banks and NBFIs in FY16 was Taka 5607.7 million while the amount was Taka 5400.7 million in FY15. Banks continued to maintain major share in education, health and humanitarian & disaster relief. Education, health, humanitarian & disaster relief contributed to 29.0, 13.6 and 32.5 percent respectively of the total CSR activities. However, they spent 16.3, 18.5 and 12.1 percent of their total CSR expenditure in education, health, humanitarian & disaster relief sectors respectively during this period.

**Enhancing financial inclusion:** Financial inclusion has emerged as a powerful tool for promoting inclusive economic growth, eradicating poverty and reducing
inequality in the emerging and developing country. A growing body of research unveils that financial inclusion has significant benefits for both firms and individuals (Ayyagari, M., & Beck, T. (2015). As part of financial inclusion initiatives BB has extended formal banking services to less privileged people in urban and rural areas. BB has identified the target group of people and advised the banks for opening No-Frill Accounts (NFAs) for them.

Up to FY16 BB has gradually issued instructions to these banks for opening nine categories of NFAs other than farmer’s account. BB has also provided instruction to all banks to open NFAs for readymade garment workers and workers of small footwear & leather product industries. From FY15, all banks were instructed to open NFAs for physically challenged persons. Total number of all categories of No-Frill Accounts (NFAs) by the SCBs, DFIs, and PCBs stood at 16133447 in 2016. Total balance of all categories of account reached at Taka 10520.34 million in 2016.

In order to broaden and deepen the financial inclusion through including the students under age of 18, BB has advised to the scheduled banks to introduce school banking activities in 2010. Total outstanding balance of school banking stood at Taka 8804.1 million against 1182179 accounts at the end of June 2016.

After introducing various types of banking services for farmers and some other underprivileged people, BB advised all scheduled banks to bring street children under institutional financial support on 9 March 2014 to open custodial account with NGO by Taka 10 as minimum opening balance and no service charge/fee for working/street children. These initiatives would help street children to develop their savings habits and eventually help them step towards better future. Till June 2016, 16 banks signed bi-lateral agreement with different registered NGOs for offering the services. Total outstanding balance of school banking stood at Taka 2201.2 million against 3465 accounts at the end of June 2016.

Bangladesh Bank issued agent banking guidelines in December 2013 for the banks with a view to safety, security and soundness of the proposed alternative delivery channel for banking services for non-privileged, underserved population and the poor segment of the society, especially from geographically remote location. Till June 2016, 12 banks have got approval from BB for agent banking services and 10 banks have started operation. Till June 2016, number of agents stood at 789 and number of outlets was 1281. Currently there are more than 258471 account holders maintaining accounts with agent banking.

With a view to bring the financially deprived grass root population under formal financial services and to gear up the banking activities of Taka 10 accounts, BB
constructed a revolving refinance fund in May 2014. The size of fund is Taka 2.0 billion. Highest limit of refinance facility is Taka 50000.0 under this scheme and participating banks will be provided interest subsidy under certain conditions. To avail refinance facility till 30 June 2016, 32 banks have signed participation agreement with Bangladesh Bank and disbursed amount stood at Taka 297.46 million in FY16.

5.2.2 Promoting Microfinance
Out of 56 commercial banks, 14 banks are engaged in micro credit operations. Currently, 8 state-owned commercial and specialized banks and 6 private commercial banks offer microfinance programs either directly or through linkage programs with NGOs/MFIs. The number of clients, annual disbursement of loan and outstanding of loan stood 1.1 million, BDT 33.66 billion and BDT 13.65 billion respectively.

5.2.3 Encouraging women entrepreneurship
Bangladesh Bank is encouraging all banks and NBFIs to provide loan to women entrepreneurs at 10.0 percent interest rate. A dedicated women entrepreneur’s desk has been established at concerned Department of BB (SME&SPD). All banks and NBFIs have been directed to do the same. They have also been instructed to reserve 15.0 percent of total SME funds exclusively for women entrepreneurs as well as to provide credit to new women entrepreneurs under cottage, micro and small sectors. In addition, all banks and NBFIs have been directed to sanction loans of at least Taka 2.5 million to women entrepreneurs with personal guarantee but without collateral under refinance facilities provided by BB. An amount of Taka 16.4 billion was refinanced to women entrepreneurs at the end of June 2016 against 16028 enterprises.

5.2.4 Promoting Mobile Financial Services (MFS)
The rapid growth of mobile phone users and countrywide coverage of mobile operators’ network have made their delivery channel an important tool for trade for extending banking services to the unbanked/banked population, specially to expedite faster delivery of remittances across the country. As on 30 June 2016, total 25 banks were given permission for mobile financial services, whereas 18 banks/subsidiaries were in operation. Total number of registered customers was 36.2 million and they had 0.6 million agents for smooth services to their customers. From legal and regulatory perspective, only bank led model is allowed to operate in Bangladesh.
Under the umbrella of mobile financial services, inward remittances, cash-in, cash-out, P2P transactions, B2P transactions, P2B transactions etc. have been provided. Day by day both the volume and monetary value of the transactions are increasing and it is real opportunity for underprivileged people to avail formal financial services. Monthly number of transactions stood 124.5 million while amount of transactions stood at BDT 231.5 billion (June, 2016).

5.3 Islamic Banking and Ethics

Islamic banking has attained as alternative sub-sector in the modern financial landscape of the world. After its humble beginning in 1960s, the world witnessed a record growth of Islamic finance in Muslim majority countries as well as in non-Muslim countries during the last four decade. Sustained growth of Islamic finance overtime across the world in terms of number of financial institutions, deposits, investment and innovations is a vivid testimony of solid performance of Islamic financial services industry (IFSI). Total assets of Islamic financial services industry (IFSI) grew to an estimated USD1.88 trillion by the end of 2015 in which Islamic banking remains the dominant sector with approximately 79% of the total Islamic financial assets (Islamic Financial Services Board, 2016). The Islamic financial industry has been able to prove itself as a sound and less risky alternative viable sub-sector of modern finance industry of the globe. In tandem with global rapid expansion of Islamic finance, Bangladesh, a developing Muslim majority country of South Asia has also experienced phenomenal growth in Islamic banking in the backdrop of strong public demand and support for the system.

Islamic commercial banks play the same roles of financial intermediaries by channeling surplus funds from savers to entrepreneurs and performing the other jobs as done by conventional banks. From viewpoints of theories of financial intermediaries based on lowering transaction cost, managing risk and solving asymmetric information problems, there seem no differences between the two types of banking. However, there are fundamental differences in theoretical foundation and mode of operations between the two types of banking.

In addition to major principles followed by conventional banks, Islamic banks have to obey the principles of Islamic Shariah strictly (Rosly, SA, 2005 and Laldin, MA, 2005) which includes prohibition of Riba (usually interpreted as usury or interest), avoidance of Gharar (excessive risk), Maisir (Gambling) and other Haram (illegal) activities (such as alcohol, pork and all other illegal activities) in transactions, following of profit and loss sharing principle (PLS) that
emphasizes on risk-sharing, making financial transactions against real tangible assets, ensuring justice in dealings, paying zakat (mandatory religious tax) and developing community.

Obviously, the basic features of ethical banking are embedded in the principles of Islamic banking. Islamic banking promotes human, inclusive, resilient and caring banking. Now, out of 56 commercial banks, 8 private commercial banks (PCBs) have been functioning as full-fledged Islamic Banks in Bangladesh (Table-5). In addition, 19 Islamic banking branches of 8 conventional banks and 25 windows of 7 conventional banks are also offering Islamic banking services. Islamic banking industry in Bangladesh now accounts for 20.5 percent deposits and 23.3 advances of the total banking system at the end of June 2016 implying that it have accounted for more than 20 percent market share of banking industry in Bangladesh.

Islamic banks as Shairah based banks have to operate business for fulfillment of twin objectives: achieving profit (for viability and sustainability) and ensuring welfare of the community as a whole. Although Islamic banks have achieved one of the twin objectives-attaining adequate profits for sustainability; they could not show success in attaining social objectives, the other one of the twin objectives. An analysis of sector-wise investments made by Bangladeshi Islamic banks reveals that investments in socially desirable sectors such as agriculture and poverty reduction are below 2 percent (Bangladesh Bank, 2016c). Similarly, an analysis of mode-wise investment shows that investments in ideal Islamic modes i.e. Profit Loss Sharing (PLS) based modes such as mudaraba and musharaka are estimated below 2 percent (Bangladesh Bank, 2016c).

<table>
<thead>
<tr>
<th>Types of Islamic banks</th>
<th>Number of Bank</th>
<th>Branches / Windows</th>
<th>Deposits (BDT in Billion)</th>
<th>Advances (BDT in Billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-fledged Islamic Banks</td>
<td>8</td>
<td>998</td>
<td>1672.60</td>
<td>1493.63</td>
</tr>
<tr>
<td>Conventional banks having Islamic banking branches</td>
<td>8</td>
<td>21</td>
<td>52.93</td>
<td>45.00</td>
</tr>
<tr>
<td>Conventional banks having Islamic banking windows</td>
<td>7</td>
<td>25</td>
<td>29.82</td>
<td>27.56</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>1044</td>
<td>1755.35</td>
<td>1566.19</td>
</tr>
</tbody>
</table>

Source: Bangladesh Bank (2016c)
6. Challenges of Ethical Banking, Policy Options and Conclusion

Challenges: The major challenges in promoting ethical banking in Bangladesh includes lowering NPL, removing fraud and forgery, enhancing investments in social sectors like agriculture, small enterprises, health, education, expanding sustainable banking activities and attainment of cost efficiency in service delivery.

Policy options: Based on recommendations of Islam, Dr. A. B. Mirza Md. Azizul (2011) and others, following policy options may be derived for promoting ethical banking in Bangladesh.

First, banks must comply with all laws, rules and regulations to ensure soundness of operations and to enhance confidence of the society.

Second, banks must ensure fair and equitable treatment of all stakeholders—shareholders, depositors, borrowers and employees.

Third, the banks must ensure full, truthful and transparent disclosure of their financial health. Many of the toxic assets were sometimes treated as off-balance sheet items. The concerned stakeholders were thus deprived of the right to get a transparent picture of the true financial health and the risks that were being assumed.

Fourth, banks must increase investment in green projects for protection of environment and in social sectors like agriculture, small enterprises, health and education for promoting financial inclusion.

Fifth, banks must behave as socially responsible corporate citizens. Social responsibility must be viewed from a wider perspective, taking into account the impact of banks’ activities on growth, employment and emphatically in our case, poverty alleviation as well.

Sixth, bank staffs need to be trained properly with fair pay and other incentives.

Seventh, Islamic banks need to undertake measures for promoting welfare-oriented banking further.

Conclusion

Following global concerns stemming from acute financial crisis, environmental problems, financial exclusion and lack of socially responsible investment, ethical banking has emerged as new paradigm in financial world. In mitigating environmental problems in financing and financial exclusion, Bangladesh has undertaken different steps for promoting ethical banking. Now banking sector has
undertaken initiatives relating to promoting sustainable finance, small business, women entrepreneurship, and corporate social responsibility.

However, allocations must increase in projects relating to ethical banking. In addition, steps need to lower interest/profit rate spread, reduce amount of non-performing loan and increase of loan in production sectors towards employment generation. Above all, banks must comply with all laws, rules and regulations, ensure fair and equitable treatment of all stakeholders, disclose full information on financial health and undertake ethically motivated human resource development policy. Islamic banks need to promote projects based on partnership modes (Mudaraba and musharaka) and financing microenterprise for promoting inclusive banking towards employment generation and poverty alleviation. This would also help to achieve welfare objectives of Islamic banking.
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Does Microfinance Play the Role of Ethical Finance? Evidence from Bangladesh

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**Abstract:** The universal appeal to make the world poverty free is manifested in constitutions of all countries, writings of humanitarian intellectuals and teachings of all religions. The present world is a strange manifestation of plenty of resources with abject level of poverty which is contrary to the spirit of inclusive sustainable development. In combating poverty, microfinance has emerged as one of the effective tools across the globe. Microfinance can be called as ethical finance as it offers small financial services among poor, women in particular to promote standard of living of the poor and their empowerment. Though Bangladesh has achieved worldwide recognition as a star performer in microfinance near 37.04 million people, one-fourth of total population still live in poverty. The experience of poverty programs of NGOs during the last three decades reveals that they have, in general, been successful in serving the moderate poor but failed in reaching the extreme poor. The present paper will review the roles of microfinance programs as ethical finance in Bangladesh.

**Keywords:** Micro finance, ethical finance, poverty alleviation, empowerment

**JEL Classification number:** G21, I32, L3, O16

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1. Introduction

The universal appeal to make the world poverty free is manifested in constitutions of all countries, writings of humanitarian intellectuals and teachings of all religions. The present world is a strange manifestation of plenty of resources with abject level of poverty which is contrary to the spirit of inclusive sustainable development. In combating poverty, microfinance has emerged as one of the effective tools across that globe. Microfinance can be called as ethical finance as it offers small financial services among poor, women in particular to promote standard of living of the poor and their empowerment. Though Bangladesh has achieved worldwide recognition as a star performer in microfinance and Grameen bank, a successful MFI won noble peace prize, near 40 million people, one-fourth of total population still live in poverty. Currently, Bangladesh microfinance industry offers financial services among nearly 37.04 million poor people; more than 90 percent of them are women. A number of empirical studies reveal that micro finance has positive impacts on the living standard of the poor (Zaman, H, 2004; Khandker, S. R., 2005; Osmani, S. R., 2012 and Khandker, Shahidur R., et. al., 2015). The experience of poverty programs of NGOs during the last three decades reveals that they have, in general, been successful in serving the moderate poor but failed in reaching the extreme poor (Emran, M. S., Robano, V., & Smith, S. C., 2014). The present paper will review the roles of micro finance programs as ethical finance in Bangladesh. The paper will also provide policy options for smooth growth of microfinance in Bangladesh so that microfinance programs can work as ethical finance toward poverty and inequality reduction.

In Bangladesh like many other LDCs local money lenders dominate the informal credit market. Although the indigenous money lenders can assess and monitor borrowers easily and cheaply, they often charge annual interest rate of more than 100 percent leading potentially profitable projects into ruins. On the other hand, formal banks have left the poor unbanked because of absence of suitable financial products and illegible collaterals. The lion share of Government sponsored rural credit has gone to the rural elite rather than the poor. The operators of micro finance argue that micro finance can be widely used as an effective tool in poverty alleviation. The Grameen Bank and other successful NGOs have led the way in developing appropriate methodologies in serving the poor.

The existing theoretical literature attributes this success to peer group micro lending, monitoring, peer pressure, mutual insurance, information transfer etc. MFIs address the problems of targeting, screening, monitoring and enforcement innovatively. The problem of screening i.e. distinguishing the good (creditworthy)
from the bad (not creditworthy) borrowers is solved by MFIs through formation of groups. Since all borrowers of a group are jointly liable for each other’s loan and they know each other in almost all respects, a bad borrower has a little chance to enter into a group. The problem of monitoring is also resolved through joint liability of all members of a group as well as close supervision of MFI’s staff. Borrowers under joint liability lose right to future credit in case of a default member implying that group members monitor each other and compel debt repayments by threatening to impose social sanctions upon peers who default strategically. Though the poor have no useful physical collateral, peer pressure works as social collateral that make group members to repay loans regularly.

MFIs have emerged over the last three decades in Bangladesh with the objectives of delivering micro financial services among the poor people for poverty alleviation. Many NGOs starting as relief and social awareness creating organization have turned into micro finance institutions (MFIs). Micro finance has become the sole program for many NGOs though some NGOs are implementing micro credit program with several social development programs like education, health, skill training and environmental issues. There are four main types of institutions involved in microfinance activities in Bangladesh: (a) Grameen Bank; (b) NGO-MFIs that have received licenses from Microcredit Regularly Authority (MRA); (c) Commercial and specialized banks; (d) Government sponsored microfinance programs (e.g. through Bangladesh Rural Development Board-BRDB, co-operative societies and programs under different ministries of the Government).

However, Grameen Bank and 10 large Microcredit Institutions (MFIs) represent near 90% market share of microfinance industry. The micro finance industry has total outstanding loans of around BDT 829.16 billion and total number of members of 37.04 million in 2015. A sector-wise distribution of loans reveals that MFIs mainly finances the informal sector of the economy such as small business, cottage industries, mini transportation, livestock, fisheries, nurseries etc.

Although micro finance has positive impact on the living standard of the poor as many studies show, a large portion of poor people, hardcore poor in particular are yet out of micro finance’s network (Hashemi, 1997, Zaman 1997 & Ahmed, Salehuddin 2004 and Emran, M. S., Robano, V., & Smith, S. C., 2014). As ethical finance has an objective of building inclusive financial system for promoting economic growth,

2. ibid
welfare of each member of the society and microfinance has the major target of serving the poor, it is imperative to identify whether microfinance program has been successful as a tool in attaining its objective of serving the poor. Given this, the present paper will examine the efficacy of microfinance program from ethical finance perspectives in Bangladesh.

The objectives of the paper are two-fold: first, to examine the efficacy of microfinance program in Bangladesh from ethical finance perspectives, and second, to put forward policy options to build an ethical microfinance market capable to serve all types of the poor.

The rest of the paper is organized into the following ways. Review of literature is made in Section II. Section III examines links between ethics and microfinance programs. Section-IV analyses impacts of microfinance on borrowers, which is followed by a discussion on challenges of microfinance programs in Bangladesh (Section-V). Finally, Section VI contains policy implications and conclusions.

2. Literature Review

A number of literatures focused particularly on examining the effect of microfinance.

Zaman (2004) argued that microcredit plays a significant role in reducing household vulnerability to a number of risks and that it contributes to improving social indicators. He found that strategic donor investments in a handful of well-managed institutions that offer a simple, easily-replicable financial product could lead to large gains in access to finance for the poor.

Khandker (2005) examined the effects of microfinance on poverty reduction at both the participant and the aggregate levels using panel data from Bangladesh. He found that access to microfinance contributes to poverty reduction, especially for female participants, and to overall poverty reduction at the village level. He concluded that microfinance thus helps not only poor participants but also the local economy.

Vanroose (2007) argued that microfinance’s ability to effectively reduce poverty is not yet clear, and it generates some unresolved ethical questions. Then, he defined poverty in a broader sense to include deficiency in human and social capital. He showed that, in this broad sense, microfinance may have negative as well as positive effects on poverty.

Duvendack and Palmer-Jones (2011) applied propensity score matching (PSM) to differentiate outcomes by gender of borrower taking account of borrowing from...
several formal and informal sources. They found that the mainly positive impacts of microfinance that they observe were shown by sensitivity analysis to be highly vulnerable to selection on unobservables, and they are therefore not convinced that the relationships between microfinance and outcomes are causal.

Hudon and Sandberg (2013) reviewed recent researches on the microfinance sector that addresses ethical issues. They noted that unfortunately, this sector had been largely neglected in the more critical or philosophical literature. They also argued that microfinance is an interesting test case for several important theoretical issues in business ethics, such as how to define poverty and development, understand exploitation, and view companies with a social mission.

Osmani, S. R., & Latif, M. A. (2013) did an extensive study on the pattern and determinants of rural poverty in Bangladesh. They summarized that despite the overall nature of poverty reduction, the rate of decline was not the same for everyone. Their result showed that poverty status significantly associated with a number of factors - specifically, access to assets, availability of working members within the household, education, access to non-farm employment opportunities, access to microcredit and remittance, and connectivity.

Hudon and Sandberg (2013) reviewed recent researches on the microfinance sector that addresses ethical issues. They noted that unfortunately, this sector had been largely neglected in the more critical or philosophical literature. They also argued that microfinance is an interesting test case for several important theoretical issues in business ethics, such as how to define poverty and development, understand exploitation, and view companies with a social mission.

Chakrabarty and Bass (2014) examined whether microfinance institutions (MFIs) that serve women borrowers at the base of the economic pyramid were likely to adopt a written code of positive organizational ethics (POE). Using econometric analysis of operational and economic data of a sample of MFIs from across the world, they found evidence that MFIs can build positive ethical strength in negative contexts.

Khandker, M. A. et al. (2015) critically evaluated the heterogeneous effects of microfinance intervention in rural Bangladesh and concluded that large and medium asset holders benefit more than marginal or small holders from microfinance. They also found that households with older heads or more adult males are likely to quit microfinance. However, program dropouts are not large enough to cancel out the overall beneficiary impact of microfinance.
Raihan, Selim et al. (2015) systematically assessed the role of microfinance to GDP in Bangladesh using computable general equilibrium (CGE) model. They found that in 2012 the contribution of microfinance to GDP in Bangladesh was between 8.9 percent and 11.9 percent depending on labor market assumption where the contribution of rural microfinance to rural GDP in Bangladesh was between 12.6 percent and 16.6 percent. They argued that their result underestimated the actual scenario as the methodology used in the study was not enough comprehensive to incorporate all socio-economic channels through which microfinance can contribute to GDP.

Khatun, F and Hasan, M (2015) agreed that microfinance plays a positive role in improvement of the living standard of poor people, women empowerment and poverty reduction. Despite the argument against the effectiveness of microfinance, they concluded that microfinance institutions promote economic sustainability through supporting informal micro enterprises.

Khalily, M. B. et al. (2016) explored the issue of overlapping and over-indebtedness of Bangladesh micro credit market using household level data. Overlapping household, i.e., more than one member of the family having membership with one or more institutions with or at least one person in the family having membership with more than one MFI, is better-off in terms of net savings, net assets, income, food and non-food expenditures, number of earning members, diversification of occupation structure, and employment creation. The issue of over-indebtedness is measured in growth of net assets. Commonly, overlapping has not contributed to over-indebtedness for any group of overlapping households. They suggested creating appropriate insurance mechanism to minimize vulnerability of households and to create larger impact of microcredit.

3. Ethics and Microfinance

3.1 Concepts of Ethics

The concept of ethics comes from the Greek word, “Ethos” that means both an individual’s character and a community’s culture. Though there are diverse views regarding ethics expressed by many scholars, it is not difficult to have a simple concept of ethics. Ethics may be defined as

- “Good behaviour” that recognize the rights and interest of others as well as society as a whole (Rahman, Muhammad Habibur, 1999).
- The study of morality that is concerned with the standards that an individual or a group has about what is right and wrong (Velasquez, Manuel G., 2011).
The study and philosophy of man with emphasis on the determination of right and wrong and also as the basic principles of right action, moral principles, moral philosophy etc. The word ethical has been variously interpreted as morally correct, honourable, decent, fair, good, honest, just, noble, principled, righteous, upright, virtuous and so on (Islam, A. B. Mirza Md. Azizul, 2011).

Ethics are principles that explain what is good and right and what is bad and wrong and that prescribe a code of behavior based on these definitions (Gomez-Mejia, L. R., & Balkin, D. B., 2012).

Ethics are based on value a system which refers to important and lasting beliefs pertaining to right and wrong, fair and unfair, good and bad and desirable and undesirable handed down in society through customs, tradition, religion and anchoring these families (Alamgir, M., 2015).

### 3.2 Ethics and Microfinance

Before establishing links between microfinance and ethics, it would be helpful to understand key features of the microfinance.

- Microfinance offers micro financial services among poor people. The former includes microcredit, micro savings, micro insurance, pension and other financial products provided mainly by NGOs/MFIs among the low-income poor people. Loan amounts up to BDT 50,000 are generally considered as microcredit; loans above this amount are considered as microenterprise loans (MRA).

- The key objectives of microfinance industry are poverty alleviation and empowerment of the poor.

- Majority of the clients of microfinance industry are women.

- As mainstream banking system fails to serve the poor due to absence of the suitable collaterals, MFIs have emerged to serve the unbanked people using microfinance as a powerful tool of financial inclusion.

- MFIs provide door-to-door services among the poor; clients do not need to come to the MFI office that saves time.

- The recovery of microcredit is above 90% against huge amounts of NPLs of banking systems in Bangladesh.

It is clear from the above information that there are close relationships between microfinance and ethics that implies the greatest good for the greatest number.
4. Present status and Impacts of Microfinance

Providing easy access to financial services among poor by MFIs and other institutions brings myriads benefit in Bangladesh, the birthplace of modern microfinance of the world. The assessment of key impact studies shows positive impact of micro finance on the lives of the poor people.

4.1 Potent Driver of Financial Inclusion for the Poor: In Bangladesh, microfinance programs work as the most powerful diver of financial inclusion to include unbanked poor people. Now about 37.04 million poor get micro financial services. No other public or private program has been as successful as microfinance programs to reach the poor that help them promote income, employment and alleviate poverty. MFIs play the dominating role in microfinance market accounting for 93% share of microfinance programs.

The amount of microfinance disbursed by MFIs is increasing fast with high recovery rate (more than 90%) in Bangladesh. Not only that the amount of annual microcredit (around BDT 829.16 billion) disbursed by NGO-MFIs has already outpaced the amount of annual agricultural credit (BDT 176.46 billion) by state owned and private banks. Obviously, micro credit has evolved the most powerful tool of financial inclusion among unbanked poor people. Obviously, MFIs have emerged as the strongest part of rural markets.

4.2 Micro credit for Poverty Alleviation via Promotion of Self-Employment: MFIs have proved that micro borrowers are creditworthy who pay regularly with recovery rate more than 90 percent. In a fact, the key success of microfinance lies in addressing lack of finance faced by the poor in generation of self-employment for poverty alleviation. Microfinance provides small funds for income generating activities and thus it creates self-employment, promotes income and helps the poor to get rid out of the poverty trap. Microfinance also makes consumption smooth for the poor and helps them cope with the vulnerability stemming either from temporary lack of work or natural disasters.

Microfinance programs have been able to generate self-employment for poor households in different economic activities, off-farm activities in particular. Some studies show that the generation of self-employment is the main mechanism through which microfinance has been effective in accelerating growth of income/expenditure and alleviating poverty which is reflected in the higher labour force participation ratio among participants in microfinance programs as compared to non-participants. It is also revealed that poverty situation has been

A resent paper by S. R. Osmani (2012) upholds the role of microcredit in poverty dynamics in the rural areas of Bangladesh. The paper was based on the findings from the first phase survey of long-term panel surveys covering 6500 rural households in 63 districts, and it examined the factors, including the role of microfinance, that have a causal influence on poverty dynamics. The study used the dynamic adaptation of the entitlement approach for determination of contribution of micro credit. A conservative estimate was about 5 per cent – in the sense that if microcredit had not existed rural poverty would have been almost 5 per cent higher than what it was in 2010. The contribution to the reduction of extreme poverty was found to be considerably higher – about 9 per cent.

Though poverty remained stubborn in Bangladesh for nearly two decades since independence 1971, it began to decline appreciably since 1990. S. R Osmani (2012) rightly recognized the key players involved in poverty reduction in Bangladesh e.g. sustainable annual growth of GDP, strong inflows of external remittances and massive expansion of microfinance.

4.3 Promotion of Savings and Investment: MFIs have been able to defy the perception that the poor do not save. MFIs in Bangladesh initially mobilized compulsory savings but now these institutions collect different types of savings viz-a-viz obligatory savings. The outstanding of savings of MFIs stood at BDT 135.41 billion in June, 2015 which accounts for 34% of loanable funds.

MFIs influence the rural informal credit market through its impact on poor household’s savings and investment. MFIs help reduce the dependency of poor on the informal money market directly through the provision of microfinance and also indirectly through the scope for increased savings by poor households. Loans from MFIs supplement their own investment and bridge the consumption need in slack season. In addition to cash savings, poor household’s savings take various forms of direct investment. The value of such investment may be substantial and it may even be higher than cash savings. MFIs are expected to contribute to accumulation of both working and fixed capital of the poor. (Hossain, 1984; Mustafa et al, 1996; Khandker and Chowdhury 1996; Rahman 1996; ASA borrowers 2003, Zaman 2004).

S. R. Osmani (2012) also upholds the positive contribution of microcredit in asset accumulation by the poor. Access to microcredit was found to enhance the
probability of moving up the asset ladder and to reduce the probability of falling. While this is true for both poor and non-poor households, the effect is much stronger for the poor. Most of the poor borrowers started their journey in life with fewer assets compared to poor non-borrowers. But over time they have been able to accumulate assets at a faster pace in comparison with poor non-borrowers, thereby narrowing the original gap in endowments, and access to microcredit is found to have made a positive contribution in this regard. Furthermore, faster pace of asset accumulation has not remained confined only to those borrowers who have utilised the loan productively; it has also extended to those who have used the loans mainly for consumption purposes. For the latter group, access to microcredit has helped by reducing the need for asset depletion at times of crises. The study has also found that microcredit’s contribution to asset accumulation has translated itself into contribution to poverty reduction. Access to microcredit reduces the probability of being poor by 2.5 per cent.

4.4 Empowerment of women: In Bangladesh, recipients of microfinance are above 90% women who have been able to raise their empowerment through involvement in income generating activities. Empowerment of women includes both material and non-material benefits achieved through participation in microcredit programs. Material benefits means increase in income, nutrition, food security, health care facilities etc. Non-material benefits includes increase in power of decision-making, self-sense of honor, respect and recognition from family members and others of the society and higher mobility. Though Goetz and Gupta (1996) reveal minimal impact of microfinance on empowerment of woman, many studies like Rahman (1986), Ray (1987), Zohir (1990), Rahman (1996), Mustafa et al (1996); Schular and Hashemi (1995), Hashemi, Schular and Riley (1996), Zaman (1998), Mahmud S (2000, 2004) show positive correlation between participation in microfinance and empowerment of woman.

4.5 Impacts on Human Capital Formation. Besides microcredit programs, some MFIs conduct non-formal education, health and other social programs which contribute to increase in school enrollment and education of children of poor households. Most MFIs require that the members learn to sign their names. Thus MFIs have been effective in generating relevant skills and social awareness which leads to human capital formation badly needed for socio economic upliftment of the poor. (Rahman 1996; Hossain, 1998, Khandker 1998, BIDS 2001).
4.6 Employment of Large Numbers of Graduates: MFIs do not only create self employment for millions of the poor, these institutes also generate jobs for more than 0.10 million young graduates. The continued tireless service rendered by thousands of committed and devoted graduates across the whole of Bangladesh has contributed a lot to make the microfinance industry a success one in Bangladesh and the most viable model for financial inclusion of the poor of the globe. Based on information provided for the fiscal year 2010 by 482 NGO-MFIs, microfinance sector has created direct job opportunities for over 0.01 million people; 82 percent of them are male and 18 percent are female (MRA, 2015).

4.7 Export of Bangladeshi Model of MFI: The success of grouped based microcredit lending model among the poor in Bangladesh initiated by Nobel Peace Winner Prof. Mohammad Yunus has not confined only in the territory of Bangladesh; its wave has also reached in other developing as well as developed countries of the world creating hope of relief from poverty and social exclusion among millions of the poor. Such success has generated markets in abroad for Bangladeshi large MFIs (e.g. BRAC, ASA) to sell their service in building MFIs.

5. Challenges

5.1 Inclusion of Hardcore Poor: Though MFIs have been able to reach among the poor of the country, have failed to reach the hard core poor. The hardcore poor account for 12% of population of the country who are excluded from microfinance for a range of causes such as low capacity, low self-esteem, vulnerability, high rate of interest and customized programs.

5.2 Reaching Economically Backward Region: MFIs/NGOs could not become able effectively to reach among the people of economically backward regions of the country. As a result, MFIs showed poor performance to reduce poverty in economically poor areas. It implies that the success of NGOs operations depend largely on the better performance of key sectors of national economy (agriculture/industry) and without Government direct support, NGOs approach is not fully effective to produce pro-poor growth in economically backward regions.

5.3 Graduation of Micro finance Recipients: Another burning issue for MFIs is to help those who graduated using microfinance and need large loan to develop SMEs.
5.4 **Overlapping:** A few studies reveal that in some cases, microfinance has created debt cycles to pay the installments of loan by making fresh loan from moneylenders (Adams and von Pischke 1992; Dichter 1997; Johnson and Rogaly, 1997). Now it is imperative to address the issue of overlapping for sustainability of MFIs and small borrowers.

5.5 **Sustainability:** The issue of sustainability has drawn much attention to all stakeholders of microfinance due to (a) dependence of microfinance on subsidies/donor funds; (b) high interest rate and operational cost (c) interest of transforming microfinance programs into financially viable ones to attract commercial funds for scaling up programs. In Bangladesh, large MFIs have attained near sustainability but a good number of MFIs are still depended on subsidized funds like Palli Karma Sahayak Foundation (PKSF) fund and donor’s fund. In fact, if we want to extend outreach of microfinance among excluded poor, and cater the demand of large loan of the graduated microfinance recipients, we need both soft and commercial fund since subsidized and donor’s funds are not sufficient to meet growing demand.

5.6 **Diversification of products:** So far, the focus by NGO/MFIs has mainly on delivering credit. However, the poor need financial services covering the entire gamut - savings, loans, insurance, credit, payments, pension etc. By providing these services, NGO/MFIs can accelerate the pace of effective financial inclusion.

5.7 **Governance:** Good governance is essential to ensure quality of leadership and management. Governance and financial sustainability are also closely interrelated. Weak governance and management characterize many MFIs in Bangladesh. Many MFIs have been turned into club of retired persons and close relative of social elite having no understanding and commitment regarding microfinance industry. One of key challenges for survival of the microfinance is to ensure accountability and transparency in overall management of MFIs.

5.9 **Regulation and Supervision:** The MRA is now the sole watchdog of vast microfinance market of the country. As a new organization, it is evolving day by day. The present capacity of this regulatory organization seems to be insufficient in terms of manpower, resource base and geographical concentration (only in Dhaka). Besides, all MFIs in Bangladesh are incorporated under 4 different laws that has created many problems which needs to bring under one common law as Bank Company Act, 1991.
5.10 Ownership: Except Grameen Bank, all MFIs have not yet included representatives from the clients of micro finance.

5.11 Research and Training: There lacks skilled manpower and research works in addressing emerging issues of microfinance.

6. Policy Options and Conclusions

Key policy options

(1) Expansion of Outreach: To enhance the outreach in remote area and provide fast services to existing customers, MFIs need cost effective channel. In this case, MFIs may use mobile financial services. MFIs may establish partnerships with mobile phone operators and banks to reach the unbanked low income people. Presently some MFIs are providing only foreign remittances; other mobile financial services such as deposits, person to person’s payments may be launched.

(2) Adequacy of Fund: MFIs need more funds to serve graduated clients and unbanked poor people. Enhanced supply of funds for graduated clients can be made possible by (a) raising voluntary and involuntary savings of NGOs/MFIs; (b) attracting more funds from commercial banks (c) increasing size of wholesale funds (PKSF); (d) introducing loan guarantee services (e) raising fund from capital markets (f) securitization of income receivables of MFIs. Soft funds for hard core poor may be increased through greater involvement of large MFIs and donor agencies. The present allocations for different ministries/departments of the Government in serving hard core poor must be enhanced. The fund for CSR allocated by private companies must be increased to meet various needs of hard core poor.

(3) Strengthening Supervisory Framework: The overall strength and capacity of MRA needs to be enhanced significantly in terms of manpower, resource base, geographical outreach and rule making authority in order to make it capable of meeting all of its operational targets. Supervisory works must be streamlined towards ensuring good governance of MFIs, which is vital for financial and operational sustainability. Days are gone for soft loans funds; good governance is a must for commercial funds which needs for maintained continued growth.

(4) Broadening Ownership: To make MFIs more transparent, accountable and people oriented new measures may be undertaken to include representative from micro borrowers and nonpolitical highly respected professionals having good grounding on microfinance and its mission.
(5) **Diversification of Products:** MFIs must diversify financial products and innovate suitable products for extending horizontal and vertical outreach of microfinance with a view to addressing the financial needs of the poor. Such diversification will ensure viability of MFIs as well as its programs designed for poverty alleviation. All groups of the poor are likely to need financial services relating to savings, credit and insurance.

(6) **Rational interest rate:** A crucial factor to attain sustainability is the application of rational interest rate. Someone argue that MFIs set high interest rate in the name of poverty alleviation and the poor people would not be able to break the vicious circle of poverty if interest rate is not lowered. MFIs in Bangladesh charge between 11-15 percent flat interests which is much lower than that of money lender (more than 100%) but high compared to that of commercial banks. The interest rate of MFIs is high as compared to that of commercial bank since transactions costs are higher in dealing small loans and taking financial intermediary directly to the Poor’s doorstep. Surplus generated from this operation is rolled back through the revolving fund in order to be able to serve more clients and enhance loan size. MFIs should charge such interest rate to cover operational cost with a view to achieving sustainability and attracting huge commercial funds into microfinance industry.

(7) **Programs for Hard core poor:** Hard core poor need supports beyond subsidized funds which includes food relief, training and health facilities. Already Grameen Bank and large MFIs have undertaken special programs to address the problems of hardcore poor. But well coordinated area based sufficient programs are required. Each large MFI can be given the lead role in particular economically backward area avoiding overlapping. Government support must also be continued for hardcore poor through enhanced investment in physical and social infrastructures under different Government ministries/departments, and social safety nets. In a fact, charity based microfinance models rather than profit based model is more effective in addressing hard core poverty. As a Muslim majority country, Bangladesh uses Zakat and Waqf based microfinance models in fighting hardcore poverty.

(8) **Strengthening Research and Training Capability:** MFIs are facing many emerging issues that need to be addressed for smooth development of the microfinance industry. To meet the present and future challenges, it is imperative to strengthen research and training capability of MRA.

(9) **Formation of Annual Program on Microfinance Programs:** Like annual agricultural credit program, MRA may formulate and implement ‘Annual Microfinance Program’ in order to manage microfinance smoothly.
As ethical finance means inclusive financial system that promotes welfare of all member of the community, poor people in particular, microfinance has been established itself as an ethical type of finance due to its pro-poor program. Microfinance industry has mobilized 37.04 million poor members under its network; it has disbursed BDT 829.16 billon as loans and collected BDT 135 billion as savings. The impacts of microfinance programs on the lives of the poor are positive and significant. However, hardcore poor are generally bypassed by present type of microfinance programs. If microfinance programs have become able to include hardcore poor by charity based models successfully, microfinance may prove itself as a proper model of ethical finance that can benefit all types of poor and thereby promotes inclusive finance and growth.
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The Ethics of Tourism Development in Bangladesh

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Abstract. Tourism is the most popular leisure activity that entertains people from every corner of the world and generates high revenue in the global economy. Developing countries like Bangladesh is still have uninvestigated tourist spot. This paper depicts the absence of minimum requirement of Bangladesh to expand its tourism sector, mostly for ethical reasons. Our study has focused on ethical aspects of tourism which will help the decision makers to change the current disequilibrium of tourism industry.

1. Introduction

Tourism is often synonymous to travelling for pleasure and education. Tourism has not only been the single economic sector that has gained considerable economic attention, but has also become a central feature of modern society that affects every part of the world. As tourism is essence of the people movement within this society, it is hard to imagine a world without holidays and opportunities for travelling to new places for new experiences. For this reason, the activity of tourism has grown by around 25 per cent in the past 10 years and is one of the main generators of employment in both developed and developing countries. The role of tourism plays a significant role in sustainable development...
where United Nations Environment Programme (UNEP) and the World Tourism Organization (WTO) encourages all countries to make sure that their policies and actions for its development and management fully embrace the principles of sustainability.

Developing country like Bangladesh has various potential sectors and tourism is one of them. Travelers from different parts of the world had interest in Bangladesh since a long time, to see the attractive panoramic unknown beauty and unspoiled natural and unique reserves. As tourism is in its modern sense of phenomenon, it mainly started in 1960s. Tourists from aboard come to see archeological sites, historic mosques and monuments, resorts, scenic beauty of lavish green forests, wildfire, hills, vales, tribal culture, religious rituals, deep mangrove forests and the longest beach in the world.

Many businesses grew concomitantly with the development of tourism including the airlines, shipping, hotels and restaurants, finance companies, tour operators, travel agents, NGOs etc. Even though, the government of Bangladesh is suffering from generating the source of earnings for a smooth mobility. Tourism is one of the sectors, where the government can easily manage to earn and make the industry from unorganized to organize. Bangladesh is rapidly developing in tourism industry to compete in local and global market. Because of the overall development of the country’s economy and its cultural diversification, Bengal always attracted tourists.

Globally, tourism has become the most important civil and largest industry in the world. It has been making massive contribution to the developing country in terms of foreign exchange, employment by employing 200 million people all around the world and generating the global GDP to 11 percent. Although global and regional patterns have fluctuated from year to year, the predicted growth rate of tourism still remains high and strong. According to the prediction World Tourism Organization (WTO), travelers who have the desire to travel and that might be over 1500 millions international arrivals by 2020. In many countries, domestic tourism outweighs international arrivals in terms of volume and income generated. This is also predicted to grow strongly.

As tourism is also a major source of employment, it is supporting 74 million jobs directly according to a World Travel and Tourism Council (WTTC) estimate, and 215 million (8.1 per cent of the world total) if all the indirect economic effects of the sector are taken into account. It represents US$4 218 billion of GDP (10.4 per cent of the world total), with travel and tourism making a particularly significant contribution to international trade, at over 12 per cent of total exports.
As a result, throughout the world, in both economic and social sector tourism promotes coordinated development programs to generate employment opportunities, reduction in poverty which reduced 40 percent to 15 percent. Tourism not only has potential advantages for pro-poor growth but also has higher potential for linkage with other local enterprises.

In general, to have a sustainable development of tourism there will be some multiplier effect. Tourism relates social impact that scrutinizes distortion of local language and culture, luxurious travelling by air-conditioned vehicles creates a distinct boundary to rich and poor. Second effect can be caused economically by leakage; increase in the price of local good and some jobs with low wages become seasonal. Other impacts can be environmental and political. By understanding its high multiplier effect, the governments around the world are taking more proactive roles and increasing its attention in impacts of tourism that has emerged. They are calling for more planning and management of development. But there are some negative impacts of tourism remain largely unchecked and are increasing. These negative impacts will be discussed more elaborately later in the research paper.

Tourism today is about exploration and discovery. In Bangladesh, the scope of natural is based on tourism, research is based on tourism, culture is based on tourism and eco-tourism is quite evident. Tourism is in a very special position to benefit local communities, economically and socially, and helps to raise global awareness and support for conservation of the environment. Within the tourism sector, economic development and environmental protection should not be seen as opposing forces, they should be pursued hand in hand as aspirations that can and should be mutually reinforcing. Policies and actions must aim to strengthen the benefits and reduce the costs of tourism.

However, Tourism becomes then part of the natural, cultural and human environment with respect to the special features of host places; this sector highly contributes to national economy. Sustainable tourism development can be achieved through alternative tourism, which is in its purest sense is an industry which attempts to make a low impact on the environment and local culture, while helping to generate income, employment, women empowerment and the conservation of local ecosystems. There are some policies to promote sustainable development which should take full account of the opportunities offered by tourism.
2. Tourism and Development

Tourism is an attractive tool for economic development in developing countries. Sustainable development of tourism is based on the principle of sound of world’s resource that refer to environmental, economic and socio aspects of tourism development. This approach is suitable to make the development of tourism more ecologically supportable in the long term. The important thing about development of tourism lies in its motives is to conserve the resource and increase the value of local culture and tradition along with alleviating the impact on environment and culture. All tourism has the possibility to be more sustainable and have the following characteristics.

2.1 Tourism Development and Economic Growth

Tourism activities are one of the crucial factors in economic growth. As tourism industry has emerged as one of the leading industries and comprises extensive range economic activities recently, the economic flows generated by international tourism have become a vital factor in economic growth in developing countries. According to the World Tourism Organization (2010), as there are increasing numbers of destination opening up, modern tourism has become a key driver and covering a board range of enterprises, employment, infrastructure development, foreign earnings and stakeholders.

Tourism is a major source of foreign currency. It provides positive externalities and creates added value for the real sector and encourages capital accumulation and creation of new investment activity. However, the foreign exchange earnings vary among tourism driven economics because of leakages which is arising from importing goods and also for consumer goods required for tourists. Besides export earnings, tourism generates share of government tax revenue throughout the world. In addition, the development of tourism as a whole gives investments in infrastructure development i.e. roads, airports, roads, water, telecommunication and other public utilities. Therefore, the improvement of infrastructure will not only benefit the tourists but also improve the standard of living of domestic population. As a result, these increases in capital attract enterprises that are in disadvantage.

The sector of tourism is a source for increase in employment in both construction sectors and agriculture sectors including unskilled labors, migrants from poor rural areas, people who prefer part-time job and also notably women of Bangladesh. As the sector in relatively labor-intensive, investments in tourism tend to generate higher employment. Tourism industry is also characterized by a
range of stakeholders. To resolve the conflicts between various groups, government take lead in cooperation and collaboration. This ensures sustainable feature of the tourism industry of Bangladesh, are kept in mind that all stakeholders express their point of view and decision are made easily.

There can be sudden changes in consumer taste and can have a sharp downturn in the economic growth but given the demand of mass tourism, it produce negative responses to economic recession. Nonetheless, generally tourism makes a vital contribution in Bangladesh and identified as a promising drive force for economic growth.

2.2 Tourism Development and Natural Environment

The countries get an incentive to conserve and protect their environment for tourism which indirectly helps to keep the balance in ecology system. Tourism development exercises great pressure on natural resources such as water, land, air and ecosystem that endanger the natural balance of the planet. As fresh water is one the most critical natural resource, when tourism increases there is an increase in demand of water for both personal use of tourist and maintenance of other facilities. Tourism is fully dependent on environment. Natural resources such as beaches, sea, mountains, lakes, rivers and also man-made resources like historic cities, heritage building and monument, constitutes the primary source of tourism. As there are always greater chances of getting affected by the construction activities and operation of tourism units, ports, marines and transport installation, interruption might occur in the movement and communication of the species. There is always a pressure to protect the wildlife and habitats in tourist sites. That’s why to control the degradation of natural environment government adopted few policies.

Tourism sometimes also characterized by time and place concentrations, which promotes eco-tourism where the domestic people are informed about the harmful effects from surroundings. The government always seeks to channel the investment into the suffering areas from overexploitation of tourism resources, environmental degradation and scarcity of infrastructure faulty lands. But, in modern tourism and environment have a harmonious relation. It gives resources and incentives to conserve ancient culture and tradition.

However, tourism also causes pollution as the tourist uses vehicles like cars, planes, buses etc that contaminates the fresh air. This directly affects the visiting destinations and causes more harm than benefit. Hence ecotourism is the ultimate solution to eradicate environmental issues.
Bangladesh is endowed with the largest mangrove ecosystem: the Sundarban, the longest unspoiled beach in the world, largest man-made lake and vast offshore marine environment. For tourism development, there are number of laws related to environment in Bangladesh. Therefore, this makes sure that the tourist products are not used in such way that will destroy the beauty of the environment.

### 2.3 Tourism Development, Culture and Society

One of the elitist types of tourism is cultural tourism. Cultural touristic trips are emerging as the most successful type of modern travel. It is growing rapidly and covering more areas of social and economic life. According to the researchers, culture is one of the motivating factors for tourist in the world. Not only attracts tourists with higher education but also tourist with specific interests with an affinity to history and religion. Tourism shapes on global culture and makes individuals globally competent with better knowledge that will help the nation to prosper.

Tourism not only allows visiting new places but also make us aware of their culture, religion, history and practices. Tourist can get an idea of their way of living and their struggles. Sometimes, main behavior of consumer affects the tourist service by fashion, customs and traditions. In ancient times, there used to be several religions in Bangladesh. Some say, long time back people used to worship deity called Bangi, and the name of the country was derived from the name of the deity. In 14th century, Muslim saints came from Iran and started preaching Islam and soon Islam became the faith of majority people.

The culture of Bangladesh can be expressed in its history. The presence of unique historical sites of Bangladesh such as Lalbag Fort in Dhaka, Liberation War Museum in Dhaka, Ahsan Manzil etc determines the successful development of tourism. Series of monuments and sculptures can also express a country’s culture such as the sculpture in University of Dhaka will remind the tourist about the incident of 1971. However, in “The Four Faces of Global Culture,” Peter Berger, professor of sociology and director of the Institute for the Study of Economic Culture at Boston University, tourism have some disadvantages too. According to him it may degrade or reproach individual culture considering a certain culture as dominant.

In recent times, the aim of tourism is to maintain sustainable development. There are many travel agents who offer expedition to ensure that these areas will remain untouched. Tour guides are always available to educate the tourist and ensure that the tourist understand the local culture and society. Therefore, tourism always
associates to show the relationship between, behavior, values and tradition of the society.

3. Code of Ethics in Tourism

In order to enhance the ethical aspect of tourism, the code of ethics has developed as a response to ethical transgression of the tourism industry, tourist and the government in recent years. For a sustainable tourism, the Global Code of Ethics for Tourism (GCET) developed some codes of ethics and comprehended some set of principles to provide guidelines and to comply with specific moral standards for tourism development. The following principles are:

**Contribution to mutual understanding and respect:** Understanding the ethical values with humanity, with tolerance and with respect for diversified religions, philosophical and moral beliefs are the foundation and consequence of sustainable tourism. For the development of tourism, both stakeholder and tourists should observe the culture, traditions and social practice of people. The activities of tourism should be conducted as a harmony by respecting the laws, practices and customs, and vice versa. The public authorities must provide protection to the tourists and should facilitate prevention and security of any kind of threats against the tourists.

According to national laws, if there is any destruction of tourism facilities or any elements of culture, it should be severely condemned and will be punished. While travelling, the tourists should not commit any criminal act by going against the host country’s laws and regulation. Lastly, the tourists must be aware of health and security risks and have to take their own responsibilities to minimize those risks even before their departure.

**Vehicle for individual and collective fulfillment:** The activity of tourism is associated more with relaxation, access to culture and nature. That’s why it should be planned as means of individual and collective fulfillment. This activity not only should respect both men and women but also promote human rights, individual rights from normal people, handicapped to ethnic minorities and indigenous people. Travelling for the purpose of health, culture or education are very beneficial and huge encourage of tourism.

**Tourism as sustainable development:** To have a sustainable development in tourism, all the stakeholder should protect the natural environment so that there can be sustainable economic growth to satisfy the needs of present and future generations. All source tourism development is conducted to save precious
resources specially water and energy, protect natural heritage composed of ecosystem and preserve endangered species of wildlife. As nature tourism and eco tourism enhance people more to travel, there should be limitations in sensitive areas like coastal areas and tropical forests.

**Tourism as a user of the cultural heritage of mankind and contributor to its enhancement:** Tourism resources belong to the common heritage of mankind. There are several tourism policies and activities that should be conducted for artistic, archaeological and cultural heritage. Mankind should be devoted to care and preserve the historical monuments and museum, so that it is more widely open not only to the tourists and also to the future generation. The financial resource from the tourist visits should be used for the protection and development of the cultural sites and monuments.

**Tourism a beneficial activity for host countries and communities:** Local population should be more involved in tourism activities and share economic, social and cultural benefits, so that they can generate direct or indirect jobs which results from them. The policies and the planning of the tourism help to raise the standard of living of the local population and also help to give priority to local manpower. Special attention should be given to specific problems of coastal areas, rural or mountainous region because tourism often has rare opportunity for development. Studies are carried out by the tourism professionals, investors and public authorities to see the impact of development projects on environment and natural surroundings and must deliver the contents with great transparency.

**Stakeholder’s Obligation in Tourism Development:** Authorities of tourism industry are ought to maintain transparency with their clients regarding their visiting destinations. Information like environment, quality, price of the destinations should be clearly stated to the travelers in order to avoid unforeseen disarray. In any event of disorganization from the authority, financial compensation must be given to the clients. Government as well as the operators should warn and advice if any political or natural calamities are likely to hit or occurring already. This will ensure the accountability of the authorities and give assurance to the travelers that authorities are always well prepared to handle any case of disarrangement Therefore it eliminates the insecurity of the potential travelers.

Furthermore, the authorities should have constant concern about traveler’s security. They should be keen in providing all the basic security and aid in case of any emergency. Besides, the tourist professionals should acknowledge individual’s religion and their practices and allow them to perform those during
their visit. Additionally, tourist professionals and the hosting countries should establish a system that resolves the problem of traveler’s financial solvency. Lastly, the media and the advertising agency are advised to provide accurate information about the culture and ambiance for the tourism spot. Advertising of sex tourism should not be promoted by any means.

**Right to Tourism:** There are numerous reasons for travelling. For example, one can enjoy the adventures and have a sense of accomplishment in doing so. Every individual in the society including the youths, disabled, senior citizens are encouraged to travel for their mental wellbeing. Moreover, travelling rejuvenates our psyche and contributes in giving a society with open minded individuals. So exploring the world should not have any obstacles. World Tourism Organization drew attention to Article 24 of the Universal Declaration of Human Rights and Article 7.d of the ‘International **Covenant on Economic, Social and Cultural Right**’ indicates the right to rest and leisure along with the limitation in working hours and holidays without freezing the employees pay. In addition, social tourism should also be facilitated in the same manner.

**Liberty of Tourist:** The streak of formalities and discrimination among the tourist displeases the travelling experience. Every individual has the liberty to move anywhere within the country in accordance with Article 13 of the Universal Declaration of Human Rights. This will enable the travellers to visit any religious and cultural sites without any form of provocation. Hence maximum freedom of travel should be ensured by the tourist industries. Other sort of liberty includes right to convert currencies in the visiting country without any hassle and right to communicate through any internal or external means along with the advantage of easy and inexpensive mean to access prompt health service, local administrative and legal services. However, any personal information of the tourist should remain confidential just like the locals of the visiting country.

**Rights of the associated stakeholders of the Tourist Industry:** Tourism creates many employment opportunities at various level of the society. There are self-employed workers, seasonal workers and permanent hired workers in this field. Their job security, social protection and adequate relation with the hosting country must be administered by the government. They must be provided with proper training for managing their assigned work for keen supervision and governance their task. On the other hand, entrepreneurs are highly encouraged to establish good relations with the foreign countries and realize their roles in the sustainable development of their own nation by contributing their profits of its growth.
Implementation of the Principles: Both the government and private operators of tourism should work together in order to make tourism better and enjoyable for the tourist. All of the principles mentioned above should be implemented in a feasible way that benefits the international tourism. It is vital to repeat that tourism industries must have constant apprehension regarding social and environmental impacts that is spawned by tourism.

4. Ethical Tourism in Developing Countries and its Historical Perspective

After the Second World War, development theorist and ecologist shed light to the anthropogenic and environmental impact of international tourism in their narratives. In 1970’s, the concept of tourism flourished in numerous nations and successfully became the financial backbone of the developing countries. It is noteworthy to mention some early thoughts of development ethics of Denis Goulet who is highly appreciated for his notions for development that are considered to be influential ideas. He articulates “ethics” as the reflective study of what is good or bad, leading an individual to make genuine choice.

Furthermore, during that period, development incorporated political, social, cultural and economic goal applying both as an end product and as a process. However, the concept of sustainable development was not nifty defined. Nonetheless, Goulet (1973) states that dynamic stability and the regenerative powers of the world’s ecological systems are to be protected with major human efforts for survival, health and creativity.

In regard of tourism, Issa Shivji (1973: ix) a Tanzanian Economist accentuate Fanon’s (1967: 123) description of a settler’s town where he illustrates the soothing environment and luxurious ambience of a town meant to please the elites and western bourgeoisies by the national bourgeoisies. This indicates an industry devoted to entertain the elites with utilizing the national resources. However the latter part of Fanon’s description portrays that such industries are helping national elites to deteriorate the morality by exploiting the middle class and involving them in socially unacceptable acts. For example, the casinos of Havana and of Mexico, the beaches of Rio, the little Brazilian and Mexican girls, the half bred 13-year-olds, the ports of Acapulco and Copacabana etc. Although the international tourism supports their economy but it does demoralize social and cultural values in many developing countries like Africa etc.

In the context of environmental ethics, tourism takes an ambiguous position in its development effects, involving both conservation and destructive attributes. Some well-publicized examples destructive attributes are the worldwide reaction to the
ruin of rain forests in Papua New Guinea and Brazil to concern about the invasion by indigenous farmers onto animal habitats in Africa. Roderick Nash asserts in his book that the idea of human nature relationship is a moral issue restricted by moral issue is revolutionary and it is believed that it will transpire a fundamental and far reaching change in both thought and behavior comparable to that which the ideal of human rights and justice held at the time of the democratic revolutions in the seventeenth and eighteenth centuries.

Roderick Nash affirms that the American Declaration of Independence, the abolition of slavery, emancipation of women, civil rights for Black Americans and the Endangered Species Acts of the 1970 are the milestones that shows the evolution of ethics and pertains similar spirit to voice for the rights of nature. Nash (1989) acknowledge American ecologist Aldo Leopold who explains “All ethics rest upon a single premise: that the individual is a member of a community of interdependent parts” (1949: 203). Leopold termed this biocentric ideology as “Land Ethic” He concluded his write up “The Land Ethic,” by stating his moral code that “A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise”.

By the 1960s, environmental awareness had spread to a “greening of religion” in Western countries. Western countries began to appreciate the fact that man was indeed just a cog in the wheel than being the entire force in the mechanism. This was championed by western historians such as Nash. Eastern perspectives were already more focused on the treating the natural world as an entirety. However, hypocrisy is prevalent in even the strictest societies, for example, Muslim tourists in western countries. But modern societies in first world countries are having a paradigm shift as they are focusing on conserving their own resources while having little care for others. This is concerning major aid agencies in the world. The tourism industry is rudimentarily considered to be a capitalistically organized society driven by social dynamics. Most of the tourism practices originate from the Metropolitan cities where tourism is most concentrated and replicating these things in the developing countries has consequences. Practices however are changing as more and more ecological bodies are encouraging more environmentally friendly tourism practices are developed.

One of the vital aspects of responsible tourism is travel ethics. Travel ethics simply indicates an awareness of our impact as we explore the world benefitting people and the environment in different destinations. International tourism has changed drastically in the last 20 years. In contrary of responsible travelling, the Dalton’s (1973) guidebook on Indonesia advises the traveller with the following
note “Going to Bali is like stepping on a giant tab of LSD.” Such obscene Balinese culture is the reason why travel ethics comes into play. With such controversies arising due to scatological culture of a nation, the idea of responsible travelling is emerging. “Code of ethics for Tourist” - a well-known 12 point guidebook is being published by Christian Conference of Asia in the early 1980s for realizing travel ethics.

In the more recent material includes “to raise awareness by providing information; to stimulate thinking and discussion and to encourage individuals and groups to become involved in working for more authentic human encounter” (O’Grady 1990). To elaborate responsible travel, there are three basic principles, which are the following: to observe and understand the culture of the visiting destination, to respect the local hosts and to tread softly on the environment of the host.

One way to promote the responsible travelling is ecotourism. It is pertained by the magazine Tread Lightly, which offers cycling through China and tracking Timber Wolves in the wilderness of Minnesota. Goa, India’s south west coast is one of the most popular tourist spot which once raised concern about their social and environmental aspects by the locals. There were 69 hotels along the 107 km of Goan coastline (Times of India 1990). The local political organization Jagrut Goencaranchi Fauz (JGF) placed their demand to eradicate overexploitation of the locals and the environment by the tourist and its operators. Their demand included ban on any new five star hotels, restrict to allow extension of existing five star hotels, withdrawal of tourism industry, strict code of conduct for advertising Goa and its culture, the Government’s non-collusion with hoteliers by organizing and sponsoring infrastructures required for five-star tourism. Their revolt against the prevailing situation pressurized the government to bring change in the existing tourism system. There are significant troubles confronting small group of Third World tourism activists endeavoring to construct a development sufficiently strong to respond adequately to the difficulties displayed by these issues in their nations. Calls have been made to build up global treaties to restrain tourism in specific cases. This Goan case has evolved due to ethical perspective of locals which made them conscious about conserving their culture and environment. Hence, ethics in tourism is one of the most important aspects in tourism that should be given high importance to flourish the sector of tourism industry.

**Conclusion**

Every nation has different social and cultural values. These differences in values trigger variations in tourism industries of developing and developed countries.
Developing countries face tragic choices when it comes to a luxury industry like tourism. Hence they lag behind to prosper and sustaining development in this certain sector. However Bangladesh has high potential to bring fruitful results by taking more ecological steps and follows the global code of ethics that direct the right way for tourism. Bangladesh needs to gear up its infrastructure, government policy, generate creative innovations and necessary reconstruction that will help the nation to step ahead in the global platform.
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Universal Health Coverage for the Poor in Southwest Coastal Region of Bangladesh and Linkage between Ethics and Economics of Responsibility

MD. HAFIZ IQBAL*

Abstract: Poor people in general get poor quality of health services. The situation is much worse for the poor who live in the remote areas as health care facilities and services are often less complete, farther away and therefore, most costly to reach compared to urban hospitals and physician. To ensure good health service for the poor, it is essential to examine the effectiveness of Universal Health Coverage from the view point of ethical and economics of responsibility. To fulfill the research objective, this study followed a purposive sampling technique and carried out household interviews through survey questionnaire. This study applied Probit model to generate empirically supported assessments. Provision of government and private sector intervention through social safety net program and corporate social responsibility (CSR) for the poor and cost sharing through universal health coverage can help to improve health service. The findings of this study justify improved, equitable and quality health care system for the poor people of the southwest coastal region of Bangladesh and try to meet the main target (good health and human well-being) of SDGs.

Keywords: Universal Health Coverage, Ethics, Economics of Responsibility, Diseases of Poor People, Bangladesh

1. Introduction

Poverty and disease go to the same direction. Most of the disease burden finds its roots in the consequences of poverty, such as poor nutrition, indoor air pollution and lack of access to proper sanitation and health education (Stevens, 2004). The

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World Health Organization (WHO) reported that diseases associated with poverty account for 45 per cent of the disease burden (WHO, 2002). Poverty creates ill-health because it forces people to live in harmful environments that make them hungry and sick, without decent shelter, clean drinking water, proper nutrition and adequate sanitation which in turn push them vulnerable to disease. Illness and disease can reduce household savings, lower learning ability, reduce productivity and lead to diminish of life, thereby creating or perpetuating poverty and hence, poor people are therefore more at risk of both illness and disability as a whole (Roy, 2014). Poor people do not get access to reliable health services and affordable medicine. In addition, financial hardship is the common for very poor people. Poverty creates illiteracy and leaving people poorly informed about health risks. Poor health is a common consequence of poverty and poverty can be a consequence of poor health and it is work as a vicious cycle (WHO, 2000).

The currently large variation in morbidity and mortality are more in underdeveloped countries or regions compared to those of developed countries and regions due to the differences in living standards, social-economic factors e.g. unemployment, exhaustion from overwork, domestic violence, isolation, income inequality, illiteracy, breakdown of social network and impacts of climate change, (Forstdahl, 1977; Mormot, 2005; Wilkinson and Pickett, 2012; Zaidi, 1988). Poor people in the low-income countries live in the remote areas e.g. hilly areas, coastal regions, isolated villages, island, river bank sites, embankments and riverine island (char land), state (khas) land in underdeveloped countries as health care facilities and services are often less complete, farther away and therefore mostly costly to reach than in urban hospitals and physician (Jensen and Saupe, 1987).

Table 1: Deaths caused by poverty-related diseases

<table>
<thead>
<tr>
<th>% of deaths caused by/in</th>
<th>Mortality Low-income countries</th>
<th>Mortality High-income countries</th>
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<tbody>
<tr>
<td>Infectious and parasitic disease</td>
<td>34.1</td>
<td>2.1</td>
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<tr>
<td>Respiratory infections</td>
<td>9.9</td>
<td>3.7</td>
</tr>
<tr>
<td>Parental and maternal conditions</td>
<td>8.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Nutritional deficiencies</td>
<td>1.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Tropical diseases</td>
<td>0.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Total ‘poverty-related’ diseases</td>
<td>54.1</td>
<td>6.2</td>
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</tbody>
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Source: WHO, 2002
Lives of poor are very vulnerable to health risk and there exist high health costs relative to their income. Poor people in the low-income countries are frequently suffered by poverty-related diseases causing higher levels of mortality which are comparatively less in high income countries (see Table 1 for more details).

Poor people (landless, marginal farmer, beggar, day laborer, fisherman, small trader, rickshaw puller and other small income groups) of southwest coastal region of Bangladesh are frequently suffered by climate induced diseases and they have no ability to pay for proper treatment. Heat waves, scarcity of drinking water, saltwater intrusion, drought-related food insecurity, cyclones, storm surges, upstream withdraw of freshwater and more utilization of brackish water in the shrimp ponds are responsible for enhancement, spread out, and outbreak of different diseases. The most common diseases of this region are identified as watery diarrhea (with or without presence of blood in stool), high blood pressure, (pre) eclampsia and gestational hypertension of pregnant women, adverse pregnancy outcomes, risk of injuries, causalities, malaria, sleeping sickness, cholera, encephalitis, meningitis, measles, eye infection, skin diseases, fever, malnutrition, and micronutrient deficiency and mental health (Bhattacharjee et al., 2010; Sharma, 2012; Khan et al., 2011, Confalonieri et al., 2007; McMichael and Lindgren, 2011; Tanser et al., 2003).

Public health status along with health care system (e.g., availability of services, accessibility to services, utilization to services, adequate coverage, and effective coverage) in this region are sub standard and under threat compared to those of the other parts of the country, since more than half of inhabitants are poor, ultra poor, day laborer, small traders, marginal farmer, and landless. This situation is very much worsening in the remote areas as health care facilities and services are often less complete, farther away, and therefore mostly costly to reach than in urban areas (Jensen and Saupe, 1987). Along with the socio-economic deprivation, relentless efforts to cope with the numerous coastal hazards have enhanced their vulnerability to health (Parvin, 2008).

1.1 Universal Health Coverage (UHC) for the Poor

Accessing the potential health impact of poor people of the southwest coastal region requires an understanding of the vulnerability of populations, their capacity to respond and adopt to cope with new conditions (Sharma, 2012). The Universal Health Coverage (UHC) can be the leading and alternative measure rather than the existing and traditional health care system in the southwest coastal region of Bangladesh. Universal Health Coverage is surrounded by three dimensions which are shown in Fig. 1.
Universal Health Coverage has four interrelated components (see Table 1 for more details). Full spectrum of quality health services address quality and efficiency, financial protection from direct payment for health services; address high out of pocket by households, coverage for entire population; address equity and efficient medical workforce and infrastructure; address good service.

(Table 2: Components of Universal Health Coverage)

<table>
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<tr>
<th>Affordability (Financial protection)</th>
<th>Accessibility (Equity)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>High quality people-centered and integrated interventions</td>
</tr>
<tr>
<td>Quality (Acceptability)</td>
<td>Services (Availability)</td>
</tr>
</tbody>
</table>

Source: Prepared by the author, 2016

(Source: WHO, 2010)
It's a means to promote the human rights to health. All people, including the poorest, and most vulnerable coastal people will get benefit from the UHC. It can help to reduce out-of-pocket (OOP) expenditure during the catastrophic period through cost sharing (pre-payment and risk-pooling). But it is impossible to imagine in the traditional health care services in Bangladesh. Traditional health care services require high OOP payments that restrict long-term economic survival and lead to further poverty and impoverishment.

On the contrary, UHC can enhance the health care services in Bangladesh and particularly in the southwest coastal region. It can ensure the political benefits (vote winner), health benefits (broader health coverage leads to better access to, and use of, necessary care and improved population health), and economic benefits (reducing high OPP/catastrophic health expenditure, alleviation of poverty, less need of saving, and more resources available for investment).

1.2 Ethics and Health Service for the Poor

Health service for the poor is concerned with the allocation, distribution and use of health related resources. It is possible to give importance to our attention on answering questions of the general form ‘If we provide more health benefits and facilities for the poor with respect to humanist moral philosophies, what are the implications for price mechanism of existing market? Analyses of this form constitute what is sometimes described as ‘positive’ economics. It is strongly argued that anybody can answer this question with restrictive form. In addition, many economists wish also to do ‘normative’ economics, to address questions about what should be done in a particular set of circumstance. To do this, it is necessary to use ethical criteria derived from humanist moral philosophy about how persons, institution and government ought to behave. In humanist philosophies, rights and duties are accorded exclusively to human beings, either as individuals or as communities-while humans may be willing to give them consideration, non-human things have no rights or responsibilities in themselves (Perman et al., 1996).

Under this ethical point of view, values are derived exclusively from human beings and rights can be defined only with respect to human beings. According to Kant, values and rights should be guided by valid rule or universal rule. Under the universal rule, people are made valid by their universality and property can be applied consistently to every individual.

The basis of ethical behavior is found in the creation of rules of conduct that each person believes should be universalized. This principle is known as Kant’s
categorical imperative. One categorical imperative suggested by Kant is the principle of respect for persons. Kant philosophy is strongly supported by the libertarian moral philosophy. Libertarian moral philosophy begins from the Kantian imperative of respect for person, but amends it to the principle of human rights. Libertarianism is a humanist moral philosophy takes as its central axiom the human rights, such as the rights to life, liberty, security and livelihoods (Perman et al., 1996).

The principal goal of industry, firm and organization of modern globalization era is to maximize profits by damaging environment. Carbon emission and water pollution are the concern issues of industrial activities and rapid urbanization process as a whole. More specifically, emitted carbon from the industrial sector can enhance greenhouse gas (GHG) and lead to increase environmental degradation and later loss of security of public health for the poor. Consequently, poor people are becoming double losers e.g. loss of livelihood and reduce capacity for participation of working activities. But in reality industrial sector and corporate level are not giving more importance to moral dignity and respect and welfare for the poor.

1.3 Economics of Responsibility

The presumption that health care costs are the responsibility of individuals is supported by orthodox economics which treats health care as a consumer good (Cooper and Vladeck, 2000). Under this principle, there is no shared responsibility for health care and hence it is said that health care is entirely an individual’s responsibility, while the contributions of government and the private sector are basically optional matter of benevolence rather than responsibility (Champlin and Knoedler, 2008). But this proposition was directly opposed by the humanist moral philosophy and libertarian moral philosophy. Problems like disease, poverty, unemployment and accidents are systemic in nature and beyond the reach of individual choice and personal responsibility.

It is also the responsibility of corporate levels or industrial sectors, NGOs, development partners, local or central government. They can provide health coverage for the poor through the principle of corporate social responsibility (CSR) from corporate level and social safety net program from government with ethical point of view. They play an important role to make ethical commitment and contribution for enhancement the economic, social and environmental conditions and improving the human welling-being or quality of life of the local community especially for the poor and poor society at a large. They can construct
hospital for the poor, provide health cards and provide quality medicine through rationing system. Health care for the poor is treated as a social good and it is fundamentally a matter of collective responsibility (Champlin and Knoedler, 2008).

J. M. Clark first introduced the term “economics of responsibility” in his article entitled “The Changing Basis of Economic Responsibility” published in 1936. Clark argues free market individualism and the public interest that will be adequately served by an absence of intentional action an “economics of irresponsibility” (Clark, 1936). Later, Clark and others suggested that health care especially for the poor is a matter of joint or collective responsibility (Chasse, 1994). Thus, it is clear that responsibility is a social construct. It is not concern issue of mainstream economics. The degree to which corporate levels or industrial sectors, NGOs, development partners, local or central government and poor people have a responsibility for health costs is a matter of custom and evolves over time. Responsibility based health care is able to boost up quality health care for the poor, human well-being and welfare.

The findings of this study ensure improved and quality health care system with low cost for the poor people of the southwest coastal region. Government of Bangladesh (GoB) gets relevant R & D based health policy from this study as GoB is obligated to ensure provision of basic necessities of life including medical care to its citizens (Article 15(a)) and to raise the level of nutrition and to improve public health (Article 18(1)) (Bangladesh Constitution, 1972). The facts, findings, and policy of this study help to formulate and finalize the future Health Policy in Bangladesh and meet the main goals (e.g., goal 1(poverty), and goal 3(good health and well-being)) of SDGs.

This study also provides a robust basis for policy makers, planners, researchers, and development partners for further research, project implementation in the health sector, developed specified policies to boost up our sense and notion “Health for All” which is mentioned UN General Assembly Resolution A/RES/67/81, 2012. The findings of this study are also helpful for similar coastal regions to construct health policy for the poor. This study generate cutting edge knowledge on universal health coverage for the poor of the southwest coastal region, provide management techniques, answer some unexplored research questions and reduce research gap on the similar studies.

The specific objectives of this study are set as to make the relationship between diseases of the poor people and universal health coverage, corporate social responsible and social safety net program, identify the major socio-economic-
demographic (SED) factors that work as catalyst of diseases of poor or low income household and develop an approach for the health strategy for the poor.

The rest of the paper is organized as follows: Section 2 represents the study area, Section 3 presents materials and methods which include pilot survey, sampling strategy and questionnaire survey, Probit model, description of variables that are used in the model, Section 4 presents results and Section 5 will present conclusion and policy implications.

2. Study Area

Geographical and climatic characteristics have long been a concern issues to human health, mortality, morbidity, the length of life, poverty and human well-being (Pavlovic at al., 2000). Due to the vulnerability to climate change, natural hazards, poverty and human health, this study considered its study area as Khulna, Satkhira and Bagerhat districts located in the southwest coastal region of Bangladesh. This region is part of an active delta of large Hiamalayan Rivers and is vulnerable to climate change and natural hazards due to its disadvantaged geographic location and its flat and low-lying topography. People of this area frequently fought against the devastating storm surge, cyclone, salinity, water logging and other natural hazards. As a result, poor people suffer a lot and their livelihood standard degrades as well. This area is located between latitude from to and longitude from to of southwest coastal region. This area is bounded by the Ganges River in the North tributaries from the Meghna River in the East, an international boundary in the West and the Bay of Bengal in the South.

The reasons for selection of study area (southwest coastal region) are as follows:

01. This area is vulnerable to climate change.
02. Water logging is common scenario of this region.
03. Food security is under threat due to salinity and other climatic factors.
04. People are frequently affected by climate induced diseases.
05. Most of the people are poor and unable to bear medical expenses.

In addition, there is discrimination in health care facility in this region compared to those of other regions of Bangladesh. The index of treatment facility and education, healthcare facility for infant, child, and poor and eligibility of health care center is now in backward position. Isolation of geographical condition and lack of strong political and corporate commitments are also enhancing further backwardness of health sector of this region.
3. Materials and Methods

Social science research frequently seem to face a “methodological dilemma” that is, how to effectively synthesize formal and informal methods and quantitative and qualitative data (Khan, 1998). This research required, on one hand, quantitative data on different attributes and socio-economic variables in the context of universal health coverage for the poor of the southwest coastal region of Bangladesh. On the other hand, it needs to address more qualitative issues such as overall health status for the poor. Many researchers share the above concern about how to judiciously balance diverse information and methods and to suit them to the demands of a particular research (White, 1992; Rahman, 1994; Ahmed, 1991).

Accordingly, in line with “methodological pluralism”, this study deployed a combination of interpretive qualitative techniques such as pilot survey and quantitative techniques of sampling, questionnaire survey and Probit model. Both of these techniques were complements to each other in this research.

3.1 Pilot Survey

To reduce probable non-response and biased response associated with questionnaire survey, this study conducted three short pilot surveys from (21-24) August, 2016 at Paikgachha Upazila of Khulna district, Shyamnagar Upazila of Satkhira district and Rampal Upazila of Bagerhat District.

Outdoor patients and sometimes accompanied persons of Paikgachha Upazila Health Complex, Shyamnagar Upazila health Complex and Rampal Upazila Health Complex were the major integrated parts of that pilot survey. 30 (10+10+10) respondents from above mentioned Health Complexes were selected for interview.

3.2 Sampling Strategy and Questionnaire Survey

To represent the population as a whole, a comprehensive sample framework is necessary (Iqbal, 2015). In this study, the sample frame is a set of poor people from different groups depending on the level of income. This study followed the purposive sampling technique.

The household head represented his/her household members as the respondent for this survey. Personal interviews were conducted with head of households followed by a structured questionnaire to collect information regarding health care status, donation status (CSR and social safety net programme) for health care,
pattern and frequency of diseases, age, income, family members and educational attainment. 142 respondents were selected for the interviews in this study. Major characteristics of the respondents of the study are depicted in the following figures.

**Figure 2: Occupational status**

- Landless: 32%
- Bagger: 11%
- Day labor: 16%
- Marginal farmer: 28%
- Fisherman: 5%
- Small traders: 8%

Source: Prepared by the author based on his collected data

**Figure 3: Disease patterns**

- Diarrhoea: 36%
- Asthma: 37%
- Pneumonia: 13%
- Cholera: 6%
- Skin disease: 5%
- Malaria: 3%

Source: Prepared by the author based on his collected data

Most of the respondents of the study area are landless. The respondents are also including beggars, day laborers, marginal farmer, fishermen and small traders. They frequently suffered diarrhea, asthma, pneumonia, cholera, skin disease and malaria.
3.3 Model Specification

For empirical assessment, this study used Probit or Normit model. This model is suitable for binary responses. It is also suitable for cumulative density function that emerges from the normal cumulative function (Iqbal et al., 2014; Munizaga and Alvarez-Daziano, 2001). The estimating model that emerges from the normal cumulative function is popularly known as the Probit model. The general form of Probit model is as follows:

\[ Y_i = \beta_1 + \beta_2 X_i + u_i \]  

(1)

where \( X_i \) is explanatory variables. Let \( Q-1 \) if the poverty is related with disease and \( Q-0 \) otherwise.

Now it is assumed that for each household there is a threshold level of the disease index, namely \( \gamma_1 \), such that if \( \gamma_1 \) exceeds \( \gamma_1 \), the household will be threatened for disease, otherwise it will not. The threshold \( \gamma_1 \), like \( \gamma_1 \), is not observable, but we can assume that it is normally \( \gamma_1 \) distributed with the same mean and variance. Under this circumstance, it is possible not only to estimate the parameters of equation (1) but also to get some information about the unobservable disease index.

Given the assumption of normality, the probability that \( \gamma_1 \) is less than or equal to \( \gamma_1 \) can be computed from the standardized normal cumulative density function as

\[ P_1 = P_1(Q = 1) = \Pr(Y < Y_1) = \Phi(\gamma_1) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\gamma_1} e^{-t^2/2} dt \]  

(2)

where \( t \) is a standardized normal variable, i.e., \( t \sim N(0,1) \).

Since \( P_1 \) represents the probability that an event will occur here the probability of falling in disease. It is measured by the area of the standard normal curve from \( -\alpha \) to \( P_1 \). If we want to obtain information on outcome variable \( (P_1) \) and estimate the parameters of explanatory variables \( \beta_1, \beta_1 \), we take the inverse of equation (2) and obtain.

\[ Y_1 = \beta_1 + \beta_2 X_i + u_i \]  

(3)

3.3.1 Description of Variables that are used in the Probit Model

This study used different variables and attributes in its model. These variables are described as follows:
Disease (outcome variable): Disease is an abnormal condition of a part, organ or system of an organism resulting from various causes such as infection, inflammation, environmental factors, social and economic factors, genetic defect characterized by an identifiable group of signs, symptoms or both.

Household head’s individual characteristics: Household head’s individual characteristic consider the age and sex of the head of household (Iqbal et al., 2014). This study considered only the age of the head of household.

Educational attainment (independent variable): Educational attainment refers to the highest level of education that an individual has completed (United States Census Bureau, n.d.). In most of the cases, the head of the household of the study area has either primary education [basic education at home] or illiterate [having no literacy].

Family member (independent variable): It indicates the number of family member of the household.

Household income (independent variable): Household income is generated from service, business, donation, aid and remittance from abroad. It is an important determinant of poverty.

Climatic variability (independent variable): The way climate fluctuates yearly above or below a long-term average value is known as climatic variability (Michigan Sea Grant, n.d.).

Corporate Social Responsibility (independent attribute): The definitions of corporate social responsibility vary from place to place, industry to industry and will change over time. It is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis.

Social Safety Net Program (independent attribute): Social safety net program is associated with protecting the poor. Social safety net program is aimed at preventing people from falling below a certain poverty level and to help cope with adverse income fluctuations (UNDP, 2012).

Universal Health Coverage (independent attribute): UHC is defined as every person, everywhere, has access to quality health care without suffering financial hardship (WHO, 2014).

The above mentioned variables and attributes are used in the Probit model quantify their impacts on diseases for the poor in the study area. Table 3 describes the used variables and attributes in the Probit model with their expected sign.
4. Results and Discussion

As shown in table 4 below, most of the variables and attributes are statistically significant with expected sign at 0.01 percent, 0.05 percent and 0.10 percent levels respectively.

According to the model, all of the variables are significant except age. The general observation of the field survey identified that age of the respondents is inconsistent because most of them are illiterate and less educated and do not know about their exact age. Most of the respondents provide imaginary age information to the data collector. Thus, we cannot say anything about the relationship between age and diseases of the southwest coastal region. Among all statistically significant variables and attributes of the model, educational attainment, household income, social safety net program, corporate social responsibility and universal health coverage are negatively related with diseases which implies the enhancement the educational attainment, household income, corporate social responsibility, social safety net program and universal health coverage results in decrease morbidity and mortality of the poor people as well. Poor people in the

<table>
<thead>
<tr>
<th>Outcome/Independent variable and Attributes</th>
<th>Data type</th>
<th>Description</th>
<th>Expected sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>dis: Disease (Outcome variable)</td>
<td>Binary</td>
<td>1: Yes</td>
<td>(+)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0: Otherwise</td>
<td></td>
</tr>
<tr>
<td>age: Age (Independent variable)</td>
<td>Continuous</td>
<td>Age of the respondents</td>
<td>(-)</td>
</tr>
<tr>
<td>eda: educational attainment (Independent variable)</td>
<td>Binary</td>
<td>1: literate</td>
<td>(-)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0: Otherwise</td>
<td></td>
</tr>
<tr>
<td>fam: Family member (Independent variable)</td>
<td>Continuous</td>
<td>No. of family member</td>
<td>(+)</td>
</tr>
<tr>
<td>hin: Household income (Independent variable)</td>
<td>Continuous</td>
<td>Household monthly income</td>
<td>(-)</td>
</tr>
<tr>
<td>clv: Climatic variability (Independent variable)</td>
<td>Binary</td>
<td>1: Yes for increase diseases</td>
<td>(+)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0: Otherwise</td>
<td></td>
</tr>
<tr>
<td>csr: Corporate Social Responsibility (Independent attribute)</td>
<td>Binary</td>
<td>1: Yes for control of diseases</td>
<td>(-)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0: Otherwise</td>
<td></td>
</tr>
<tr>
<td>ssnp: Social Safety Net Program (Independent attribute)</td>
<td>Binary</td>
<td>1: Yes for diseases</td>
<td>(-)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0: Otherwise</td>
<td></td>
</tr>
<tr>
<td>uhc: Universal health coverage (Independent attribute)</td>
<td>Binary</td>
<td>1: Yes for good health care</td>
<td>(-)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0: Otherwise</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Description of variables and attributes with expected sign
southwest coastal region have positive perception on education, income, corporate social responsibility, social safety net program and universal health coverage for reduction of health threat. Educated people are more sincere and cautious about food value and habit, life style, disease and nutrition. Poor people have inconsistent income level of this region. They have less work opportunity due to salinity, water logging and other catastrophic events and hence, their livelihood patterns are under threatened. Income of poor people varies from time to time and location to location. Therefore, poor people do not get access to good health care facilities.

Corporate level plays an important role to contribute financial assistance for the treatment of poor through the approach of corporate social responsibility. Social safety net program works toward livelihood security especially for the poor. The universal health coverage is one of the leading and alternative measures rather than the existing and traditional health care system not only in the southwest coastal region of Bangladesh but also in other regions of the world. It enhances human well-being and quality and accessible health care for all. Estimated result of parameters shows that 1 percent increase in education will lead to decrease diseases 21 percent. Furthermore, 1 percent increase in household monthly income, corporate social responsibility, social safety net program and universal

**Table 4: Parameters estimate of diseases of the southwest coastal region of Bangladesh**

<table>
<thead>
<tr>
<th>Independent variables/Attributes</th>
<th>Coefficient</th>
<th>Standard error</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td>0.30975E-01</td>
<td>0.45091</td>
<td>0.13901</td>
</tr>
<tr>
<td>eda</td>
<td>-0.21982**</td>
<td>0.54120</td>
<td>0.05109</td>
</tr>
<tr>
<td>fam</td>
<td>0.53122***</td>
<td>0.62096</td>
<td>0.01101</td>
</tr>
<tr>
<td>hin</td>
<td>-0.57090**</td>
<td>0.67091</td>
<td>0.05001</td>
</tr>
<tr>
<td>clv</td>
<td>0.32091**</td>
<td>0.21788</td>
<td>0.03601</td>
</tr>
<tr>
<td>csr</td>
<td>-0.28890E-1***</td>
<td>0.22098</td>
<td>0.00000</td>
</tr>
<tr>
<td>ssnp</td>
<td>-0.86703-1***</td>
<td>0.34987</td>
<td>0.00100</td>
</tr>
<tr>
<td>uhc</td>
<td>-0.54230***</td>
<td>0.45551</td>
<td>0.00000</td>
</tr>
<tr>
<td>constant</td>
<td>1.45904*</td>
<td>0.12101</td>
<td>0.07189</td>
</tr>
</tbody>
</table>

McFadden (pseudo) $R^2$ 0.37730
Log-likelihood -354.0912
Number of observations (n) 142

Descriptive statics for continuous data
Age: Mean=41.13, Standard deviation=7.09, Minimum value=20, Maximum Value=71
Family member: Mean=6.42, Standard deviation=1.01, Minimum value=1, Maximum value=7
Income: Mean=4749.52, Standard deviation=713.64, Minimum value=7000, Maximum value=1000
***Significant at 1% (0.01), **Significant 5% (0.05), and *Significant 10% (0.10)
health coverage will lead to decrease diseases 57 percent, 2 percent, 8 percent and 54 percent respectively and vice-versa.

On the contrary, the variables, e.g., family members and climatic variability are positively related with the diseases of the southwest coastal region which implies that these variables go to the same direction as diseases. Poor households are generally consisting of large family members in southwest coastal region. Large household requires large amount of treatment cost. Tidal waves, salinity, cyclones, storm surges, water logging, drought, drinking water scarcity are the common natural hazards in this region and these are associated with mortality, morbidity, the length of life, livelihoods and human wellbeing. Due to the widespread poverty and climatic variability, poor people are suffering a lot from climate induced diseases. The estimated result of parameters shows that 1 percent increase in family member will lead to increase 53 percent disease and it will be 32 percent under the increase climatic variation condition and vice-versa.

The coefficients of the model are ranged from + 0.53122 to -0.57090 (except intercept/constant value). The overall explanatory power of the model estimated could be assessed using McFadden’s (pseudo) $R^2$ (Birol et al., 2005; Hensher et al., 2005; Agimass and Mekonnen, 2011). While pseudo $R^2$ statistics between 0.2 and 0.4 are said to be adequate (Bennett and Blamey, 2001; Birol et al., 2005; Agimass and Mekonnen, 2011), the corresponding result for the Probit model is higher 0.2 and it is 0.3. Thus, pseudo $R^2$ suggested that Probit model of this study is well fitted model. It indicates that 37 percent of the variation of the diseases is explained by the associated variables.

5. Conclusion and Policy Implications

Poor people have worse health outcomes than better-off people and this association reflects causality running in both directions: poverty breeds diseases and diseases keep poor people poor (Wagstaff, 2002). The evidence on inequalities in health between the poor and non-poor and on the consequences for impoverishment and income inequality associated with health care expenses. Government and corporate level interventions are highly required for improving the condition. Government can introduce monthly health care allowance for the poor through social safety net program. Government can also incorporate compulsory healthcare education at the primary and secondary level and increase poor people to keep their family size smaller by giving different mode of incentives like monthly financial support and job opportunity.
In addition, government can introduce universal health coverage for the poor in the southwest coastal region with cost sharing approach. As we have no control over the climatic variability, we give more importance on R&D based adaptive measures for the poor under the climatic variability condition and it should come from government level and development partners. Corporate sectors should come forward to help the poor for ethical ground. They can provide sponsorship of the health care for the poor and set up temporary health camp or permanent hospital for the poor. Pharmaceutical companies should provide medicine for the poor with reduced price like price flooring approach.
References


Poverty Eradication/Reduction and Ethics - Rural Women Perspective

RASHEDA AKHTAR KHANAM*

Women are a marginalized sector in Bangladesh. The question of Poverty reduction reminds us about the sufferings of a rural woman working almost eighteen hours a day without any remuneration. From morning till night, she is cooking, washing, feeding the children and all household members, collecting fuels from outside, and looking after household cattle, poultry and what not. In a patriarchal society like ours, it is accepted as the normal duty of a housewife. But still her labour is not recognized, as she is not earning any wages. Even the income from her productions like eggs, vegetables sold in the market goes to the hand of male head of the house because the product is sold by him. Moreover, it is supposed that the husband and in-laws have every right to beat her on any flimsy ground.

Bangladesh is said to be the best gender equal country in Southeast Asia. The Prime Minister, Speaker, Leader of the opposition and a few other Ministers are all women. But that does not mean that all women are empowered. Gender equality does not mean anything in a patriarchal mindset of a society like ours. For example, let us take a normal case, suppose husband and wife are both working in offices. Both are earning members. But what we see is, after coming from office the wife rushes to the kitchen, prepare some snacks and tea for her husband and children, while husband sits on a sofa waiting for the tea to come. If it happens any day that the wife is late due to official work, she is sure to find on her return, children are crying and a gloomy face of the husband. So the outlook of people needs to be changed.

* Vice-President of Women for Women, Former Director of Women Entrepreneurship Development Project (WEDP) of BSCIC, Former Consultant of Technology & Entrepreneurship Development, UNDP
It is to be noted that women workforce is gradually increasing. It has been found in a report by World Bank that women work force in a decade will increase from present 34% to 42% and it will add 1.8% in the GDP. This figure was mentioned by the World Bank President Zim Young Kim at the IMF meeting held in Lima, Peru, in October 2015.

A report from Bangladesh Bureau of Statistics also shows that women labour force will increase from present 30% to at least 1/3 of the total labour force of Bangladesh by 2021. It also reports that from 2001 to 2011 this work force has increased from 2.7 million to 5.5 million. This growth rate is very encouraging.

But there are some constraints which are found common among these poor women. These are:

1. **Lack of education**: Low level of education and high illiteracy rate among rural women act as one of the most important constraints on increasing the productivity and the management of their enterprises.

2. **Lack of technical skill**: Rural women use antiquated technology, which they have acquired as a traditional, handed down skill. Absence of technical skill impedes women’s entry into technologically upgraded activities with potential for better productivity and increased profitability.

3. **Social and cultural inhibitions**: Unfavourable cultural practices and social inhibitions act adversely for the development of entrepreneurship among women. Income generating activities requiring women to go out of their homestead to work are looked down upon and discouraged.

4. **Lack of adequate and effective training facilities**: Rural women get less chance to acquire new skills or to improve their traditional skills due to lack of skill improvement training facilities in local areas. There are a few government and non-governmental organizations which arrange skill training for rural women. But the training imparted is not always need-based. There is a tendency for continuing with stereotyped activities.

5. **Too much burden of household works**: As women involved in income earning activities also have to perform household chores, they often find it difficult to devote the time or the energy to carry out income earning activities properly. Not much has been done by way of introducing technologies at an affordable price to reduce the burden and drudgery of the household work.

6. **Lack of credit facility (Loan) or fund constraints**: Since women are socially at a disadvantaged position, they have less access to credit facilities, both
institutional and non-institutional. Banks generally do not like giving loans to women. This attitude of banks restricts the access of independent women entrepreneurs to credit. This is a big obstacle for women to become entrepreneurs. Over 60.2% of SME entrepreneurs demand for finance remains unmet because banks or other non bank financial institutions do not want to lend women, a survey found. This is reported by International Finance Corporation, a branch of World Bank Group. Because most of the women, particularly the poor women have no property in their own name. Banks want collateral. However our experiences show that these poor women are very regular in loan repayment.

7. **Sale of the product** – Marketing is a constraint that women face in marketing their products. Due to transport cost, poor financial position and lack of knowledge about the actual market price, they have to sell their product at low prices. In this case, mostly they have to depend on the male member of the family.

8. **Lack of general awareness**: Though some policies have been adopted by the government to improve the overall situation of women, rural women have not been getting much benefit from them. Due to their poverty, ignorance and general lack of awareness, they cannot avail themselves of these opportunities. Nor can they seek out facilities that may be available for their benefit.

A study shows that from processing paddy seedbed to marketing, there are 23 steps out of which women are conducting 17 steps. 65% of agricultural activities including poultry and cattle rearing are done by women. Besides these women are working in export oriented industries like garments, frozen fish, etc. About 90% of workers, in these industries are women and only in garments industries 35 lacks women are working. But there is no recognition of their labour. Most of the time they are also victim of wage differences particularly in private sector.

Bangladeshi poor women are also working in Middle East countries. They are earning a lot of foreign exchange for the country. But there they are also subject to violence and exploitation. Government cannot give them much support. Human Rights Watch mentioned that Bangladeshi women are getting one of the least wages. They are getting only about $200 per month while women from the Philippines get almost double of this amount. It is mentioned by Rothna Begum, Middle East women rights researcher.

1. In order to increase the productivity of women and thereby their income, a number of steps are needed. These are:

2. Introduction of less costly technology in household works, so that it can reduce time
3. Equal distribution of household works between male and female members
4. Participation of women in decision making by changing attitude of the family and society and for this, workshops including men have to be arranged.
5. Change of property ownership law
6. Making both print and electronic media women friendly and supportive
7. Information about new products and new less costly technology has to be made accessible to women

Again poor women, who want to become entrepreneurs on their own, also face many constraints. So they need some organizational assistance, like,

In order to increase the productivity and remuneration of women, some steps need to be taken, such as:

1. Training to be provided in different fields like
   a. Skill development
   b. Managerial capacity, including Accounting and Bookkeeping.
   c. Informational Technology.

2. Arrangement of credit
3. Providing basic information about the demand for the product they want to produce and available supply in the market
4. Arrangement of workshops

5. Educational exchange tour for skilled women

This will require available facility in the area, information on customers’ need and also on their choice. Supply will ensure sale, if right products, demand oriented products are made.

Women are encircled in a vicious circle of poverty. They are poor because they are poor. Some of these factors are shown below which are contributing in creating this circle,

But women will come out of this vicious circle, if some structural supports are provided to them from any government or non-government organization.

For a sustainable project, which can be done by women in a group or single handed, investing a big amount will ensure financial viability, however, a package of support is also very much important. As shown below:
So to ensure proper support services to bring out the growth potential in women run enterprises following recommendations are made.

**Recommendations**

1. Making a gender sensitive planning considering both gender realities and economic realities
2. Making women visible in decision making
3. Chalking out programmes addressing poverty and destitution
4. Sector wise gender allocation
5. Mainstreaming women in development program
6. Special credit facilities for women
7. National and political commitment for women’s empowerment at all levels
8. Formulating and implementing strict rules to eliminate all sorts of violence against women and trafficking of women and girl child.
9. Programmes are to be chalked out in mass media to reflect gender perspective and to focus on positive images of women and girls
10. Raise the rate of female participation in the active labour force (employed) to bring it at par with men

Equal rights to property, including land is very much essential for eradication of poverty. About 45% of women are directly involved in agriculture but only 22% of them own land. Religion based inheritance law and not considering women as an earning member of the family are some of the major reasons for women’s poverty.

Violence is connected with poverty. Poor women are the victim of violence by husbands and in-laws. All because they demand more and more dowry from women’s family which they cannot afford. But if these women can be made an earning member through entrepreneurship development, this violence will be stopped.

One of the SDG goals is gender equality and we will not be able to achieve it by keeping 40% of the population in poverty.

At the 136th anniversary of the Inter-Parliamentary Union, recently held in Dhaka, women’s political empowerment and equal access to leadership at all levels have been emphasised as fundamental to achieving sustainable development goals. And it is also important to empower women economically, as economic empowerment gives them voice that is critical both in the family and also outside.
Economics and Ethics
Corporate Social Responsibility Orientation:
A Case Study

MIHIR KUMAR ROY*
F.A.KHAN PANNI**
SHAHRIAR PARVEZ***
AZADULLA T. SHANTU****

Abstract: The study on “Corporate Social Responsibility Orientation: A Case of Mutual Trust Bank Ltd. (MTBL)’’ consists of the literature review and interpretation of result found from the survey. MTB is definitely not one of the pioneers among the private commercial banks. MTB has speeded its business in the fields of Corporate, Retail and Investment Banking. So far, the performance of MTB in these fields has been good enough and the business is growing successfully. 2008 has been quite a successful year for MTB as the organization did much better from the previous years. This proves that the organization is on the right path to becoming the benchmark in the banking industry. MTB wants to be famous for its retail banking facilities. It is continuously coming up with new deposit schemes to attract clients. Customers are regularly coming to deposit their funds in different schemes like Savings, Fixed deposit and Deposit Pension Schemes. MTB is continuously promising the clients with attractive rate and return policy on such schemes and the demand of MTB is increasing day by day. To attract more clients MTB has come up with the facilities of locker system. MTB is also earning more revenue, thanks to its investment banking policy. Clients of MTB are extremely happy with the investment banking system of MTB. Since MTB’s

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EPS price is raising in the stock market that has further increased the Investment banking popularity. MTB has an efficient human resource department which is continuously working to encourage the employees and make them more efficient and productive. One of the main factors behind the success of MTB is its employees. MTB has created training facilities for such employees and because of that they are getting highly trained. Besides the foreign exchange branches of MTB are open on Saturday (Holiday), customers appreciate it a lot and as a result of that the operating profit of MTB is increasing day by day.

1.1 Background of the study

This paper is titled ‘Corporate Social Responsibility (CSR) orientation for the Mutual Trust Bank limited (MTB) Gulshan Branch. The reason for choosing CSR as research topic was that CSR is directly linked with Marketing. CSR can help a company to create brand image through social awareness and also through advertising of that company. The actual purpose of CSR is to create positive characteristics of that company through socially responsibility.

1.1.1 Significance and importance of this study

This study would be significant in a sense that it will be a practical example regarding the CSR for MTBL. This study will be helpful in realizing the MTBL current status regarding CSR, which will be helpful in attaining more profitability customer in context of CSR. This study will also be an encouraging issue to the banking sector and also students, in providing useful guidelines for the further study. Through this study the company will also get beneficiary message in arising and improve their CSR activities.

1.2 Concepts and Types of CSR

The idea behind corporate social responsibility is that companies have multiple responsibilities to maintain. These responsibilities can be arranged in a pyramid, with basic responsibilities closer to the bottom. As a business meets lower-level responsibilities that obligate it to shareholders and the law, it can move on to the higher level responsibilities that benefit society. In summary, the total corporate social responsibility of business entails the simultaneous fulfillment of the firm’s economic, legal, ethical, and philanthropic responsibilities. Stated in more pragmatic and managerial terms, the CSR firm should strive to make a profit, obey the law, be ethical, and be a good corporate citizen.
CSR consists of several responsibilities but among them these 6 carries most important and well known to the corporate sector around all over the world. Detail and explanation are given below, of this Six CSR.

They are:

- a) Philanthropic Responsibility
- b) Ethical Responsibility
- c) Legal Responsibility
- d) Economic Responsibility
- e) Environment Contribution
- f) Consumer protection

1.2.1 Philanthropic Responsibility

Philanthropic corporate social responsibility involves donating funds, goods, or services to another organization or cause. For example, the local branch of a bank might donate money to fund the purchase of uniforms for a school sports team, or a health care company might donate to the city opera. Some critique organizational philanthropy for not being incorporated directly into an organization’s core business plan. Philanthropic activity is not always tracked as part of social accounting, making it difficult for these efforts to be audited or held accountable to external benchmarks. Corporations increasingly hold charities accountable for the use of donations and for measuring performance relative to their mission.

In general, philanthropy usually refers to organized donations by wealthy individuals or organizations to other charitable foundations or events, but can be used to describe any private action performed for public good. Anyone can be a philanthropist provided their actions or money are used for the good of society. Most philanthropic gestures occur over a longer period of time and are usually targeted to a specific purpose or in pursuit of a defined goal. For example, many organizations have promised specific amounts of money to organizations in Africa in order to fight the AIDS epidemic. Other large institutions, such as the Gates
Foundation, have donated money to a variety of programs and organizations around the world in pursuit of furthering educational opportunities for everyone.

Philanthropy encompasses those corporate actions that are in response to society’s expectation that businesses be good corporate citizens. This includes actively engaging in acts or programs to promote human welfare or goodwill. Examples of philanthropy include business contributions to financial resources or executive time, such as contributions to the arts, education, or the community. A loaned-executive program that provides leadership for a community’s United Way campaign is one illustration of philanthropy. Communities desire firms to contribute their money, facilities, and employee time to humanitarian programs or purposes, but they do not regard the firms as unethical if they do not provide the desired level. Therefore, philanthropy is more discretionary or voluntary on the part of businesses even though there is always the societal expectation that businesses provide it.

1.2.2 Ethical Responsibility

Although economic and legal responsibilities embody ethical norms about fairness and justice, ethical responsibilities embrace those activities and practices that are expected or prohibited by societal members even though they are not codified into law. Ethical responsibilities embody those standards, norms, or expectations that reflect a concern for what consumers, employees, shareholders, and the community regard as fair, just, or in keeping with the respect or protection of stakeholders’ moral rights.

In one sense, changing eras or values precede the establishment of law because they become the driving force behind the very creation of laws or regulations. For example, the environmental, civil rights, and consumer movements reflected basic alterations in societal values and thus may be seen as ethical bellwethers foreshadowing and resulting in the later legislation. In another sense, ethical responsibilities may be seen as embracing newly emerging values and norms society expects business to meet, even though such values and norms may reflect a higher standard of performance than that currently required by law.

Ethical responsibilities in this sense are often ill-defined or continually under public debate as to their legitimacy, and thus are frequently difficult for business to deal with. Superimposed on these ethical expectations emanating from societal groups are the implied levels of ethical performance suggested by a consideration of the great ethical principles of moral philosophy. This would include such principles as justice, rights, and utilitarianism.
The business ethics movement of the past decade has firmly established an ethical responsibility as a legitimate CSR component. Though it is depicted as the next layer of the CSR pyramid, it must be constantly recognized that it is in dynamic interplay with the legal responsibility category. That is, it is constantly pushing the legal responsibility category to broaden or expand while at the same time placing ever higher expectations on businesspersons to operate at levels above that required by law.

1.2.3 Legal Responsibility

Society has not only sanctioned business to operate according to the profit motive; at the same time business is expected to comply with the laws and regulations promulgated by federal, state, and local governments as the ground rules under which business must operate. As a partial fulfillment of the “social contract” between business and society firms are expected to pursue their economic missions within the framework of the law. Legal responsibilities reflect a view of “codified ethics” in the sense that they embody basic notions of fair operations as established by our lawmakers. They are depicted as the next layer on the pyramid to portray their historical development, but they are appropriately seen as coexisting with economic responsibilities as fundamental precepts of the free enterprise system. A company’s legal responsibilities are the requirements that are placed on it by the law. Next to ensuring that company is profitable, ensuring that it obeys all laws is the most important responsibility, according to the theory of corporate social responsibility. Legal responsibilities can range from securities regulations to labor law, environmental law and even criminal law.

1.2.4 Economic Responsibility

Historically business organizations were created as economic entities designed to provide goods and services to societal members. The profit motive was established as the primary incentive for entrepreneurship. Before it was anything else, business organization was the basic economic unit in our society. As such, its principal role was to produce goods and services that consumers needed and wanted and to make an acceptable profit in the process. At some point the idea of the profit motive got transformed into a notion of maximum profits, and this has been an enduring value ever since. All other business responsibilities are predicated upon the economic responsibility of the firm, because without it the others become moot considerations.
It is subject to compliance with the law, build up a fair, safe and stable competitive industry and consistently create economic value through best professional operation for State, shareholders, employees, clients and the general public.

1.2.5 Environment Contribution

Since the Brundtland Report was published in 1987 as a result of World Commission on Environment work, business and management scholars have been grappling with the question of how and why corporations should incorporate environmental concerns into their own strategies. Today many companies have accepted their responsibility to do no harm to the environment. An earlier emphasis on strict governmental regulations has ceded ground to corporate self-regulation and voluntary initiatives. As a result the environmental aspect of CSR is defined as the duty to cover the environmental implications of the company’s operations, products and facilities; eliminate waste and emissions; maximize the efficiency and productivity of its resources; and minimize practices that might adversely affect the enjoyment of the country’s resources by future generations.

In the emerging global economy, where the Internet, the news media and the information revolution shine light on business practices around the world, companies are more frequently judged on the basis of their environmental stewardship. Partners in business and consumers want to know what is inside a company. This transparency of business practices means that for many companies, CSR is no longer a luxury but a requirement. Anyone with children has a stake in future generations and the ability of the environment to support life. But environmental good practice is also about business efficiency - it’s about the best use of valuable raw materials, and feeding the benefits of action straight through to the bottom line.

The purpose of this CSR is mainly to support State industrial policies and environmental protection policies, conserve energy, protect and improve the natural ecological environment and support sustainable development of the society. With CSR activity, favorable changes need to be produced both within and outside the corporate environment. The favorable influence inside and outside the corporate environment means two types of performance: social performance of the CSR itself and corporate performance. A company needs to positively affect CSR activity in its core business (profit seeking business) in a broad sense, and pursue its corporate goals by attaining the social performance of CSR itself utilizing its core business resources and capabilities, and stakeholders, as well as designing CSR activity so that its resources and capabilities, and stakeholders can be expanded.
1.2.6 Consumer Protection

Customers are the lifeblood of every business, including both retail and business-to-business customers. Whether or not you think of customer satisfaction as a social responsibility issue, every business owner will think of it as a profitability issue! Time and resources put into understanding the customer perspective is always a good investment. Strong and effective customer relations can be the direct route to long term success. Listening to, and engaging, your customers are the first steps to building good customer relations. As a starting point, many businesses measure their customers’ satisfaction to determine their expectations and assess their experience, including such factors as service, price, quality, value, product or service experience, and broader social responsibility matters in order to improve their customer relations, foster goodwill and inform continuous improvement of the customer experience. Another good practice is to provide mechanisms for customer feedback via comment cards or a dedicated email address (customerservice@company.com). By effectively listening to your customers and acting upon their feedback you will get insight into customer needs and build customer loyalty. Engaged and satisfied customers are more likely to give you repeat business and recommend you to others. Customer trust is a critical success factor for any business.

Research conducted by Edelman, a global public relations firm, shows that “trust and transparency are as important to corporate reputation as the quality of products and services. Building customer trust in your company and your products and services is the key route to building a successful business. Much of this trust centers on interactions with employees. Strong customer-employee relationships can build customer confidence. Companies can further nurture trust by seeking and acting on customer feedback to improve the company’s value proposition.

It bears considering general guidelines and standards which have been established for good consumer relations. For the retail customer, the UN has adopted a set of “Guidelines for Consumer Protection”, including:

- Protect consumers from hazards to their health and safety
- Promote and protect the economic interests of consumers
- Access to information to enable informed choices
- Provide consumer education, including education on the environmental, social and economic impacts of consumer choice
- Make available effective consumer redress and
- Promote sustainable consumption
1.3 Objectives of the Study

- To give an overview of CSR in the banking sector
- To give an overview of MTBL, Gulshan branch with reference to CSR.
- To analyze the practice CSR by the branch.
- To suggest ways and means to improve the CSR at the branch level.

1.4 Methodology

1.4.1 Variable Aspect of the Study

In this study the Six (6) types or dimension of CSR were been discussed throughout the report.

a) Philanthropic responsibility: Most philanthropic gestures occur over a longer period of time and are usually targeted to a specific purpose or in pursuit of a defined goal.

b) Ethical responsibility: The business ethics movement of the past decade has firmly established an ethical responsibility as a legitimate CSR component. Though it is depicted as the next layer of the CSR pyramid, it must be constantly recognized that it is in dynamic interplay with the legal responsibility category.

c) Legal responsibility: Society has not only sanctioned business to operate according to the profit motive; at the same time business is expected to comply with the laws and regulations promulgated by federal, state, and local governments as the ground rules under which business must operate.

d) Economic responsibility: At some point the idea of the profit motive got transformed into a notion of maximum profits, and this has been an enduring value ever since. All other business responsibilities are predicated upon the economic responsibility of the firm, because without it the others become moot considerations.

e) Environment contribution: In the emerging global economy, where the Internet, the news media and the information revolution shine light on business practices around the world, companies are more frequently judged on the basis of their environmental stewardship. Partners in business and consumers want to know what is inside a company. This transparency of business practices means that for many companies, CSR is no longer a luxury but a requirement.
f) **Consumer protection:** By effectively listening to your customers and acting upon their feedback you will get insight into customer needs and build customer loyalty. Engaged and satisfied customers are more likely to give you repeat business and recommend you to others. Customer trust is a critical success factor for any business.

### 1.4.2 Data source of the study

In this report the primary data were collected from two (2) sources, distinguished as part A & B.

**Part A:** The variable is complete census of 25 employee/people.

- **In part B:** The variables are 35 customers, selected using convenience sapling method.
- Because n>30, which is the standard in context of statistically. Reason for choosing this is mainly because of the limitation in time and financial.

**Part A-** Primary data: consists of the employee of MTB’s only Gulshan Branch as respondent.

Census techniques were used as the respondent was 25 people which are the complete employee of that branch.

The distribution of the employee on the department basis:

- Manager: 1 employee
- Deputy Manager: 1 employee
- General Banking: 6 employee
- Cash: 4 employee
- Remittance: 3 employee
- Credit: 6 employee
- Smart Banking: 2 employee
- Internee: 2 employee

**Research Method**

- Face to face interview was used in the method of data collection of Gulshan Branch employee.

**Research Instrument**

- The research instrument used in the process of process was Questionnaire.
• Questionnaire was adopted from Carroll & Shabana (2010) on the topic of Philanthropic, Ethical, legal & Economic responsibilities and another from which questionnaire was adapted from Sandhu & Kapoor (2010) on the topic of Environment contribution.

Part B: Secondary data (Documentation analysis)

Because of all the result showed extremely positive, therefore the result arise several doubtful thought. To minimize that doubtful thought documentation were used, and therefore for reliability of data/documentation, the collection of data were collected from their Official website as a fact or supporting data to prove the result, even after discussing with the employee of that branch they also suggested that all of their CSR activities were recorded in their official website. Therefore, their official website was used in collecting the secondary data.

1.4.3 Analysis and processing of data

• Microsoft Office Excel analysis
• Documentation analysis

To convert the quantitative data into quantitative form, six point Likert scale ranged from strongly disagree to strongly agree were used. The ranges are as follows.

<table>
<thead>
<tr>
<th>Measuring Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

1.5 Limitations of the Study

There are some limitations in the study. The researcher tried to make this report as a part of the degree program and took only few customers perception because of time constraints. For financial constraints, the researcher took information only from branches of Gulshan, Dhaka city. Another limitation of this research is the inclusion of only one bank which is MTB. Different bank may have different response from the customers. As a result, the expansion of the number of the surveyed banks in any future study could improve the ability to generalize for more banks in the country. Further studies should include larger respondents because all customers are important to for realizing the perception affected by CSR.
Literature Review Related to CSR Practices

2.1 Literature review

2.1.1 CSR and its definition

“Everybody talks about society, but nobody does anything about it”. This very proverb has lost its cogency today. Organizations CSR approach has eradicated this making them social responsible one evolving from profit maximizing characteristics. To address the social problems or the problems of the stakeholders, the business community evolved a new approach in their business strategies named “Corporate Social Responsibilities (CSR)”. By definition, CSR is a process with the aim to embrace responsibility for the company’s actions and encourage a positive impact through its activities on the environment, consumers, employees, communities, stakeholders and all other members of the public sphere who may also be considered as stakeholders. What does it mean for a corporation to be socially responsible? Academics and Practitioners have been striving to establish an agreed-upon definition of this concept for 30 years. In 1960, Keith Davis suggested that social responsibility refers to businesses’ decisions and actions taken for reasons at least partially beyond the firm’s direct economic or technical interest.” At about the same time, Eells and Walton (1961) argued that CSR refers to the “problems that arise when corporate enterprise casts its shadow on the social scene, and the ethical principles that ought to govern the relationship between the corporation and society.”

Corporate social responsibility (CSR) is also known as social responsibility. Corporate Social Responsibility has gained much attention in recent years. The importance of CSR practices in sustainable business is inevitable throughout the world. CSR has been gaining its popularity throughout the world, nationally and internationally. Inter-connected events and its impact around the world are increasing the importance of Corporate Social Responsibility in order to “build sustainable business, which needs healthy economies, market and communities” (ASOCIO, 2004, p2).

2.1.2 Current trend of CSR in the literature review

The role of business worldwide and specifically in the developed economies has evolved over the last few decades from classical „profit maximizing approach to a social responsibility approach, where businesses are not only responsible to its stockholders but also to all of its stakeholders in a broader inclusive sense. Because of global competitiveness and demand, the CSR practices and standards
are being implemented in Bangladesh (Alimullah, 2006). Wise and Ali (2009) pointed out that CSR is still an evolving concept that enables corporate executives to create and apply self-determined policies to best meet the needs and demands of its stakeholders.

Hackston and Milne (1996) used six categories: environment, energy, human resources, product and safety, community involvement, and other. A technique commonly used in social responsibility research to measure the significance of content is to count the number of words used to describe a particular issue (Hackston and Milne 1996). Wartick and Cochran (1985) depicted the evolution of the corporate social performance model by focusing on three challenges to the concept of corporate social responsibility: economic responsibility, public responsibility, and social responsiveness.

The issue of Corporate Social Responsibility had been addressed during recent several decades by the scholars from all over the world. It’s specifics in Banks as they are active players on the CSR field attracted particular interest of the researchers. So many authors as Melsa Ararat (2006), Amirul Afif Muhamat (2010), Zahirul Md. Islam (2012), Ismail A. Adelopo(2010) paid attention to some regional financial markets and their specifics of the CSR. On the other hand such scholars as Simona Mihai Yiannaki (2013), Emrah Arbak (2009), Allen Goss (2011), Gordon S. Roberts (2011), May Seitanidi (2008), Andrew Crane (2008) addressed their research to some particular issues concerning implementation and functioning of the CSR in banking. Ukrainian researchers had not paid attention to this problem at all. To our point of view it would be interesting to analyze development and specifics of the CSR in banks globally, within the groups of countries different in geographical position, culture, traditions and level of economic development.

2.1.3 The issue and the prospective of CSR

Corporate Social Responsibility was first noticed in the Anglo-Saxon world in 1950s with the idea of contributing societal welfare and environmental responsibility. As this management tool was very successful the message has spread around the world and is now a global business concept. Thus, the idea of corporate social responsibility is not new for these countries.

In all of these CSR journal is common in one thing that is, CSR. All of these journals show the importance and significance of CSR. The purpose of selecting these journals is mainly because these journals followed the purpose and theme same as the topic and dimension used in this report. The previous research done
by several researchers helped me in preparing this report. All previously done report/journal is used as guidelines.

2.2 Geneses of the MTBL, an overall perspective of MTBL

Registered Name of the Company Mutual Trust Bank Limited

Legal Form

The Company was incorporated on September 29, 1999 under the Companies Act 1994 as public company limited by shares for carrying out all kinds of banking activities with Authorized Capital of Tk. 38,00,000,000 divided into 38,000,000 ordinary shares of Tk.100 each.

Company Registration No: c38707(665)/99 on September 29, 1999

Bangladesh Bank Permission No. BRPD (P)744(78)/99-3081 on October 5, 1999

Registered Office: MTB Centre, 26 Gulshan Avenue, Plot 5, Block SE(D), Gulshan 1, Dhaka 1212

SWIFT CODE: MTBL BD DH

Corporate Website: www.mutualtrustbank.com

2.3 Historical background

The Company was incorporated on September 29, 1999 under the Companies Act 1994 as public company limited by shares for carrying out all kinds of banking activities with Authorized Capital of Tk. 38,00,000,000 divided into 38,000,000 ordinary shares of Tk.100 each.

The Company was also issued Certificate for Commencement of Business on the same day and was granted license on October 05, 1999 by Bangladesh Bank under the Banking Companies Act 1991 and started its banking operation on October 24, 1999. As envisaged in the Memorandum of Association and as licensed by Bangladesh Bank under the provisions of the Banking Companies Act 1991, the Company started its banking operation and entitled to carry out the following types of banking business:

(i) All types of commercial banking activities including Money Market operations.

(ii) Investment in Merchant Banking activities.

(iii) Investment in Company activities.
(iv) Financiers, Promoters, Capitalists etc.
(v) Financial Intermediary Services.
(vii) Any related Financial Services.

MTB Retail Savings Products

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Deposit Slab (If any)</th>
<th>Rate</th>
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</thead>
<tbody>
<tr>
<td><strong>MTB Inspire</strong></td>
<td>Below BDT 0.1 million</td>
<td>6.00%</td>
</tr>
<tr>
<td></td>
<td>BDT 0.1 million to less than BDT 0.5 million</td>
<td>6.50%</td>
</tr>
<tr>
<td></td>
<td>BDT 0.5 million to less than BDT 1.0 million</td>
<td>7.50%</td>
</tr>
<tr>
<td></td>
<td>BDT 1.0 million and above</td>
<td>8.50%</td>
</tr>
<tr>
<td><strong>MTB Ruby</strong></td>
<td><strong>Day End Balance</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Up to BDT 5 lac</td>
<td>5.50%</td>
</tr>
<tr>
<td></td>
<td>Above BDT 5 lac and up to BDT 20 lac</td>
<td>5.75%</td>
</tr>
<tr>
<td></td>
<td>Above BDT 20 lac</td>
<td>6.00%</td>
</tr>
<tr>
<td><strong>MTB Senior</strong></td>
<td><strong>Day End Balance</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Below BDT 0.1 million</td>
<td>6.00%</td>
</tr>
<tr>
<td></td>
<td>BDT 0.1 million to less than BDT 0.5 million</td>
<td>6.50%</td>
</tr>
<tr>
<td></td>
<td>BDT 0.5 million to less than BDT 1.0 million</td>
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<tr>
<td></td>
<td>BDT 1.0 million and above</td>
<td>8.50%</td>
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<tr>
<td><strong>MTB Junior</strong></td>
<td><strong>Day End Balance</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Up to BDT 20,000</td>
<td>5.00%</td>
</tr>
<tr>
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<td>Above BDT 20,000 and up to BDT 50,000</td>
<td>5.50%</td>
</tr>
<tr>
<td></td>
<td>Above BDT 50,000</td>
<td>6.00%</td>
</tr>
<tr>
<td><strong>MTB Graduate</strong></td>
<td><strong>Day End Balance</strong></td>
<td></td>
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<td>Up to BDT 20,000</td>
<td>5.25%</td>
</tr>
<tr>
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<td>Above BDT 20,000 and up to BDT 50,000</td>
<td>5.75%</td>
</tr>
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<td></td>
<td>Above BDT 50,000</td>
<td>6.00%</td>
</tr>
<tr>
<td><strong>Privilege Savings</strong></td>
<td><strong>Day End Balance</strong></td>
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<td>Up to BDT 5 lac</td>
<td>5.50%</td>
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<td>Above BDT 5 lac and up to BDT 15 lac</td>
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<td></td>
<td>Above BDT 25 lac</td>
<td>6.75%</td>
</tr>
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</table>

2.4 Practice of CSR in Different Dimensions

MTB is definitely not one of the pioneers among the private commercial banks. It has been in this industry for 12 years now and during these years MTB has spread its business in the fields of Corporate, Retail and Investment Banking. So far the performance of MTB in these fields has been good enough and the business is growing successfully. 2008 has been quite a successful year for MTB as the organization did much better from the previous years. This proves that the organization is on the right path to becoming the benchmark in the banking
industry. MTB wants to be famous for its retail banking facilities. In its 12 years it contributed itself onto several Corporate Social Responsibility (CSR) activities. As being one of the reputed banks in Dhaka city means a lot, therefore contributing in CSR will help any bank to incise its reputation. MTB is no less, in its 12 years life its contributed mostly in Philanthropic responsibility which is indirectly related with Ethical, Legal & Economic responsibility, Environment contribution and the most important constraints Consumer protection.

Consumer protection is mainly the safety and security of its customer, MTB successfully maintained its consumer protection, keeping all confidential documents secret.

MTB even observes World Environment Day 2014, as CSR activities. MTB decided to create a different department with other department in their head office

<table>
<thead>
<tr>
<th>Categories</th>
<th>Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agriculture</td>
<td>13.00% (Highest) *</td>
</tr>
<tr>
<td>2. Term loan</td>
<td>14.00% (Mid Rate)</td>
</tr>
<tr>
<td>a) Industrial</td>
<td></td>
</tr>
<tr>
<td>b) Non-Industrial</td>
<td>16.50% (Mid Rate)</td>
</tr>
<tr>
<td>3. Working Capital</td>
<td>14.00% (Mid Rate)</td>
</tr>
<tr>
<td>4. Export Finance (PC, ECC)</td>
<td>7.00% (Highest)*</td>
</tr>
<tr>
<td>5. Commercial Lending</td>
<td>16.50% (Mid Rate)</td>
</tr>
<tr>
<td>6. Import finance</td>
<td>16.50% (Mid Rate)</td>
</tr>
<tr>
<td>a) General</td>
<td></td>
</tr>
<tr>
<td>b) Essential Goods (rice, wheat, edible oil, lentils, chickpeas, onion, date and sugar)</td>
<td>15.00% (Mid Rate)</td>
</tr>
<tr>
<td>7. Housing Loan:</td>
<td></td>
</tr>
<tr>
<td>a) Commercial</td>
<td>16.50% (Mid Rate)</td>
</tr>
<tr>
<td>b) Residential</td>
<td>14.50% (Mid Rate)</td>
</tr>
<tr>
<td>8. Consumer Credit</td>
<td>18.00% (Mid Rate)</td>
</tr>
<tr>
<td>9. Lease Finance</td>
<td>16.50% (Mid Rate)</td>
</tr>
<tr>
<td>10. Loan to Non-Banking Financial Institutions</td>
<td>17.00% (Mid Rate)</td>
</tr>
<tr>
<td>11. Loan/ SOD against FDR of MTB</td>
<td>3.00% above FDR interest rate but not less than 14.00% P.A.</td>
</tr>
<tr>
<td>12. SOD against FDR of other Banks</td>
<td>17.00% (Mid Rate)</td>
</tr>
<tr>
<td>13. Loan/SOD against other Special Deposit Products of MTB</td>
<td>3.00% above deposit product interest rate but not less than 14.00% P.A.</td>
</tr>
<tr>
<td>14. Auto Loan</td>
<td>16.50% (Mid Rate)</td>
</tr>
<tr>
<td>15. Small Business Loan under SME</td>
<td>16.50% (Mid Rate)</td>
</tr>
<tr>
<td>16. Others</td>
<td>17.00% (Mid Rate)</td>
</tr>
</tbody>
</table>
for conducting CSR activities, showing how series they are towards CSR. For this reason CSR activities is calculated mainly on a overall basis rather than at a particular or branch. Only the legal responsibility can be followed or carried in the branch level. MTB is doing great and may be best in providing Legal responsibility, because they are keeping it secret by maintaining it as a confidential document.

3.0 Result and their interpretation

3.1 Data Analysis

This chapter shows the result and interpretation of the survey data collected form primary source.

From Table (3.1 to 3.5) are the results from the orientation of MTBL Gulshan Branch at the census respondent of 25.

Philanthropic responsibility:

*Table 3.1: constraint of Philanthropic responsibility*

<table>
<thead>
<tr>
<th>Measurement Items</th>
<th>Mean/ Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Bank supports art &amp; cultural activities</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Managers &amp; Employee Support &amp; participate In charitable activities</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>This Bank supports the activities regarding education</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>This Bank assists to enhance quality of life for other</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

In this table it can be observed that the employee/staff of MTB Gulshan branch thinks that MTB is strongly preferable on the Philanthropic responsibility of CSR. It shows to have an average of 6 and standard deviation of 0.

Ethical responsibility:

*Table 3.2: Constraint of Ethical responsibility*

<table>
<thead>
<tr>
<th>Measurement Items</th>
<th>Mean/ Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Bank operates in a manner consistent with expectation of societal and ethical norms</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>This Bank recognize and respect new ethical &amp; societal norms</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>This Bank prevents unethical behavior in their organizational goal</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>This Bank make efforts to maintain the ethical &amp; societal norms</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>
In this table it can be observed that the employee/staff of MTB Gulshan branch thinks that GMTB is strongly preferable on the Ethical responsibility of CSR. It shows to have an average of 6 and standard deviation of 0.

**Legal responsibility:**

<table>
<thead>
<tr>
<th>Measurement Items</th>
<th>Mean/ Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Bank operates in a manner consistent with</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>expectation of government and law</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This Bank obeys the rules &amp; regulation of Bangladesh</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Bank</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This Bank successfully performs the legal rules &amp;</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>regulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Bank meet up with the legal rules &amp; regulation</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

In this table it can be observed that the employee/staff of MTB Gulshan branch thinks that MTB is strongly preferable on the Philanthropic responsibility of CSR. It shows to have an average of 6 and standard deviation of 0.

**Economic Responsibility:**

<table>
<thead>
<tr>
<th>Measurement Items</th>
<th>Mean/ Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Bank mostly focus on maximizing the earning</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>This Bank is committed to profitability</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>This Bank has a strong competitive position</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>This Bank seeks a profitability business</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

In this table it can be observed that the employee/staff of MTB Gulshan branch thinks that MTB is strongly preferable on the Philanthropic responsibility of CSR. It shows to have an average of 6 and standard deviation of 0.

**Environmental Contribution:**

<table>
<thead>
<tr>
<th>Measurement Items</th>
<th>Mean/ Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Bank practices recycle products like paper</td>
<td>4.88</td>
<td>0.27</td>
</tr>
<tr>
<td>This Bank invest in energy conservation</td>
<td>6</td>
<td>0.27</td>
</tr>
</tbody>
</table>
In this table it can be observed that the employee/staff of MTB Gulshan branch thinks that MTB is strongly preferable on the Philanthropic responsibility of CSR. It shows to have an average of 6 and standard deviation of 0.

**Part B**

Because of all the result showed extremely positive, therefore the result arise several doubtful thought. To minimize that doubtful thought documentation were used, and therefore for reliability of data/documentation, the collection of data were collected from their Official website as a fact or supporting data to prove the result, even after discussing with the employee of that branch they also suggested that all of their CSR activities were recorded in their official website. Therefore, their official website was used in collecting the secondary data.

**a) Philanthropic Responsibility**

1. MTB signs MoU with Action Aid for building a school at Char Montaz in Patuakhali
2. MTB Bravery award for Late LIACOT ALI
3. MTB Contributes BDT 1 core to PM’s Relief Fund for supporting the Families Affective by Savar Tragedy
4. MTB Donates House Building Material for rebuilding of Damaged Houses of the Families affected by the Tornado at Brahmanbaria.
5. MTB Honors the wife and children of late Hazrat Ali
6. MTB provides Yearly Contribution to 2 Families affected by the BDR Carnage.
7. MTB signs MoU with The Daily Star to distribute 1000 copies complimentary for 1-year to meritorious students of University of Dhaka
8. MTB distributes Clothes to Orphans in Dhaka
9. MTB made yearly contribution to two families affected BDR Carnage.
10. MTB distributes Winter clothes to poor Madrasa Student of Rampura, Dhaka
11. MTB distributes winter clothes to cold Hit people of Remote Village of Jessore.
12. MTB distributes winter clothes to cold Hit people of Remote Village of North Bengal.
13. MTB extends Financial Grants to Underprivileged Children.
14. MTB distributes Blankets to cold Hit People.
15. MTB distributes Blankets to cold Hit People in North Bengal.
16. MTB Co-Sponsors 11th South Asian Games Dhaka 2010
17. MTB celebrates 10th Founding Day with Blood Donation program.
18. MTB Distributed Iftar among Orphan and Disadvantaged people
19. MTB donates TK 1.00 Million to Prime Minister’s Relief & Welfare Fund for the Victims of Cyclone Alia.
20. MTB donates folio of paintings titled “Our Liberation War: Down the Path of History” to Liberation War Museum
21. MTB donates 10,000 books on moral values to the school wing students of Viqarunnisa Noon School & College

(Source: MTB website)

b) Ethical Responsibility
MTB Contributes BDT 1 Core to Prime Minister’s Relief Fund
MTB donates Tk. 25.00 lac to Prime Minister’s Relief Fund. (Source: MTB website)

d) Legal Responsibility
As MTB consider rules and regulations to be very important and protection of the confidential information is very strict. The safety of all the confidential document are considered to be their rules and regulation. Therefore the observation techniques were used in the analysis process.

Only the Bangladesh Bank (BB) has the right in creating or making a new rules or modification of the existing rules. Whenever a new rules were issued by the Bangladesh Bank (BB), BB sent a letter or confirmation with all the related necessary document or paper for the new expanded or revised rules and regulation to the corporate or head office of Mutual Trust Bank (MTB) situated at Gulshan-1, Then the MTB Head office management team processed it into the form of circular.

(Circular is a paper or page where all the update were shown for the easiness to access, Internal circular are something that only the employee can view as they need to view through her RM code only). That circular paper were sent or publish to the website of MTB, which can only be view through the RM code given by Bank, as like a Personal Home page. Then the employee strictly follows it, as their duty.
e) Economic Responsibility

The Company was incorporated as a Public Limited Company in 1999, under the Companies Act 1994, with an Authorized Share Capital of BDT 1,000,000,000 divided into 10,000,000 ordinary shares of BDT 100 each. At present, the Authorized Share Capital of the company is BDT 10,000,000,000 divided into 1,000,000,000 ordinary shares of BDT 10 each.

The Company was also issued Certificate for Commencement of Business on the same day and was granted license on October 05, 1999 by Bangladesh Bank under the Banking Companies Act 1991 and started its banking operation on October 24, 1999. As envisaged in the Memorandum of Association and as licensed by Bangladesh Bank under the provisions of the Banking Companies Act 1991, the Company started its banking operation and entitled to carry out the following types of banking business. (Source: MTB website)

d) Environmental Contribution

MTB observes World Environment Day 2014
(Source: MTB website)

Consumer Protection

At MTB, we believe in providing the best of services to our customers. We provide customers with easy access to information, products and services, as well as the means to get their grievances redressed. If you have a grievance, please feel free to contact to our Complaint Cells:

Part B: Primary Data

A short questionnaire was used to draw out the perception of the customer, regarding the consumer protection performed by the MTB. Where a 4 question were used, with the sample size of 35 customers, selected on the basis of convenience sampling method.

Consumer contribution:

<table>
<thead>
<tr>
<th>Measurement Items</th>
<th>Mean/ Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
</tr>
<tr>
<td>This Bank make efforts to improve product quality</td>
<td>4.97</td>
</tr>
<tr>
<td>This Bank settles customer’s complaints quickly</td>
<td>5.25</td>
</tr>
<tr>
<td>This Bank practices product improvement by customers</td>
<td>5.27</td>
</tr>
<tr>
<td>requirements</td>
<td></td>
</tr>
<tr>
<td>This Bank make efforts to improve customer service</td>
<td>5.34</td>
</tr>
</tbody>
</table>
In this table it can be observed that the customer of MTB Gulshan branch thinks that MTB has an average of 5.34 maximum and minimum of 4.97 of CSR and has a standard deviation of maximum 0.97 and a minimum of 0.77 of CSR. In this table it’s a positive sign of between moderately agree and agree (4: Moderately agree, 5: Agree and as its 4.97), and a maximum, which is between agree and strongly agree (5: Agree, 6: Strongly agree and its 5.34)

4.0 Summary of findings, Recommendations and Conclusion

4.1 Summary of Findings

After analyzing on chapter 3, it could be said that MTBL performs CSR well; their employee thinks this bank’s performs CSR pretty good. According to the orientation result all the employee are happy as their bank’s CSR performance. This is a good thinks as they will be motivated on providing better and best service to the customer.

MTB is one of the reputed bank in Dhaka city, it kept it reputation while incising the number of the branch and ATM booth, which is lot to manage.

But the MTB is still kept its promise on providing better banking service to the people.

4.2 Recommendation

After doing the Internship on MTB, the attention i gather, the information and the place or work, that was observed on my three months there could suggest about their performance. MTB is one of the reputed banks in Dhaka city; it’s already opened 104 Branch, which is a lot for a bank to operate keeping its reputation intact. The Company was incorporated as a Public Limited Company in 1999, under the Companies Act 1994, with an Authorized Share Capital of BDT 1,000,000,000 divided into 10,000,000 ordinary shares of BDT 100 each. At present, the Authorized Share Capital of the company is BDT 10,000,000,000 divided into 1,000,000,000 ordinary shares of BDT 10 each.

There are a few suggestions which gave to MTB.

They are:

The MTB could do some advertising on the CSR awareness,

To aware the customer as CSR is very important to both the Customer and the Bank,

To increase the CSR activities in the lowest expenditure as much as possible.
4.3 Conclusion

According to the result, it could be said that MTB is successfully performing the activities of Corporate Social Responsibility (CSR) according to the rules and monitoring system of Bangladeshi Government. Therefore, according to the documentation, it could be said that MTB performs mostly Philanthropic Responsibility which is indirectly related with other CSR responsibility like Ethical, Legal, Economic, Environmental contribution & Consumer protection. The MTB has a particular special department of CSR, performing various CSR every year.

On the documentation, it showed MTB performed of 24 CSR activities on the field of Philanthropic, Environmental, and Economic responsibility. & Ethical responsibility, other two responsibilities consisted of Consumer Protection & Legal responsibility which failed to show any document & by observation techniques it was found that MTB follows a strict rules and regulation, where the distribution of Legal regulation is strict. 

According to all the result anticipated and seeing the documentation it could be said it’s proven that MTB performs the attributes related with CSR. Dividing all its types discussed in this report.

Even MTB contributes a high amount of expenses every year on the CSR activities.
References


Corporate Social Responsibility: Contextual Considerations

PARTHA SARATHEE GHOSH*

Abstract: The roles of business in present world are not limited to its traditional functions only-producing and distributing goods/services and achieve growth at any means and maximize profit. Rather good business gets a hold of creating betterment for the society in present and for the future too. Theses added functions/activities of business are termed as Corporate Social Responsibility (CSR). It is not donations/gifts of that business to its stakeholders/society, it is its implicit responsibility, that will certainly be paid back to the business in long run in the forms of goodwill, reputation, growth and ultimately to profitability. If a business organization target societal welfare and be socially responsible, the profits automatically roll in. Protecting the environment and the social welfare at large should not only be rested upon the will of business. The regulatory authorities, social & state machineries with appropriate & effective legal framework should be employed to make the business socially responsible.

Introduction

The role of business worldwide and specifically in the developed economies has evolved over the last few decades from classical ‘profit maximizing’ approach to a social responsibly approach, where businesses are not only responsible to its shareholders but also to all of its stakeholders in a broader inclusive sense. One can identify so many reasons for shifting the role of business from classical concept to a responsible business concept, but negative impression of stakeholders on the enterprise would get a higher priority among others. In one hand, enterprises create wealth and job opportunities for the society and on the other; they are pollute and destroy environment and ecology with devastating

* Banker, UCBL & Executive Member, BEA
impact on human health and bio-diversity worldwide, just to gain business growth and profitability ultimately and overlooking the other long term economic considerations (economic value of damages-social, environmental etc.). To address the social problems or the problems of the stakeholders, the business community evolved a new approach in their business strategies named CSR and through CSR enterprises are intent to strike a balance between economic and social goals include responsibilities for current and past actions as well as adequate attention to future impacts.

There is no universally accepted definition of CSR. There are different type of views on what CSR is and what it is not. Having become a buzzword in boardrooms and the media, CSR is more often misunderstood as giving back to the society and considered to be synonymous with philanthropy. The dominant school of thought is that CSR is no philanthropic activity and a business must earn for what it invests. The company does it for its own long term good. Drawing a parallel with Publicity and Public Relations it is argued that philanthropy could earn publicity but CSR, like Public Relations is a long term investment with assured returns. It advocates that CSR constitutes a series of initiatives taken by a company in its enlightened self-interest. It would be motivating to derive a meaning of the concept with the dissection of each of the words. CSR is not a difficult concept and can be explained as: **Corporate** - means organized business; **Social** - means everything dealing with people, the society at large; **Responsibility** - means accountability between the two.

The World Business Council for Sustainable Development in its publication Making Good Business Sense by Lord Holme and Richard Watts, used the definition for CSR as ‘Corporate Social Responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large’ (http://www.mallenbaker.net/csr/definition. php).

CSR is also defined by the Commission of the European Communities (2006): “[CSR] is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholder on a voluntary basis. It is about enterprises deciding to go beyond minimum legal requirements and obligations stemming from collective agreements in order to address societal needs”.

Though various definitions have been attached to the term, it can be stated that CSR, in its broadest sense, delineates the relationship between business and
society and the role of business in sustainable development. The fundamental idea behind CSR is that a corporation or company incurs responsibilities to society beyond maximization of profit and beyond meeting the minimal requirement of the law. CSR also has numerous facets. Corporations are overwhelmed by many issues in the name of CSR: stakeholder demands, environmental issues, issues of sustainability, diversity, labour conditions, ethical investment, and philanthropy among others. Clearly, there is no one agreed concept. An important distinction should be made, however, between internal and external CSR practices.

**Internal CSR** refers to programmes that focus on the core business and on the workforce, such as:

- Human Resources (HR) practices,
- Health, Safety and Environmental (HSE) practices,
- Codes of Conduct,
- Fulfilling and Motivating Work Environment,
- Employee Development Programmes,
- Local Content Policies,
- Assessing and Increasing the Social and Environmental Impact of a Company,
- Environmental Management Systems (EMS),
- Product Responsibility,

**External CSR** refers to social and environmental programmes directed towards the external environment, including:

**Triple Bottom Line (TBL) & Sustainability reporting**

The concept of CSR became prominent in the 1970s. During the 2nd half of the 20th century in the developed countries, another concept has come to consider the people and environment along with traditional bottom line ‘profit’ is called Triple Bottom Line (TBL) reporting. Triple Bottom Reporting is defined as corporate communication with stakeholders that describe company’s approach to managing one or more of the economic, environmental and/or social dimensions of its activities and through providing information on these dimensions. Companies are increasingly including economic, environmental and social information in their public reporting. A TBL company conceives a reciprocal social structure where corporate, labour and other stakeholders all will be benefitted. It also endeavors to benefit the natural order as much as possible or at the least do no harm and minimise environmental impact.
Sustainability reporting has come after TBL to consider social and environmental impacts for not only present generation but also future generations. Although sustainability reporting has come into developed countries many years ago but from the very beginning of 21st century it has been used in developing countries. Sustainability is practiced by managing environmental, social and economic impacts and considering the impacts on future generation. Most commonly accepted definition of sustainability is given by Brundtland Commission. According to Brundtland Commission sustainability means “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.

**Difference between TBL & Sustainability Reporting**

The major difference between triple bottom line reporting and sustainability reporting is that triple bottom line considers the current impact of an organization on people and environment but sustainability reports current impact as well as impact on next generations. That means organizations should run in such way so that present people and their environment as well as next generations and their environment will not be affected. Whatever may be the terminology used business are trying to satisfy their stakeholders to legitimize their existence.

In developed economies, the enterprises are concerned enough to meet the requirements as mentioned under CSR. It might be for their mere sense of responsibility or might be for strong regulations and monitoring where they are running. But in developing economy those are rare in existence. So, it is a great challenge to ensure the right doings of the businesses and ensure the societal, economic and environmental prosperity of present people and their environment as well as next generations for the economy like ours. There are ample reasons for much deeper thinking regarding the issue and to find ways out to implement such well being for the society and the country at large.

**Key Drivers of CSR**

- **Ethical consumerism** - Over the last two decades can be linked to the rise of CSR. Industrialization in many developing countries is booming as a result of technology and globalization. Consumers are becoming more aware of the environmental and social implications of their day-to-day consumer decisions and are beginning to make purchasing decisions related to their environmental and ethical concerns.
- **Transparency and trust** - Business has low ratings of trust in public
perception. There is increasing expectation that companies will be more open, more accountable and be prepared to report publicly on their performance in social and environmental arenas.

- **Increased public expectations of business** - Globally companies are expected to do more than merely provide jobs and contribute to the economy through taxes and employment. As corporations pursue growth through globalization, they have encountered new challenges that impose limits to their growth and potential profits. Global competition forces multinational corporations to examine not only their own labour practices, but those of their entire supply chain, from a CSR perspective.

- **Laws and regulation** - Independent mediators, particularly the government, ensuring that corporations are prevented from harming the broader social good, including people and the environment. Governments should set the agenda for social responsibility by the way of laws and regulation that will allow a business to conduct themselves responsibly.

- **Stakeholder priorities**. Increasingly, corporations are motivated to become more socially responsible because their key stakeholders expect them to understand and address the social and community issues that are important to them.

**History of CSR**

The rise in anti-corporate activism over environmental and human rights issues made a shift in corporate attitudes towards social and environmental aspects essential. In 70s and 80s saw major international boycotts of companies investing in South Africa, notably the Nestlé boycott over the company’s aggressive milk formula marketing strategies in the global South. The 1992 Earth Summit in Rio was a key moment in the evolution of CSR as corporate involvement succeeded in impeding the Summit’s ambitious task to ‘find ways to halt the destruction of irreplaceable natural resources and pollution of the planet.’ Proposals put forward by Sweden and Norway for regulation of multinationals were crushed in favour of voluntary corporate environmentalism.

**Variance of CSR**

CSR practices are not same throughout the world. Due to geographical, economic, environmental, political, regulatory, social and cultural differences it would not be appropriate to generalize the results of studies of developed nations to developing countries. Researchers find out that CSR practices differ from country to country
(Adams, Hill & Roberts, 1998) and between developed and developing countries (Imam, 2000). Gray, Javad, Power & Sinclair, (2001) also found that “the nature and patterns of CSR vary between types of industry”. CSR activities also differ between western and eastern region. Western emphasizes more on human resource information. Gray et al., (2001) concluded that “Surveys of CSR practices in western countries reveal that companies place the greatest emphasis on disclosing human resource information such as employee numbers and remuneration, equal opportunities, employee share ownership, disability policies, and employee training.” In developing countries like Bangladesh many people still now do not understand the meaning of CSR. They just think that CSR activities only confined to philanthropic activities performed by organizations. But CSR activities do not only include philanthropic activities it also includes economic, ethical and legal responsibilities. Bangladesh is a country where people are largely prone to engage in corruption. In this situation CSR activities are considered by corporation as an ethical dilemma.

Stakeholders, Shareholders & Legitimate Theory

Stakeholder theory and legitimacy theory strongly advocates for CSR. An argument voiced for stakeholder theory is that society should let business attempt to solve society’s problems because other institutions have clearly failed to do so (Davis, 2001). Jensen Meckling, 2002 argued that “Corporations should consider the effects of their actions upon the customers, suppliers, general public, employees, and others who have a stake or interest in the corporation.” Stakeholder theory advocates performing CSR by the organization because organizations are not only responsible to their shareholders, being a part of the society they are also responsible to the stakeholders.

Legitimacy theory claims that corporations have implicit contracts with stakeholders to provide for their long-term needs and wants. By providing for the desires of stakeholders, the corporation legitimizes its existence (Guthrie & Parker, 1989). And it has been found in different studies that socially responsible firms are less likely to manage their earnings.

Shareholder theory proposes that the corporation should legally maximize long-term shareholder wealth (Jensen, 2002). Companies would not in practice increase stakeholder welfare at the expense of shareholder wealth (Karnani, 2010). Shareholders appoint the managers and board of directors as an agent to run their businesses’ resources so that their profit/wealth can be maximized. By fulfilling the prime motives of maximizing profit of the shareholders the board of
directors and management can perform the philanthropic responsibilities to the society.

Why CSR is necessary

Yongtae Kim, MyungSeok Park, Benson Wier have tried to find out relation between earnings quality and CSR. In their article titled “Is Earnings Quality Associated with Corporate Social Responsibility?” they found that socially responsible firms are less likely (1) to manage earnings through discretionary accruals, (2) to manipulate real operating activities, and (3) to be the subject of Social Economic Cost investigations, as evidenced by Accounting and Auditing Enforcement Releases against top executives. They also observe that CSR firms are larger, have higher growth opportunities, have better earnings performance, and have lower leverage than nonCSR firms.

CSR can differentiate a company from its competitors by engendering consumer and employee goodwill (McWilliams & Siegel, 2001). If rivals are not engaged in CSR then they will lose customer loyalty. On the other hand, some firms are involved in CSR simply because they believe it is the right thing to do. Regardless of the underlying reasons, CSR has become a commonly used term in the business arena (Lindgreen, Swaen, & Maon, 2009). N. Craig Smith (2003b), a former professor at Harvard Business School, argued that “The impression created overall is that the debate about CSR has shifted: it is no longer about whether to make substantial commitments to CSR, but how”. So still now a long controversy is going on about corporate social responsibility.

How CSR be ensured in Bangladesh

Besides converting the organizations more socially responsible from their inner sense of responsibility, some external forces should exerted simultaneously so that they feel compulsion and interest as well to go for CSR activities. Some of the means may be as per the following:

- Rebate of taxation for socially responsible business.
- Reduction of financial cost for such organizations (reduce rate of loan pricing from banks/financial intuitions based on CSR rating).
- Publicly presenting the grading/rating of the organization, so that they can create positive/negative impact in the markets for their products/services.
- The entrepreneurs/sponsors may be awarded for their CSR related outstanding activities (like CIP or others).
Argument behind No CSR

In the developing and underdeveloped countries like Bangladesh, there are numerous social and environmental problems like poverty, illiteracy, violence against women, pollution, corruption etc. These problems are not so easy to solve. If these problems were as simple to solve as stakeholder theory advocates maintain, they would have been remedied long ago by profit-seeking firms focused on benefiting society (Karnani, 2010). Firms do not exist for solving such kind of problems. This is the responsibility of the government to solve such kind of social and environmental problems. The businesses can serve the society by providing necessary goods and services to their existing and potential customers at a fair and reasonable price by maintaining proper quality, obeying the related laws.

Friedman (2002) asserted in a New York Times article, “There is one and only one social responsibility of business - to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game” (p. 230). Friedman (2002) also argued that if an organization performs its' all business activities properly then it will be the main CSR of that organization to their stakeholders. Proper, reasonable and legal activities of the business will not provide benefit only to their shareholders but also to their stakeholders. So, no extra CSR activities will be required by the organizations.

Conclusion

The modern concept of Corporate Social Responsibility (CSR) is evolving gradually despite several hindrances. Driving forces behind this evolution is pressurized from Conventional CSR Watchdogs include Labor Unions, Consumer Groups, Environmentalists, NGOs and all ‘Stakeholders’ while slow progress is attributed to lack of Good Governance, absence of strong labor unions, consumer forums and above all lack of understanding by business houses, specifically non-exporting ones, that CSR is not charity but is rather an instrumental public relation investment.
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A Galtungian Interpretation on the Madrarsa Graduates’ Phenomenon on Violence

KAZI SAMEEO SHEESH*

Abstract: The objective of this research is to illustrate and analysis the phenomena of how the Madrasa graduates of Dhaka city perceive about violence against them. This research follows the qualitative approach applying in-depth interview tools. The Madrasa graduates expressed that they are deprived in various ways, such as, dispossession from freedom of choice, democratic rights and so on. There remain different stigmas against them in the society and those stigmas undermine their potentialities and humiliate them to live with dignity in the society. Moreover, global politics often points out them as terrorists and accuses them for severe crimes which they have not committed. These deprivations consist of Galtung’s concept of direct, structural and cultural violence and these oppressions influence to construct their perceptions about sense of violence. This paper views that the rejection of socio-economic, political, educational rights of the Madrasa graduates forced them to feel alienated. I have also come to the impression of an embedded belief like “World is against them” has occurred in their mind. This sense of alienation and deprivation can tempt them to be angry against the social norms, state policy and international politics. Madrasa education in Bangladesh is not a static one as historical evolution of this system shows that it has been reformed overtime because of various societal pressures. This historical evolution bolsters that still there remains scope for reformation. Therefore, instead of producing and jolting the hostile relation to reinforce the sense of separation and inflaming the anger of the Madrasa graduates, initiatives to integrate them into society with respect, dignity and value would be helpful for shaping their perceptions about peace and conflict in expected manner.

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Introduction and rationale of the study

In Bangladesh, Madrasa education, which is generally considered as a system for gaining Islamic knowledge, has been in practice for a long time. A significant number of school-going children are enrolled in this system. Here, it is worthy to mention that the literary meaning of Islam is peace. However, in recent years, particularly after 9/11, I have found that on many occasions Muslims are being portrayed as terrorists. It would be immaterial whether as a researcher I am a practising Muslim or not, I cannot deny the influence of this notion in my life since I am a citizen of Bangladesh which possesses world’s second largest Muslim population. So, I think we need to dig deeper into this issue. Though in this research I have narrowed my focus only to the Madrasa graduates of Dhaka city, I expect that this learning can at least help us to listen the voices of Madrasa graduates and probe the underpinnings on their perceptions about peace and conflict. Moreover, it can facilitate us to think critically regarding the causal relationship, if there is any, between terrorism and Madrasa education. So, this research intends to explore the perceptions along with the bedrock of the Madrasa graduates of Dhaka city in relation to peace and conflict.

Peace and conflict are very dynamic and complicated issues. There remain various conflict theories and dimensions of peace in social science and in the field of peace studies (Bajaj, 2008). Here, one of the pioneer and prominent proponents of peace and conflict studies is Professor Johan Galtung. This Galtung’s framework incorporates both positive and negative peace concepts as well as deems on the issue of conflict. So, considering the 9/11 aftermath of global politics, socio-economic, historical, cultural background of the Madrasa graduates, I suppose Galtung’s concept of negative and positive peace and the conflict triangle framework well suited to analyse context for the perceptions of the Madrasa graduates about peace and conflict (for Galtung’s peace and conflict framework please see Appendix-1).

Research questions

Based on the Galtung’s conceptual framework, I have divided the research questions as follows:

I. What are the perceptions of madrasa graduates on conflict and peace?
II. What are the direct, structural and cultural factors that influence Madrasa graduates’ perceptions of conflict and peace?

**Review of Literature**

Here I would like to relate Galtung’s peace and conflict framework with the context of Madrasa graduates of Dhaka city. For this I am going to review the literature on following category.

**Embedded Global Politics**

In this era of globalization, global politics can have a direct influence on the Madrasa graduates of Dhaka city in creating their perceptions about peace and conflict. Huntington’s (1993, 1996) famous and controversial ‘clash of civilizations thesis’ states culture as the prime force for conflict in the twenty-first century. Huntington alleged that in the twenty-first century the causes of conflict would not primarily be ideological or economic; rather it would be cultural conflict between different civilizations (Heywood, 2011). Huntington (1993) wrote:

> It is my hypothesis that the fundamental source of conflict in this new world will not be primarily ideological or primarily economic. The great divisions among humankind and the dominating source of conflict will be cultural. Nation states will remain the most powerful actors in world affairs, but the principal conflicts of global politics will occur between nations and groups of different civilizations. The clash of civilizations will dominate global politics. The fault lines between civilizations will be the battle lines of the future.

Huntington’s doctrine has been sternly criticised for its epistemological, methodological position by many academic critics (Said 2011; Fox, 2005; Mungiu Pippidi & Mindruta, 2002; Henderson & Tucker, 2001; Russett, Oneal, & Cox, 2000). For example Said (2001) addressed Huntington’s ‘clash of civilization’ as a ‘clash of ignorance’. He argued on the Huntington’s misguiding view of ‘Islam’ and pointed out the intention of Huntington’s thesis as “…..of the purest invidious racism, a sort of parody of Hitlerian science directed today against Arabs and Muslims.” (Said, 2004)

Nonetheless, Huntington is being criticised for its empirical, logical, ideological positions by many scholars, the influence of this thesis cannot be ignored in the era post-cold-war global politics. It has also been boosted up after the incidence of 9/11 and so-called ’war on terror’ evident an emerging of ’civilizational’ struggle and conflict between West and Islam.
**Product of a class system and Process of history**

Power differentials, such as class conflict, deprivation, contrast, historically dominant ideologies and so on can persuade the perceptions about peace and conflict. According to the Marxist view, ‘consciousness, in a materialist understanding, comes from real experience in a material world that proceeds thought.’ (Peet, and Hartwick, 2009, p.145) So, the material (real, natural, social) position of the Madrasa graduates would carry a driving force to influence their perceptions about peace and conflict.

Ahmed (2005) and BEI (2011) reported that an overwhelming portion of Madrasa students in Bangladesh come from very-low income group. Parents send them to the Madrasa because they cannot afford to bear the expense to other schools. This scenario is worse for the Quami Madrasa¹ as about 82% of the students of Quami Madrasa come from poor families (BEI, 2011).

Again, the Bengali Muslim people inherited class differences. Historically the Muslim people in this territory can be differentiated into two major social classes; one, the nobles (*ashraf*) who migrated from northern India (especially from nearby Bihar) and use the Urdu language to set themselves apart, and two, the commoners (*atraf*) who belong to the indigenous Bengali population. Before Islam came into this territory, like other parts of India, Bengali people were identified Hindus (Eaton, 2001). A strong caste system prevailed there. The scheduled caste people were being extremely oppressed by the upper class of Hindus. History evident that when the Islam entered here, most of the Hindus are affiliated with the scheduled castes, formerly called untouchables or harijans, were converted to Muslim (Eaton, 2001). It needs to be noted that conversion of the Bengali populations to Islam did not occur by the sword, as has been alleged sometime. Historian Richard Eaton (2001) identified that widespread conversion in Bengal was a result of several factors; such as, one, the gradual eastward shift of the Ganges river, which opened up forest lands to the outside world and to intense agricultural development; two, the influx of pioneer holy men who built mosques and shrines that formed the nuclei of hundreds of new agricultural communities and spread Islamic influence to the indigenous people, and three, economic prosperity under Muslim rule brought by the region’s integration into the world economy through the export of textiles. However, Hindu gods and scriptures were not rejected but adapted to Islamic understandings of God, the prophets, and their holy books. At the same time, Islamic doctrines and practices

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¹ Quami Madrasa functions independently. This type of Madrasa does not follow any prescribe curriculum and allow the intervention of any state authority.
were recast into Hindu forms. Thus, we can say that the oppression due to social caste system and scope of economic opportunities and interests were very vital causes for the conversion of Bengali Muslim (lower caste Hindus to Muslims) people, though this conversion does not mean that people rejected all the rituals of their Hindu forefathers (Eaton 2001, 25-51, ANON 2009, 86-88). So, I view that the conversion of Hindu to Muslim did not create a great theological conflict, but it reflects that class difference remains as a major cause behind this conflict.

**Methodology**

Since I want to know the perceptions, explanations and interpretations about peace and conflict of the Madrasa graduates, therefore, I consider the phenomenology research paradigm fits best with my study (Kane, 1995). My research approach is a distinctly qualitative one rooted in a detailed analysis of interview texts, and grounded in a broader contextualisation of the socio-economic, cultural and political situation of the Madarasa graduates who participated in this study as interviewees. I used the ‘community interview’ instrument to do this (Kane, 1995). In depth, I interviewed 3 Madrasa graduates (two male and one female) from Dhaka city.

**Result and Discussion**

In this section, I am going to illustrate three major themes those I derive from the conversation with the interviewees. In addition to this, I pinpoint the relevance of those themes on the basis of Galtung’s framework.

**Theme 1: Following Islam (complete code of life) means peace, deviation from Islam agitates conflict.**

In response to talk about their learning from the Madrasa regarding peace and conflict the interviewees responded, “We learn moral values from Madrasa about peace. Absence of moral values is the mother of all conflicts”. (Interviewee:2) They identified that moral education that they have learnt from their schools is the most important lesson to achieve peace in mind as well as establish harmony in the society. A set of moral standard guides the people to live in a ‘right track’ (sahipath). This ‘right track’ they learn from the Madrasa and this ‘right track’ can uphold them to live with peace and harmony with others. Moreover, the learning about peace and devotion to Allah provide them mental peace. For example, one

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2 According to the Phenomenology paradigm, the reality is portrayed as people perceive, experience, and interprets it (kane, 1995).
participant said, “Islam is a complete code of life. If one follows Islam, he or she will get peace in this life and life after death.” (Interviewee: 3)

This deviation and absence of moral practice are the keys for the unrest of the society. These also arouse conflict within the members of a family as they expressed that haram (forbidden) income wipes out peace from the society and welcomes conflicts. They firmly alleged that following the code of conduct of Islam defines as peace and deviating from this means conflict. (Interviewee: 2 & 3)

So, theme 1 is a reflection of the presence and absence of positive peace. This theme reflects that according to the Madrasa graduates human beings can achieve mental and social peace if they can learn and practice Islamic moral values. The absence of this ‘positive peace’ paves the way to bring conflict in the society.

**Theme 2: Peace and conflict are political concerns.**

The interviewees exclaimed with grief, “After 9/11 all the Madrasa students are identified as terrors. How can we have peace?” (Interviewee: 1 & 2) They strongly utter that it is a part of the global politics to identify the Madrasa as ‘a factory to produce terrorists’. Especially, after the 9/11 incident the idea has been widespread. Now, media, civil society even some government officials and policymakers are also talking like this. Presenting evidences from newspapers one participant said, “A few days ago one the Ministers of Bangladesh (he mentioned the name, here I am not disclose the name of Minister) said that all the Madrasas are producing terrorists.” (Interviewee: 3) In addition, one interviewee said,

> The incident of 9/11 destroys our peace. Though we are not involved with this at all, this kills our peace. All the time situation leads us to a conflicting situation. After 9/11 all the Madrasa students are identified as terrors. How can we have peace? (Interviewee: 2)

They reported that this is a conspiracy of a group of ’Western people’ to stimulate a hostile relation between West and Islam. Moreover, it is propaganda against Islam (Interviewee: 3).

They viewed that in Madrasa they had learnt that peace is the fundamental of Islamic teaching. They raised the question that if these kinds of propaganda to sketch madrasa students as terror are going on then how they could contribute to ensure peace. The ‘9/11 and war on terror’ aftermath are provoking the Madrasa students for more conflict and violence.

So, here, they strongly opined that peace and conflict both are vital political concerns.
I would say theme 2 reflects the Galtung’s concept of direct and structural violence. ‘War on terror’ sometimes translated in the mind of many people as a ‘war against Muslims’. Thus, the incidents of war (Afghan, Iraq) might be considered by Madrasa graduates as direct violence. Furthermore, the participants viewed that since the ‘9/11’, many people and organizations are often propagating against the Muslim. This sort of structural violence is influencing the mind-set of the Madrasa graduates to perceive about peace and conflict.

Theme 3: Discrimination hampers our peace and persuades conflicts.

The Madrasa graduates are being discriminated in various ways. Say, in Bangladesh female students in general medium are getting stipend, but there is no provision of stipend for the female students in Madrasa. They said that personally the madrasa graduates do not bear hostility with the other medium students. One interviewee expressed, “I consider them as bhai (brother) and bon (sister). But they treat us as sot bhai/bon (stepbrother/ step sister) because of the education system.” (Interviewee:3) However, this sort of discriminatory policies sometime persuade conflict and hinder the peaceful and harmonious relationship with the other students.

Thus, the policy tends the Madrasa graduates to be discriminated from the students of other streams. Even there remains bigotry in attitudes among the female participations as well. This has been identified by them as a ‘conspiracy’ to create conflict.

Here, they have also talked about the subject of rights. If equal rights are fulfilled then it brings peace, any violation on this rights or discrimination persuades conflict. So, it can be said that theme 3 is an example of structural and cultural violence. The deprivations of the female Madrasa students from the support of stipend, the discriminatory policies of the state are influencing the Madrasa graduates to conceptualise the perceptions about peace and conflict.

Exploring the Evidence

Here in the above discussion, the Madrasa graduates expressed that they are deprived in various ways, such as, dispossession from freedom of choice, democratic rights and so on. There remain different stigmas against them in the society and those stigmas undermine their potentialities and humiliate them to live with dignity in the society. Moreover, global politics often points out them as terrorists and accuses them for severe crimes which they have not committed. These deprivations consist of Galtung’s concept of direct, structural and cultural
violence and these oppressions influence to construct their perceptions about peace and conflict.

I view that the rejection of socio-economic, political, educational rights of the Madrasa graduates forced them to feel alienated. In addition, I have also come to the impression of an embedded belief like “World is against them” has occurred in their mind. This sense of alienation and deprivation can tempt them to be angry against the social norms, state policy and international politics. Here, one issue needs to be addressed. Madrasa education in Bangladesh is not a static one as historical evolution of this system shows that it has been reformed overtime because of various societal pressures. This historical evolution bolsters that still there remains scope for reformation. Therefore, instead of producing and jolting the hostile relation to reinforce the sense of separation and inflaming the anger of the Madrasa graduates, initiatives to integrate them into society with respect, dignity and value would be helpful for shaping their perceptions about peace and conflict in expected manner.

**Recommendation and Conclusion**

In this paper, I set out to answer about the insights of the Madrasa graduates of Dhaka city about peace and conflict? Along with the insights, I also tried to identify the influential factors towards shaping their perceptions. In sum, it has been found that Madrasa graduates perceived peace and conflict as binary and the presence or absence of the Galtung’s peace concept has been distinctly noticed in their perceptions. They have emphasized the accomplishment of equity, political rights, mutual respect, and trust and so on as the components to assert peace. On counter, violation of political and democratic rights, attitudes of negligence, misinformation, distrust, stigmas negative propaganda and so on have been identified by them as elements of conflict. Moreover, the faiths on Islam and values of Islamic learning have been mentioned by them as a pathway to ensure peace and reverse of this is likely to bring conflict. The underpinnings for these perceptions are also embedded in their reflection in peace and conflict. Direct, structural and conflict violence towards the Madrasa graduates have swayed them to feel alienated and this alienation is belonged to reinforce anger. Here, in this study the sense of alienation and anger have been reflected as the important factor to shape the perceptions of the Madrasa graduates on conflict and better integration of them by vanquishing the discriminatory factors have been pointed out as peace.
Appendix-1

Galtung’s peace and conflict framework

In the 1960s, Galtung expanded the concepts of peace and violence to include indirect or structural violence, and this was a direct challenge to the prevalent notions about the nature of peace (Grewel, 2003). Here, the figure 1 depicts an illustration of the Galtung’s framework about peace and conflict.

Negative peace refers to the absence of direct violence. Reduction or elimination of direct violence, for example, assault, riot, terrorism, war, is considered as the way to create negative peace. Initiative to cease a war can be an example of negative peace (Galtung, 2008).

Galtung (1964) defined positive peace as the absence of indirect and structural violence. In other words, the presence of social justice and equality is referred as the positive peace. Thus, it is characterized as the existence of harmonious and integrated social relationship. However, to understand more about positive peace we need to have an idea about structural violence which is elaborated by the Galtung’s works on conflict triangle.
Johan Galtung’s conflict triangle (figure 2) focuses on three sorts of violence as the components for conflict, they are direct or overt, structural and cultural violence. Direct (overt) violence refers to the direct attacks to the people, for example, direct attack, massacre. Structural violence or indirect violence refers to the social structures which obstacle people from meeting the basic needs and fundamental human rights. Poverty, social injustice, gender discrimination, apartheid and so on are the example of structural violence. Cultural violence occurs as a result of the cultural assumptions that blind one to direct or structural violence, for example, one may undervalue the ‘black-people’, or even consider their expulsion or extermination as a right deed. (Grewel, 2003)
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Agriculture Financing of BKB: Progress, Challenges and Ethical Issues

MD. LIKAT HOSSAIN MORAL

Abstract: Agricultural finance is crucial to support the growth of the agricultural sector. This is essential for food security, job creation, and overall economic growth. The main sources of finance in agriculture are still the state-owned banks. As such, BKB is the dominant player in the area of agricultural credit. Since its inception, BKB attempted to address one of the major concerns of institutional credit making it accessible to the rural poor. It opened many branches in the rural areas, often in areas with weak economic base. The urban-rural proportion of branches, deposits and credit flows showed significant increases in favour of rural areas. To date, BKB serves its customers through 1031 branches all over the country except Rajshahi and Rangpur divisions. BKB as a major financial provider in agriculture in Bangladesh, also faces similar challenges as faced by other institutions of developing countries in providing credit to rural areas. The BKB still faces some additional challenges, such as moral hazard, adverse selection, incomplete and often misleading information from borrowers, etc. However, the BKB makes efforts to mitigate them by adhering to the applicable ethical standards in banking. The challenges come from within and outside.

JEL Classification: G21; G28

Keywords: Agricultural Credit, Institutional Credit, Challenges of Agricultural Credit

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1. Introduction

The Bangladesh Krishi Bank (BKB) was established under the Bangladesh Krishi Bank Order 1973 (P.O. 127 of 1973). The primary objective of BKB is to promote agricultural development of Bangladesh. To this effect, it provides credit facilities to small and marginal farmers, sharecroppers and small entrepreneurs engaged in development of agro-based as well as Cottage industries. The agricultural sector is divided into 4 sub-sectors i.e., crop, fisheries, livestock and forestry. BKB provides credit facilities to all the four sub-sectors for the overall development of agriculture. Over the time, it has diversified its banking activities to render more services aiming to contribute to the overall economic development of the country. The Bank also started commercial functioning since 1977 to generate more loanable funds tapping surplus rural and urban savings for further investment in the rural economy.

The predecessor of BKB was Agriculture Development Finance Corporation (ADFC). Subsequently, this became the Agricultural Development Bank of Pakistan (ADBP). In 1952, the Agricultural Development Finance Corporation (ADFC) was formed mainly to serve large farmers. Again in 1958, this entity was renamed as the Agricultural Development Bank of Pakistan (ADBP) with a mandate to serve small farmers. Given that a land title was required as collateral for a loan, ADBP did not adequately serve the needs of the rural poor. In addition, its purpose was primarily to mobilize rural deposits for investment in urban enterprises by opening branches in major cities. Actually, the banking system prior to the liberation in 1971 was highly concentrated in the urban areas. Bank branches outside the metropolitan centers of Dhaka, Narayanganj, Chittagong, and Khulna were insignificant. Immediately after the liberation of the country in 1971, out of historic necessity, the government nationalised and reorganised all the banks & financial institutions except a few foreign bank branches (Rehman, 2000). Since its inception, BKB attempted to address one of the major concerns of institutional credit making it accessible to the rural poor. It opened many branches in the rural areas, often in areas with weak economic base. The urban-rural proportion of branches, deposits and credit flows showed significant increases in favour of rural areas. To date, BKB serves its customers through 1031 branches all over the country except Rajshahi and Rangpur divisions. The main sources of finance in agriculture are still the state-owned banks. As such, BKB is the dominant player in the area of agricultural credit. In FY16, BKB alone shared 28 percent of the total disbursement. The contribution of BKB in agricultural lending can be seen from Table 1.
Agriculture is a key economic activity in Bangladesh. It contributes around 16.77 per cent of the country’s gross domestic product (GDP), employs 47.5 percent of the total labour force, and feeds up around 160 million people. It is increasingly becoming established in the economic literature that the development of a growing economy depends critically on the development of the agricultural sector (Andriesse et al., 2007; World Bank, 2008). In Bangladesh, about 70 per cent of the rural poor are concentrated in the agricultural sector. Hence, poverty alleviation is required for the rural farmers. Growth in the agricultural sector has important links with the overall economy through various channels. First, agriculture provides crucial supplies of raw materials to many other non-agricultural sectors. Second, consumption of agricultural commodities has important implications for poverty reduction of households in both rural and urban areas. Rice constitutes a major share in the expenditures of the poorer households, and therefore, the demand for and supply of agricultural commodities, especially food items, and their prices greatly influence the welfare of poor households. Third, the rural sector is the dominant source of supply of unskilled labour to the economy. However, changes in global production networks and increased urbanization have changed the character of rural areas. Still the agricultural sector in Bangladesh is characterized by the adoption of outmoded technology, dependence on unpredictable weather, poor infrastructure, small and

Table 1: Agricultural Credit Performance by Lenders - FY16

<table>
<thead>
<tr>
<th>Lenders@</th>
<th>Disbursement Target</th>
<th>Actual Disbursement</th>
<th>Recovery</th>
<th>Overdue</th>
<th>Outstanding</th>
<th>Overdue as % of Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCBs -6</td>
<td>28.90</td>
<td>27.21</td>
<td>28.23</td>
<td>23.02</td>
<td>87.16</td>
<td>26.41</td>
</tr>
<tr>
<td>BKB</td>
<td>48.00</td>
<td>49.40</td>
<td>51.36</td>
<td>21.63</td>
<td>140.29</td>
<td>15.42</td>
</tr>
<tr>
<td>RAKUB</td>
<td>16.00</td>
<td>11.15</td>
<td>13.29</td>
<td>10.38</td>
<td>34.79</td>
<td>29.83</td>
</tr>
<tr>
<td>Sub Total</td>
<td>92.90</td>
<td>87.76</td>
<td>92.88</td>
<td>55.03</td>
<td>262.24</td>
<td>20.99</td>
</tr>
<tr>
<td>FCBs -9</td>
<td>3.93</td>
<td>5.10</td>
<td>4.98</td>
<td>0.003</td>
<td>2.29</td>
<td>0.13</td>
</tr>
<tr>
<td>PCBs -38</td>
<td>67.17</td>
<td>83.60</td>
<td>72.70</td>
<td>1.75</td>
<td>80.24</td>
<td>2.18</td>
</tr>
<tr>
<td>Sub Total</td>
<td>71.10</td>
<td>88.70</td>
<td>77.68</td>
<td>1.75</td>
<td>82.53</td>
<td>2.12</td>
</tr>
<tr>
<td>Grand Total</td>
<td>164.00</td>
<td>176.46</td>
<td>170.56</td>
<td>56.78</td>
<td>344.77</td>
<td>16.47</td>
</tr>
</tbody>
</table>

@ excluding BRDB and BSBL.

Source: Agricultural Credit Department, Bangladesh Bank.
fragile markets, and inadequate income flows. So, efforts should be made to expand the rural financial system to ensure its smooth operations and thereby contributing to agricultural productivity and tackling the severity of poverty.

Formal rural financial markets in Bangladesh comprise specialized banks such as BKB and RAKUB, state-owned commercial banks, a sizeable number of private banks, Bangladesh Rural Development Board (BRDB), as well as NGOs. Informal sources of credit like local moneylenders, friends and relatives also contribute significantly to the rural economy of Bangladesh.

Through continual progress from 1972-73, BKB has brought itself to its present position of success and glory. Success are not free from challenges. But this progress faced challenges since some of the regions are urban-centric losing land for traditional agriculture, huge non-performing loan, high transaction cost, low interest rate, shortage of experienced manpower, unethical and fraudulent practices of few officials of the bank etc. BKB as a major financial provider in agriculture in Bangladesh, also faces similar challenges as faced by other ‘formal institutions’ of developing countries in providing credit to rural areas. Keeping this background in mind, this paper aims at addressing the following research questions:

1. To view the operational aspects of BKB with applicable ethical standards in banking
2. To get overall idea about the business progress made by BKB
3. To identify the major challenges faced by BKB upholding the applicable ethical standards in banking

In order to answer the above research questions, this study proceeds as follows. Section II describes research methodology. Section III shows BKB’s network in the country. Section IV discusses the business progress made by BKB. Section V states major challenges faced by BKB. Section VI offers conclusions and recommendations.

II. Research Methodology

This is a descriptive research paper based on secondary information. Print and electronic publications of different banks, BKB Head office, Bangladesh Bank, Ministry of Finance, different organs of the Govt., international agencies like IMF, World Bank, and Asian Development Bank have been used as data sources. The business progress made in different divisions has been measured primarily in terms of profitability, efficiency, and social equity.
III. BKB’s Network

The Bank operates its function through its 1031 branches (mainly, headed by AGMs, SPOs and POs) all over the country except Rajshahi and Rangpur division. It has 16 foreign exchange (Authorized dealer) branches. In the field level the bank has 10 divisional units including one Local Principal Office (divisional office status) headed by a General Manager, 53 Chief Regional and Regional offices (headed by DGMs & AGMs) for close supervision, monitoring and follow-up of the branch activities. For smooth operation, as a part of internal control and compliance system, the bank has also 63 field level audit offices of which 9 at Divisional and 54 at Regional levels. In the Head Office the Bank has 6 Divisions (headed by GMs), 36 Departments (headed by DGMs) and a Training Institute (headed by GM).

The divisional tier has been vested with the authority of comprehensive supervision, monitoring and follow-up of the overall functions of the respective division. The divisions perform deposit mobilisation, advances, loan recovery and other business functions as well as administrative functions within their territorial jurisdiction. The Dhaka division, is the most important and extensive unit as it oversees the metropolitan branches facing enormous pressure from foreign exchange trading. Evidently, it has become a daunting task to keep pace with the challenges of rising unhealthy and unethical competition. The operational networks of BKB are shown in Table 2:

<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Name of the Division (Including LPO)</th>
<th>Number of Regions &amp; Corporate Branches</th>
<th>Number of Urban/Semi Urban Branches</th>
<th>Number of Rural Branches</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dhaka</td>
<td>8</td>
<td>3</td>
<td>43</td>
<td>105</td>
</tr>
<tr>
<td>2</td>
<td>Mymensingh</td>
<td>6</td>
<td>-</td>
<td>25</td>
<td>106</td>
</tr>
<tr>
<td>3</td>
<td>Chittagong</td>
<td>7</td>
<td>2</td>
<td>22</td>
<td>83</td>
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<td>-</td>
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<td>Kushthia</td>
<td>5</td>
<td>-</td>
<td>17</td>
<td>48</td>
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<tr>
<td>8</td>
<td>Barisal</td>
<td>6</td>
<td>-</td>
<td>25</td>
<td>101</td>
</tr>
<tr>
<td>9</td>
<td>Faridpur</td>
<td>5</td>
<td>-</td>
<td>15</td>
<td>82</td>
</tr>
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<td>Local Principal Office (LPO)</td>
<td>-</td>
<td>1</td>
<td>01</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>53</strong></td>
<td><strong>08</strong></td>
<td><strong>221</strong></td>
<td><strong>810</strong></td>
</tr>
</tbody>
</table>

Source: BKB, BCBD, HO, Dhaka
The urban /semi-urban and rural proportions of branches recorded a significant rise in favour of rural areas as in the above table. The branch network of 9 divisions shows greater accessibility of the rural population to the banking system thereby helping further monetisation of the rural economy of the respective division.

IV. Business Progress of BKB

A. Progress of BKB since 1972:

BKB has come to its present position over the years since 1972. During the period, 1972 to 2017, branch network and business operations of the bank increased commendably. Table-3 below shows significant increase in the paid up capital, deposits, credit flows, number of loanees, bank-network, number of employees, etc. To date, BKB serves its customers through 1031 branches. (Before 15th March 1987 RAKUB (Rajshahi and Rangpur Division) was under BKB). Since 1972, BKB pursued a policy of expanding banking services to the rural areas and extending generous credit to the farmers and mass-people who are the real players in making agricultural outputs and success of rural economy and thus satisfied the objective of the bank as well as the government.

B. Division-wise Business Progress of BKB

Loan & Deposit Outstanding

Division-wise outstanding deposits and advances with the number of depositors and borrowers in 10 divisions as on 30-06-17 are displayed in Table-3(a). Dhaka division’s share in deposits are Tk.6122.33 crore (27.14 percent of total deposit). It is the highest in the divisions. On the other hand, Kushtia division’s share in deposits is Tk.825.91 crore (3.66 percent of total deposits). The amount of advances in Dhaka division is Taka 3353.58 crore (18.31 percent of total advances). However, the share of Sylhet division is Taka 1030.32 crore (5.63 percent of total advances).

The number of depositors and borrowers of Mymensing division is the highest among 10 divisions of the bank. The table also shows that depositors of Mymensing division and the borrowers of Sylhet division are small as compared to other divisions.

It is worth to mention here that the administrative division Dhaka (comprising greater Dhaka, Mymensing, Tangail and Faridpur districts) is the largest source of funds with the highest amount of deposits in the country. As on 30.6.16, the
Table 3: Overall Progress of BKB since 1972 at a glance

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>Paid up capital</td>
<td>10.00</td>
<td>25.00</td>
<td>100.00</td>
<td>350.00</td>
<td>900.00</td>
<td>900.00</td>
<td>900.00</td>
<td>1150.00</td>
</tr>
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<td>02.</td>
<td>Deposits</td>
<td>6.91</td>
<td>176.94</td>
<td>1737.28</td>
<td>7883.38</td>
<td>11022.51</td>
<td>19619.05</td>
<td>21018.51</td>
<td>22559.70</td>
</tr>
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<td>03.</td>
<td>Loan disbursement</td>
<td>9.64</td>
<td>271.04</td>
<td>778.91</td>
<td>3477.54</td>
<td>4819.70</td>
<td>5721.74</td>
<td>5921.96</td>
<td>6289.36</td>
</tr>
<tr>
<td>04.</td>
<td>Recovery</td>
<td>2.92</td>
<td>197.03</td>
<td>665.54</td>
<td>1550.71</td>
<td>3095.03</td>
<td>5673.88</td>
<td>7312.84</td>
<td>7698.99</td>
</tr>
<tr>
<td>05.</td>
<td>Loan outstanding</td>
<td>46.05</td>
<td>497.28</td>
<td>3249.02</td>
<td>8344.85</td>
<td>10628.98</td>
<td>16986.02</td>
<td>17595.37</td>
<td>18531.65</td>
</tr>
<tr>
<td>06.</td>
<td>Loan overdue/ Classified Loan</td>
<td>22.63</td>
<td>93.49</td>
<td>1750.96</td>
<td>2357.52</td>
<td>2808.26</td>
<td>4310.06</td>
<td>4841.30</td>
<td>4315.77</td>
</tr>
<tr>
<td>07.</td>
<td>Number of Loanees</td>
<td>72</td>
<td>379</td>
<td>1733</td>
<td>3247</td>
<td>3391</td>
<td>3397</td>
<td>3399</td>
<td>3338</td>
</tr>
<tr>
<td>(000)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08.</td>
<td>No. of Branches</td>
<td>77</td>
<td>653</td>
<td>836</td>
<td>949</td>
<td>972</td>
<td>1030</td>
<td>1031</td>
<td>1031</td>
</tr>
<tr>
<td>09.</td>
<td>No. of Regional/Chief regional offices</td>
<td>7</td>
<td>22</td>
<td>49</td>
<td>51</td>
<td>53</td>
<td>53</td>
<td>53</td>
<td>53</td>
</tr>
<tr>
<td>10.</td>
<td>No. of Employees</td>
<td>2052</td>
<td>6734</td>
<td>11722</td>
<td>9944</td>
<td>9430</td>
<td>10444</td>
<td>9630</td>
<td>8726</td>
</tr>
</tbody>
</table>

*Before 15th March 1987 RAKUB (Rajshahi and Rangpur Division) was under BKB.
Source: BKB, BCBD, HO, Dhaka.
total amount of deposit was Tk.5233848 million against total advance of Tk.4156784 million and rural deposit was Tk.787980 million against total advance of Tk.253162 million. In the 1980’s, the Chittagong region, both urban and rural, was the major supplier of funds to other regions. Urban Dhaka was the next largest source of funds with the highest amount of deposits in the country. Rural Rajshahi and Khulna have become major recipients of funds since 1983, followed by rural Dhaka. Since 1983, the ratio of advances to deposits in rural areas had been positive, but it has been steadily declining since 1985. As of 1987, the ratio of advances to deposits was 1.1 (Cookson, 1988). Subsequently, the scenario started changing discernibly.

1. Deposit Mix & No. of Accounts

Tables 4 and 5 below show deposit mix (total deposit consists of deposits in current, savings, and fixed accounts in addition to deposit schemes and others) of 10 divisions of the bank. To clarify further, fixed deposits accounts, deposit schemes and others are same in nature.

More than 68 percent are fixed deposits whereas less than 32 percent are current and savings deposits of the total deposits. These are high-cost deposits and much less than low-cost or no-cost deposits. Almost all the divisions of the bank depict the same picture. However, it is more glaring for Dhaka division and LPO.

2. Outstanding Advances Classified by Economic Purposes

The advances classified by economic purposes, as given in the Tables 6 and 7 reveal that credit for production of crops was remarkably high at Taka 9092.94 crore. It indicates positive sign for production of crops. Second highest in the others stood at Taka 3263.16 crore, and Taka 1349.39 crore in Agricultural Project/Cash credit, Taka 1080.88 crore in Fisheries, Taka 1029.22 crore in Livestock, Taka 568.06 crore in SME, and Taka 351.96 crore for poverty alleviation. These also reveal positive signs. Advances in the Grain Storage remained very low at Taka 7.58 crore.

The loan outstanding for other purposes was remarkably high in Dhaka, Chittagong and LPO. LPO has no outstanding loans against fisheries, livestock, irrigation equipment, agricultural equipment and poverty alleviation sectors. Actually, LPO has limited scope due to it’s command area in city corporations.
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Division (Including LPO)</th>
<th>Deposit Outstanding</th>
<th>Loan Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Depositors</td>
<td>Total Amount</td>
<td>Deposit as % of Total Deposit</td>
</tr>
<tr>
<td>1</td>
<td>Dhaka</td>
<td>1046047</td>
<td>6122.33</td>
</tr>
<tr>
<td>2</td>
<td>Mymensingh</td>
<td>1333392</td>
<td>1315.01</td>
</tr>
<tr>
<td>3</td>
<td>Chittagong</td>
<td>660155</td>
<td>3073.48</td>
</tr>
<tr>
<td>4</td>
<td>Comilla</td>
<td>1086967</td>
<td>2518.87</td>
</tr>
<tr>
<td>5</td>
<td>Sylhet</td>
<td>660433</td>
<td>1346.63</td>
</tr>
<tr>
<td>6</td>
<td>Khulna</td>
<td>760346</td>
<td>1373.95</td>
</tr>
<tr>
<td>7</td>
<td>Kushtia</td>
<td>595923</td>
<td>825.91</td>
</tr>
<tr>
<td>8</td>
<td>Barisal</td>
<td>830535</td>
<td>1428.50</td>
</tr>
<tr>
<td>9</td>
<td>Faridpur</td>
<td>668061</td>
<td>1173.87</td>
</tr>
<tr>
<td>10</td>
<td>Local Principal Office  (LPO)</td>
<td>14543</td>
<td>3381.15</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>7656402</strong></td>
<td><strong>22559.7</strong></td>
</tr>
</tbody>
</table>

Source: BKB, BCBD, HO, Dhaka.
### Table 4: Deposit Mix & No. of Accounts as on 30-06-2017

(Figure in crore)

<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Name of the Division (Including LPO)</th>
<th>Current</th>
<th></th>
<th></th>
<th></th>
<th>Savings &amp; SND</th>
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<th></th>
<th>Fixed Deposit</th>
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<tr>
<td></td>
<td></td>
<td>Number of Account</td>
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<td>%</td>
<td>Number of Account</td>
<td>Amount</td>
<td>%</td>
<td>Number of Account</td>
<td>Amount</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>Dhaka</td>
<td>18962</td>
<td>201.87</td>
<td>0.89</td>
<td>916287</td>
<td>1310.12</td>
<td>5.81</td>
<td>30854</td>
<td>4294.14</td>
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<td>Mymensingh</td>
<td>15061</td>
<td>119.96</td>
<td>0.53</td>
<td>1173380</td>
<td>487.02</td>
<td>2.16</td>
<td>13357</td>
<td>445.63</td>
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<td>3</td>
<td>Chittagong</td>
<td>7136</td>
<td>111.12</td>
<td>0.49</td>
<td>572355</td>
<td>1039.98</td>
<td>4.61</td>
<td>18847</td>
<td>1747.42</td>
<td>7.75</td>
</tr>
<tr>
<td>4</td>
<td>Comilla</td>
<td>9215</td>
<td>135.90</td>
<td>0.60</td>
<td>957157</td>
<td>838.33</td>
<td>3.72</td>
<td>18884</td>
<td>1298.62</td>
<td>5.76</td>
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<td>Sylhet</td>
<td>8784</td>
<td>104.73</td>
<td>0.46</td>
<td>605740</td>
<td>450.32</td>
<td>2.00</td>
<td>8823</td>
<td>709.76</td>
<td>3.15</td>
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<td>5872</td>
<td>64.74</td>
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<td>657626</td>
<td>525.41</td>
<td>2.33</td>
<td>23838</td>
<td>549.11</td>
<td>2.43</td>
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<td>Kushtia</td>
<td>6797</td>
<td>60.70</td>
<td>0.27</td>
<td>535736</td>
<td>352.62</td>
<td>1.56</td>
<td>9137</td>
<td>242.67</td>
<td>1.07</td>
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<tr>
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<td>Barisal</td>
<td>3347</td>
<td>69.29</td>
<td>0.31</td>
<td>678909</td>
<td>533.10</td>
<td>2.36</td>
<td>32445</td>
<td>563.96</td>
<td>2.50</td>
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<tr>
<td>9</td>
<td>Faridpur</td>
<td>3160</td>
<td>67.46</td>
<td>0.30</td>
<td>600033</td>
<td>465.28</td>
<td>2.06</td>
<td>15805</td>
<td>432.28</td>
<td>1.92</td>
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<tr>
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<td>Local Principal Office (LPO)</td>
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<td>0.26</td>
<td>10552</td>
<td>168.97</td>
<td>0.75</td>
<td>1314</td>
<td>3133.20</td>
<td>13.88</td>
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<td><strong>Total</strong></td>
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<td>993.14</td>
<td>4.4</td>
<td>6707775</td>
<td>6171.15</td>
<td>27.36</td>
<td>173304</td>
<td>13416.79</td>
<td>59.47</td>
</tr>
</tbody>
</table>

Source: BKB, BCBD, HO, Dhaka.
Table 5: Deposit Mix & No. of Accounts as on 30-06-2017
(Figure in crore)

<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Name of the Division (Including LPO)</th>
<th>Deposit Schemes</th>
<th>Other Deposits</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number of Account</td>
<td>Amount</td>
<td>%</td>
</tr>
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<td>1</td>
<td>Dhaka</td>
<td>42150</td>
<td>294.31</td>
<td>1.30</td>
</tr>
<tr>
<td>2</td>
<td>Mymensingh</td>
<td>51601</td>
<td>246.05</td>
<td>1.09</td>
</tr>
<tr>
<td>3</td>
<td>Chittagong</td>
<td>33637</td>
<td>161.74</td>
<td>0.72</td>
</tr>
<tr>
<td>4</td>
<td>Comilla</td>
<td>43841</td>
<td>208.54</td>
<td>0.92</td>
</tr>
<tr>
<td>5</td>
<td>Sylhet</td>
<td>20610</td>
<td>77.63</td>
<td>0.34</td>
</tr>
<tr>
<td>6</td>
<td>Khulna</td>
<td>50431</td>
<td>225.36</td>
<td>1.00</td>
</tr>
<tr>
<td>7</td>
<td>Kushia</td>
<td>33552</td>
<td>159.50</td>
<td>0.71</td>
</tr>
<tr>
<td>8</td>
<td>Barisal</td>
<td>86255</td>
<td>257.94</td>
<td>1.14</td>
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<td>Faridpur</td>
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<td>207.92</td>
<td>0.92</td>
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<td>Local Principal Office (LPO)</td>
<td>1188</td>
<td>11.04</td>
<td>0.05</td>
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</table>

Source: BKB, BCBD, HO, Dhaka

Total: 404286 1850.03 8.19 291237 128.59 0.58 7629402 22559.70
Table 6: Outstanding Advances Classified by Economic Purposes as on 30-06-2017
(Figure in Crore)

<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Name of the Division (Including LPO)</th>
<th>Crop</th>
<th>General</th>
<th>Marginal</th>
<th>Total</th>
<th>Fisheries</th>
<th>Livestock</th>
<th>Irrigation</th>
<th>Agricultural</th>
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<td>1465.44</td>
<td>82.35</td>
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<td>73.54</td>
<td>242.40</td>
<td>6.98</td>
<td>11.93</td>
</tr>
<tr>
<td>2</td>
<td>Mymensingh</td>
<td></td>
<td>2055.76</td>
<td>31.77</td>
<td>2087.53</td>
<td>149.70</td>
<td>273.30</td>
<td>19.65</td>
<td>10.19</td>
</tr>
<tr>
<td>3</td>
<td>Chittagong</td>
<td></td>
<td>483.58</td>
<td>67.74</td>
<td>551.32</td>
<td>46.81</td>
<td>44.36</td>
<td>2.12</td>
<td>3.37</td>
</tr>
<tr>
<td>4</td>
<td>Comilla</td>
<td></td>
<td>409.05</td>
<td>7.10</td>
<td>416.15</td>
<td>47.19</td>
<td>34.69</td>
<td>5.40</td>
<td>3.39</td>
</tr>
<tr>
<td>5</td>
<td>Sylhet</td>
<td></td>
<td>688.05</td>
<td>58.13</td>
<td>746.18</td>
<td>31.78</td>
<td>52.56</td>
<td>3.79</td>
<td>3.61</td>
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<td>6</td>
<td>Khulna</td>
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<td>520.57</td>
<td>16.07</td>
<td>536.64</td>
<td>442.41</td>
<td>91.72</td>
<td>5.12</td>
<td>6.75</td>
</tr>
<tr>
<td>7</td>
<td>Kushtia</td>
<td></td>
<td>856.42</td>
<td>40.44</td>
<td>896.86</td>
<td>37.84</td>
<td>132.64</td>
<td>3.81</td>
<td>19.13</td>
</tr>
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<td>8</td>
<td>Barisal</td>
<td></td>
<td>1350.56</td>
<td>38.05</td>
<td>1388.61</td>
<td>192.47</td>
<td>73.85</td>
<td>1.11</td>
<td>2.25</td>
</tr>
<tr>
<td>9</td>
<td>Faridpur</td>
<td></td>
<td>773.58</td>
<td>80.78</td>
<td>854.36</td>
<td>59.14</td>
<td>83.70</td>
<td>3.87</td>
<td>3.33</td>
</tr>
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<td>10</td>
<td>Local Principal Office (LPO)</td>
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<td>67.50</td>
<td>0</td>
<td>67.50</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>8670.51</td>
<td>422.43</td>
<td>9092.94</td>
<td>1080.88</td>
<td>1029.22</td>
<td>51.85</td>
<td>63.95</td>
</tr>
</tbody>
</table>

Source: BKB, BCBD, HO, Dhaka.
Table 7: Outstanding Advances Classified by Economic Purposes as on 30-06-2017

(Figure in Crore)

<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Name of the Division (Including LPO)</th>
<th>Grain Storage</th>
<th>Poverty Alleviation</th>
<th>SME</th>
<th>Agricultural Project/CC</th>
<th>Others</th>
<th>Total Outstanding</th>
<th>Total Outstanding</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dhaka</td>
<td>1.32</td>
<td>86.63</td>
<td>145.40</td>
<td>177.47</td>
<td>1056.12</td>
<td>3353.58</td>
<td>18.31</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Mymensingh</td>
<td>0.30</td>
<td>89.39</td>
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<td>347.41</td>
<td>3096.18</td>
<td>16.91</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Chittagong</td>
<td>0.25</td>
<td>14.12</td>
<td>68.15</td>
<td>268.22</td>
<td>620.89</td>
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<tr>
<td>4</td>
<td>Comilla</td>
<td>0.32</td>
<td>3.88</td>
<td>4.28</td>
<td>6.08</td>
<td>57.00</td>
<td>1978.16</td>
<td>10.80</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Sylhet</td>
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<td>15.61</td>
<td>47.01</td>
<td>53.17</td>
<td>76.60</td>
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<td>21.24</td>
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<td>220.72</td>
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<td>7</td>
<td>Kushtia</td>
<td>4.69</td>
<td>36.59</td>
<td>56.12</td>
<td>30.25</td>
<td>167.13</td>
<td>1385.06</td>
<td>7.56</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Barisal</td>
<td>0.02</td>
<td>48.05</td>
<td>13.87</td>
<td>4.72</td>
<td>75.29</td>
<td>1800.24</td>
<td>9.83</td>
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</tr>
<tr>
<td>9</td>
<td>Faridpur</td>
<td>0.67</td>
<td>36.45</td>
<td>40.49</td>
<td>25.09</td>
<td>21.58</td>
<td>1151.77</td>
<td>6.29</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Local Principal Office (LPO)</td>
<td>0</td>
<td>0</td>
<td>26.73</td>
<td>691.95</td>
<td>646.22</td>
<td>1432.40</td>
<td>7.82</td>
<td></td>
</tr>
<tr>
<td>Total</td>
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<td>7.58</td>
<td>351.96</td>
<td>568.06</td>
<td>1349.39</td>
<td>3288.96</td>
<td>18311.65</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Source: BKB, BCBD, HO, Dhaka.
3. **Business Target and Progress for the FY 2016-17**

Tables 8 and 9 show the comparative positions of overall target of the fiscal year 2016-17 and progress in deposit mobilisation, loan disbursement, loan recovery, imports, exports, foreign remittances, recovery of classified loans and net profit/loss of BKB. As on 30-06-2017 progress in deposit mobilisation was Taka 1545.19 crore (70.24%) due to shifting away from high cost deposits. The actual disbursement of Taka 6289.36 crore (86.75%) was against the disbursement target of Taka 7250 crore. During July16- June 2017, recovery of credit in the amount of Taka 6169.06 crore (82.25%) was against the recovery target of Taka 7500 crore. The achievement of imports and exports targets was far below i.e. 43.61% and 32.19% due to shifting away from high risk. It is worth to mention here that, the rest of the business target of the bank i.e. foreign remittances, recovery of classified loans and net profit/loss of BKB was encouraging i.e. 73.88%, 75.57% and 42.01%. During the period, the net profit in the Dhaka division amounted to Taka 38.21 crore. This is undoubtedly encouraging in view of recurring losses in preceding three years in a row. Through ongoing progress from July 2015, Dhaka division has graduated to a profitable state. If this upward trend continues, Dhaka division should be able to earn net profit exceeding Taka 50 crore during July-December 2017 which will support to uplift BKB in a better position.

4. **Non-Performing Loans**

The ratios of non-performing loans (NPLs) to total loan as per different division are provided in Table 10 to depict the asset quality of the 10 divisions. Table-10 reveals that Faridpur and Barisal have the lowest non-performing loans at 8.25% and 12.09%, respectively. Three divisions have the highest ratio of gross NPLs to total loans. Due to a few large defaults, Chittagong, Dhaka and LPO incurred gross NPLs to total loan ratios of 41.58%, 38.74% and 31.83% respectively. This is highly alarming and it adversely affects the overall performance of the bank. For this reason, the ratio of non-performing loans (NPLs) to total loan of the bank is 23.57% of which 81.26% is classified as bad loans.

5. **Status of ICT in BKB as on 30-06-17**

Information technology is progressively making a positive difference in reducing transaction costs. Introducing technology further upstream (digitizing delivery of records) could make an even more impactful positive difference in terms of profitability and portfolio expansion. Mechanization has taken the banks to a new age with new opportunities as well as new challenges. The various innovations in
## Table 8: Business Target and Achievement for the FY 2016-17 of BKB

(Figure in Crore)

| Sl. No | Name of the Division (Including LPO) | Deposit Mobilization | | Disbursement of Loan | | Recovery of Loan | | Import |
|-------|------------------------------------|----------------------|--|----------------------|--|----------------|--------------|
|       |                                    | Target | Achievement | | Target | Achievement | | Target | Achievement | | Target | Achievement | | Target | Achievement | |
| 1     | Dhaka                              | 600.00 | 221.11 | 36.85% | 1122.00 | 817.45 | 72.86% | 1221.25 | 736.72 | 60.33% | 300.00 | 132.42 | 44.14% |
| 2     | Mymensingh                         | 110.00 | 115.43 | 104.94% | 664.00 | 593.13 | 89.33% | 1072.08 | 629.17 | 58.69% | 14.00 | 16.64 | 118.86% |
| 3     | Chittagong                         | 280.00 | 203.76 | 72.77% | 850.00 | 550.05 | 64.71% | 734.96 | 692.04 | 94.16% | 225.00 | 74.05 | 33.20% |
| 4     | Comilla                            | 220.00 | 228.03 | 103.65% | 745.00 | 695.58 | 93.16% | 751.20 | 617.90 | 82.26% | 0.00 | 0.00 | 0.00 |
| 5     | Sylhet                             | 100.00 | 121.87 | 121.87% | 465.00 | 364.68 | 78.43% | 331.77 | 311.85 | 94.00% | 2.00 | 0.46 | 23.00% |
| 6     | Khulna                             | 180.00 | 152.19 | 84.55% | 697.00 | 658.30 | 94.45% | 706.72 | 659.57 | 93.33% | 160.00 | 134.36 | 83.98% |
| 7     | Kuakata                            | 90.00  | 60.91 | 67.68% | 621.00 | 607.99 | 97.90% | 633.33 | 578.54 | 91.35% | 1.00 | 0.00 | 0.00 |
| 8     | Barisal                            | 150.00 | 156.67 | 104.45% | 578.00 | 532.33 | 92.10% | 590.24 | 507.82 | 86.04% | 0.00 | 0.00 | 0.00 |
| 9     | Faridpur                           | 130.00 | 116.30 | 89.46% | 540.00 | 509.63 | 94.38% | 459.75 | 463.66 | 100.85% | 0.00 | 0.00 | 0.00 |
| 10    | Local Principal Office (LPO)       | 340.00 | 168.92 | 49.68% | 968.00 | 962.22 | 99.40% | 998.70 | 971.79 | 97.31% | 1800.00 | 732.34 | 40.69% |
| Total |                                   | 2200.00 | 1545.19 | 70.24% | 7250.00 | 6289.36 | 86.73% | 7500.00 | 6169.06 | 82.25% | 2500.00 | 1090.25 | 43.61% |

Source: BKB, BCBD, HO, Dhaka.
Table 9: Business Target and Achievement for the FY 2016-17 of BKB

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of the Division (Including LPO)</th>
<th>Export Target</th>
<th>Export Achievement</th>
<th>Foreign Remittance Target</th>
<th>Foreign Remittance Achievement</th>
<th>Recovery of Classified Loan Target</th>
<th>Recovery of Classified Loan Achievement</th>
<th>Neat Profit/Loss Target</th>
<th>Neat Profit/Loss Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dhaka</td>
<td>115.00</td>
<td>299.96</td>
<td>26.08%</td>
<td>565.00</td>
<td>377.03</td>
<td>66.73%</td>
<td>576.86</td>
<td>200.19</td>
</tr>
<tr>
<td>2</td>
<td>Mymensingh</td>
<td>6.00</td>
<td>0</td>
<td>0%</td>
<td>170.00</td>
<td>115.88</td>
<td>68.16%</td>
<td>227.81</td>
<td>199.83</td>
</tr>
<tr>
<td>3</td>
<td>Chittagong</td>
<td>520.00</td>
<td>172.38</td>
<td>33.15%</td>
<td>295.00</td>
<td>202.17</td>
<td>68.53%</td>
<td>338.97</td>
<td>202.07</td>
</tr>
<tr>
<td>4</td>
<td>Comilla</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>642.00</td>
<td>431.81</td>
<td>67.26%</td>
<td>185.96</td>
<td>171.54</td>
</tr>
<tr>
<td>5</td>
<td>Sylhet</td>
<td>23.00</td>
<td>17.38</td>
<td>75.57%</td>
<td>188.00</td>
<td>136.31</td>
<td>72.51%</td>
<td>95.34</td>
<td>130.06</td>
</tr>
<tr>
<td>6</td>
<td>Khulna</td>
<td>200.00</td>
<td>176.12</td>
<td>88.06%</td>
<td>97.00</td>
<td>85.68</td>
<td>88.33%</td>
<td>88.48</td>
<td>89.02</td>
</tr>
<tr>
<td>7</td>
<td>Kuakata</td>
<td>1.00</td>
<td>0</td>
<td>0%</td>
<td>167.00</td>
<td>133.33</td>
<td>79.84%</td>
<td>116.23</td>
<td>103.37</td>
</tr>
<tr>
<td>8</td>
<td>Barisal</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>145.00</td>
<td>135.34</td>
<td>93.34%</td>
<td>105.90</td>
<td>133.93</td>
</tr>
<tr>
<td>9</td>
<td>Faridpur</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>170.00</td>
<td>184.06</td>
<td>108.27%</td>
<td>49.23</td>
<td>73.31</td>
</tr>
<tr>
<td>10</td>
<td>Local Principal Office (LPO)</td>
<td>600.00</td>
<td>138.80</td>
<td>23.13%</td>
<td>61.00</td>
<td>45.32</td>
<td>74.3%</td>
<td>255.22</td>
<td>238.37</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2500</td>
<td>804.64</td>
<td>32.19%</td>
<td>2500.00</td>
<td>1846.93</td>
<td>73.88%</td>
<td>2040</td>
<td>1541.69</td>
</tr>
</tbody>
</table>
### Table 10: Division-Wise Status of Classified Loans: Sub-Standard, Doubtful & BL as on 30.06.2017

<table>
<thead>
<tr>
<th>Name of the Division (Including LPO)</th>
<th>Total Loan Outstanding</th>
<th>Total CL</th>
<th>CL as % of Total Loan</th>
<th>SS</th>
<th>DF</th>
<th>BL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dhaka</td>
<td>3353.58</td>
<td>1299.12</td>
<td>38.74%</td>
<td>110.95</td>
<td>8.54%</td>
<td>41.82</td>
</tr>
<tr>
<td>Mymensingh</td>
<td>3096.18</td>
<td>604.89</td>
<td>19.54%</td>
<td>100.38</td>
<td>16.59%</td>
<td>27.58</td>
</tr>
<tr>
<td>Chittagong</td>
<td>1619.61</td>
<td>673.51</td>
<td>41.58%</td>
<td>22.80</td>
<td>3.39%</td>
<td>12.10</td>
</tr>
<tr>
<td>Comilla</td>
<td>1978.16</td>
<td>376.59</td>
<td>19.04%</td>
<td>82.85</td>
<td>22.00%</td>
<td>27.83</td>
</tr>
<tr>
<td>Sylhet</td>
<td>1030.32</td>
<td>149.23</td>
<td>14.48%</td>
<td>6.52</td>
<td>4.37%</td>
<td>8.53</td>
</tr>
<tr>
<td>Khulna</td>
<td>1464.33</td>
<td>195.76</td>
<td>13.37%</td>
<td>18.47</td>
<td>9.44%</td>
<td>12.91</td>
</tr>
<tr>
<td>Kushtia</td>
<td>1385.06</td>
<td>256.28</td>
<td>18.50%</td>
<td>71.98</td>
<td>28.09%</td>
<td>31.50</td>
</tr>
<tr>
<td>Barisal</td>
<td>1800.24</td>
<td>217.70</td>
<td>12.09%</td>
<td>47.55</td>
<td>21.84%</td>
<td>17.64</td>
</tr>
<tr>
<td>Faridpur</td>
<td>1151.77</td>
<td>94.98</td>
<td>8.25%</td>
<td>11.21</td>
<td>11.80%</td>
<td>6.02</td>
</tr>
<tr>
<td>Local Principal Office (LPO)</td>
<td>1432.40</td>
<td>447.71</td>
<td>31.26%</td>
<td>0.11</td>
<td>0.02%</td>
<td>150.24</td>
</tr>
</tbody>
</table>

**Total**                          | 18311.65               | 4315.77  | 23.57%                | 472.82 | 10.96% | 336.17 | 7.79% | 3506.89 | 81.26% |

*Note: BKB, BCBD, HO, Dhaka.*
BKB are Automated Clearing House System (ACHS), Electronic Fund Transfer (EFT), Real Time Gross Settlement (RTGS) for ensuring the fastest payment and settlement system, On-line, SWIFT, ATM and POST Network, Online CIB, payments of utility bills, fund transfers, introducing MICR cheques, traveler’s cheques and many more value-added services. Table 11 provides the overall picture of computerisation in BKB as on 30-06-2017. Out of 1031 branches, 246 branches provide full online banking services, 98 branches provide offline banking services and 118 branches are partially computerised. Six ATMs are being used in Dhaka (Staff College branch), Mymensing, Chittagong, Sylhet, Khulna and LPO. It is evident from Table 11 that the upward trend in technology adoption in BKB has been quite impressive.

6. **Financial Inclusion Plan and Its Performance Evaluation**

A large number of small bank accounts have been opened in BKB under FIP up to 30-06-17 (Tables 12 and 13). However, it has been observed that the accounts opened have no significant transactions. In order to ensure the access of the unbanked, bank accounts are opened by depositing Tk.10/ to Tk.50/ for farmers, unemployed youth, hardcore poor, physically handicapped people, freedom fighters, beneficiaries under social security program, distressed people, school banking, etc. In order to continue the process of ensuring meaningful access to banking services to the excluded, the focus should shift more toward higher volumes of transactions in the large number of new accounts.

6 (a). **Credit flow to Women and Hardcore Poor farmers**

Reaching Women and Hardcore Poor farmers is one the major segments of financial inclusion of the bank. Providing financing to agriculture is challenging for both women and hardcore poor farmers. The varied unique challenges make access to finance a much bigger challenge for these group compared to others in the agricultural sector. The following Table-14 shows that the bank extended credit facilities to 350,503 no. of women, 128,239 no. of landless farmers, 728,053 no. of marginal farmers and 129,485 no. of sharecroppers. The total outstanding amount is Tk.4116.68 crore, which is 22.48% of bank’s total outstanding. It indicates positive sign for accelerating financial inclusion plan. In one sense, BKB’s entire amount of agriculture could be considered under financial inclusion.
### Table 11: Status of ICT in BKB as on 30-06-2017

<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Name of the Division (Including LPO)</th>
<th>Number of Online Branch</th>
<th>Number of Offline Branch</th>
<th>No of Partially Computerized</th>
<th>Total Computerized Branch</th>
<th>No of ATM</th>
<th>Total Number Of Computer Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dhaka</td>
<td>61</td>
<td>11</td>
<td>15</td>
<td>87</td>
<td>01</td>
<td>790</td>
</tr>
<tr>
<td>2</td>
<td>Mymensingh</td>
<td>18</td>
<td>12</td>
<td>25</td>
<td>55</td>
<td>01</td>
<td>655</td>
</tr>
<tr>
<td>3</td>
<td>Chittagong</td>
<td>29</td>
<td>06</td>
<td>06</td>
<td>41</td>
<td>01</td>
<td>525</td>
</tr>
<tr>
<td>4</td>
<td>Comilla</td>
<td>27</td>
<td>14</td>
<td>04</td>
<td>45</td>
<td>0</td>
<td>845</td>
</tr>
<tr>
<td>5</td>
<td>Sylhet</td>
<td>15</td>
<td>10</td>
<td>11</td>
<td>36</td>
<td>01</td>
<td>505</td>
</tr>
<tr>
<td>6</td>
<td>K ushtia</td>
<td>36</td>
<td>06</td>
<td>08</td>
<td>50</td>
<td>01</td>
<td>440</td>
</tr>
<tr>
<td>7</td>
<td>Barisal</td>
<td>24</td>
<td>06</td>
<td>02</td>
<td>32</td>
<td>0</td>
<td>325</td>
</tr>
<tr>
<td>8</td>
<td>Faridpur</td>
<td>18</td>
<td>15</td>
<td>26</td>
<td>59</td>
<td>0</td>
<td>630</td>
</tr>
<tr>
<td>9</td>
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<td>01</td>
<td>0</td>
<td>0</td>
<td>01</td>
<td>01</td>
<td>71</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>246</strong></td>
<td><strong>98</strong></td>
<td><strong>118</strong></td>
<td><strong>462</strong></td>
<td><strong>6</strong></td>
<td><strong>5271</strong></td>
</tr>
</tbody>
</table>

Source: BKB, BCBD, HO, Dhaka.
<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Name of the Division (Including LPO)</th>
<th>Bank account for Farmer initial deposit TK 10</th>
<th>Bank Account for Freedom Fighters</th>
<th>Bank Account for Beneficiaries under social security Program</th>
<th>Bank account for Hardcore Poor women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No of Accounts</td>
<td>Amount</td>
<td>No of Accounts</td>
<td>Amount</td>
</tr>
<tr>
<td>1</td>
<td>Dhaka</td>
<td>396120</td>
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<td>2</td>
<td>Mymensingh</td>
<td>605738</td>
<td>4.20</td>
<td>493</td>
<td>0.06</td>
</tr>
<tr>
<td>3</td>
<td>Chittagong</td>
<td>95460</td>
<td>1.17</td>
<td>20</td>
<td>0.01</td>
</tr>
<tr>
<td>4</td>
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<td>305170</td>
<td>2.54</td>
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<td>0.10</td>
</tr>
<tr>
<td>5</td>
<td>Sylhet</td>
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<td>5.90</td>
<td>215</td>
<td>0.01</td>
</tr>
<tr>
<td>6</td>
<td>Khulna</td>
<td>274093</td>
<td>1.88</td>
<td>419</td>
<td>0.04</td>
</tr>
<tr>
<td>7</td>
<td>Kuakhtia</td>
<td>237739</td>
<td>2.18</td>
<td>53</td>
<td>0.02</td>
</tr>
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<td>8</td>
<td>Barisal</td>
<td>231460</td>
<td>5.20</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>Faridpur</td>
<td>228700</td>
<td>3.56</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>Local Principal Office (LPO)</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2611402</td>
<td>30.53</td>
<td>2829</td>
<td>0.36</td>
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</table>

Source: BKB, BCBD, HO, Dhaka.
<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Name of the Division (Including LPO)</th>
<th>Bank Account for Disabled People</th>
<th>School Banking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No of Accounts</td>
<td>Amount</td>
</tr>
<tr>
<td>1</td>
<td>Dhaka</td>
<td>1460</td>
<td>0.39</td>
</tr>
<tr>
<td>2</td>
<td>Mymensingh</td>
<td>3663</td>
<td>0.04</td>
</tr>
<tr>
<td>3</td>
<td>Chittagong</td>
<td>3460</td>
<td>0.17</td>
</tr>
<tr>
<td>4</td>
<td>Comilla</td>
<td>3586</td>
<td>0.07</td>
</tr>
<tr>
<td>5</td>
<td>Sylhet</td>
<td>768</td>
<td>0.01</td>
</tr>
<tr>
<td>6</td>
<td>Khulna</td>
<td>3631</td>
<td>0.84</td>
</tr>
<tr>
<td>7</td>
<td>Kushnia</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>Barisal</td>
<td>1325</td>
<td>0.78</td>
</tr>
<tr>
<td>9</td>
<td>Faridpur</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>Local Principal Office (LPO)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>17893</strong></td>
<td><strong>2.3</strong></td>
</tr>
</tbody>
</table>

Source: BKB, BCBD, HO, Dhaka.
Table 14: BKB’s Credit flow to Women and Hardcore Poor farmers as on 30-06-2017

<table>
<thead>
<tr>
<th>BKB’s Total</th>
<th>Credit flow to Women and Hardcore Poor farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding Loan</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>3338129</td>
</tr>
</tbody>
</table>

Source: BKB, BCBD, HO, Dhaka
Table 15: Disbursement of Agricultural & Rural Credit Publicly at Union Level as on 30-06-2017

<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Name of the Division (Including LPO)</th>
<th>Total Branch</th>
<th>No of Branches Organised Open Camp</th>
<th>No of Programme Organised by the Branch</th>
<th>Total No of beneficiaries under open Camp program</th>
<th>Total Amount Disbursed in the Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dhaka</td>
<td>148</td>
<td>135</td>
<td>1250</td>
<td>7653</td>
<td>1631.95</td>
</tr>
<tr>
<td>2</td>
<td>Mymensingh</td>
<td>131</td>
<td>131</td>
<td>1403</td>
<td>5333</td>
<td>2582.72</td>
</tr>
<tr>
<td>3</td>
<td>Chittagong</td>
<td>105</td>
<td>58</td>
<td>599</td>
<td>10170</td>
<td>2480.20</td>
</tr>
<tr>
<td>4</td>
<td>Comilla</td>
<td>169</td>
<td>158</td>
<td>1564</td>
<td>7531</td>
<td>1654.42</td>
</tr>
<tr>
<td>5</td>
<td>Sylhet</td>
<td>101</td>
<td>100</td>
<td>550</td>
<td>2557</td>
<td>1645.82</td>
</tr>
<tr>
<td>6</td>
<td>Khulna</td>
<td>88</td>
<td>83</td>
<td>736</td>
<td>3585</td>
<td>2412.46</td>
</tr>
<tr>
<td>7</td>
<td>Kushtia</td>
<td>65</td>
<td>62</td>
<td>723</td>
<td>5250</td>
<td>4010.50</td>
</tr>
<tr>
<td>8</td>
<td>Barisal</td>
<td>126</td>
<td>126</td>
<td>1110</td>
<td>3670</td>
<td>1150.28</td>
</tr>
<tr>
<td>9</td>
<td>Faridpur</td>
<td>97</td>
<td>97</td>
<td>944</td>
<td>6130</td>
<td>443.55</td>
</tr>
<tr>
<td>10</td>
<td>Local Principal Office (LPO)</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>1031</strong></td>
<td><strong>950</strong></td>
<td><strong>8879</strong></td>
<td><strong>51879</strong></td>
<td><strong>18011.9</strong></td>
</tr>
</tbody>
</table>

Source: BKB, BCBD, HO, Dhaka.
7. Disbursement of Agricultural & Rural Credit Publicly at Union Level

For BKB, borrowers are mostly poor, illiterate, and unfamiliar with banking procedures. Somehow, some corruptions take place through the intermediary as a way of getting loan. Fake loans, such as, loans to non-existent people, can be reduced if a branch disburses loans publicly at union level. Both forms of corruption can be diminished by disbursing loans through open camp system. For the sake of transparency in credit disbursement, emphasis has been placed on disbursement of loans publicly at union level by the bank. Branches under 9 divisions have organised 8879 ‘open camp programmes publicly at union level’ up till 30-06-2017. Table-15 provides the overall picture of disbursement of agricultural & rural credit through the above as on 30-06-2017.

8. Human Resource Position in BKB

The numbers of employees working in the bank are shown in table 16. The existing strength of Bank’s manpower is 8726 against the approved strength of 15442 as on 30-06-17. The bank is running with shortage of more than 6716 employees. Therefore, branches are facing immense difficulties in managing and supervising their activities due to shortage of workforce. Apart from the regular banking activities, branches are also involved in carrying out a number of Corporate Social Responsibility (CSR) type of activities, such as, handling electricity bills of customers of Polli Bidyut Samity, providing agricultural subsidy to farmers, allowances to the beneficiaries under social security programme; widow, old age & disability allowances programmes; pension for the retired military personnel, etc. Whereas the magnitudes of manpower involvement in CSR type of activities hinder their main business activities; such as, loan recovery, deposit mobilisation and loan disbursement. Besides, female employees are seriously reluctant to be posted in rural areas. Therefore, female employees are concentrated in city branches mainly in Dhaka city.

V. Major Challenges Facing BKB in Agricultural Financing

Agricultural finance is crucial to support the growth of the agricultural sector. This is essential for food security, job creation, and overall economic growth. The synthesis report presents a summary of research studies on five key areas of agricultural finance innovation prepared under the G20 Global Partnership for Financial Inclusion (GPFI) and the presentations and discussions of these during the “G20 Roundtable on Innovations in Agricultural Finance” convened on September 9, 2015 in Antalya, Turkey by the SME Finance Sub-Group1-
Table 16: Human Resource Position of BKB as on 30-06-2017

<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Name of the Division (Including LPO)</th>
<th>Approved Post</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Surplus</th>
<th>Shortage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dhaka</td>
<td>2253</td>
<td>1332</td>
<td>254</td>
<td>1586</td>
<td>-</td>
<td>667</td>
</tr>
<tr>
<td>2</td>
<td>Mymensingh</td>
<td>1790</td>
<td>901</td>
<td>91</td>
<td>992</td>
<td>-</td>
<td>798</td>
</tr>
<tr>
<td>3</td>
<td>Chittagong</td>
<td>1621</td>
<td>798</td>
<td>52</td>
<td>850</td>
<td>-</td>
<td>771</td>
</tr>
<tr>
<td>4</td>
<td>Comilla</td>
<td>2182</td>
<td>1047</td>
<td>72</td>
<td>1119</td>
<td>-</td>
<td>1063</td>
</tr>
<tr>
<td>5</td>
<td>Sylhet</td>
<td>1369</td>
<td>556</td>
<td>36</td>
<td>592</td>
<td>-</td>
<td>777</td>
</tr>
<tr>
<td>6</td>
<td>Khulna</td>
<td>1275</td>
<td>697</td>
<td>78</td>
<td>775</td>
<td>-</td>
<td>500</td>
</tr>
<tr>
<td>7</td>
<td>Kushtia</td>
<td>941</td>
<td>524</td>
<td>36</td>
<td>560</td>
<td>-</td>
<td>381</td>
</tr>
<tr>
<td>8</td>
<td>Barisal</td>
<td>1661</td>
<td>785</td>
<td>56</td>
<td>841</td>
<td>-</td>
<td>820</td>
</tr>
<tr>
<td>9</td>
<td>Faridpur</td>
<td>1262</td>
<td>578</td>
<td>30</td>
<td>608</td>
<td>-</td>
<td>654</td>
</tr>
<tr>
<td>10</td>
<td>Local Principal Office (LPO)</td>
<td>131</td>
<td>59</td>
<td>34</td>
<td>93</td>
<td>-</td>
<td>38</td>
</tr>
<tr>
<td>11</td>
<td>Head Office</td>
<td>957</td>
<td>556</td>
<td>154</td>
<td>710</td>
<td>-</td>
<td>247</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>15442</td>
<td>7833</td>
<td>893</td>
<td>8726</td>
<td>-</td>
<td>6716</td>
</tr>
</tbody>
</table>

Source: BKB, BCBD, HO, Dhaka
mentioned five key research areas presented in the synthesis. They included a) Understanding Demand of Smallholder Households, b) Digital Financial Services, c) Financing for Women in the Agricultural Sector d) Value Chain Finance and e) Agricultural Insurance. The five areas of emphasis focus on innovative approaches and tools for productive agricultural lending, market inclusion and agricultural insurance. Given the diversity of topics, the format of the research papers and summaries varied with the themes. The synthesis sent key messages on the trends and lessons with recommendations for policy interventions, and further research and development. (Glossary of terms used in Value-Chain Finance, Agricultural value chain finance instruments (according to Miller, 2011), Variety of financial relations and linkages from inside and outside the value chain, Demand for finance within a value chain, and Key Lessons from research and roundtable discussions can be seen in Appendix Box-1, 2, 3, 4 and 5 respectively).

The transition from subsistence to commercial agricultural production requires funding. However, in developing countries, where agriculture is a source of livelihood for 86 per cent of rural people (International Finance Corporation [IFC], 2013), financing for investment in agriculture is scarce, even for large investors. Financial institutions are reluctant to accept the risks prevalent in the agricultural sector, such as, droughts, floods, pests and/or the transaction costs of covering large geographical distances. Consequently, although governments are now making efforts to attract investment for agriculture, the lack of understanding of the financial risks and opportunities in agriculture, deprives the sector of much needed funds to boost production, processing and marketing.

The above policy brief explored the financial needs of agriculture in developing countries, in general, and the instruments available to address these needs. In this study, we principally examine the challenges in agricultural financing and the roles of different actors including the options for governments to strengthen further the legal and policy environment of the financial system to boost agricultural development in Bangladesh even further.

Like other sectors, investors in agriculture, particularly local farmers, need financing for other supporting actors, such as, foreign-owned plantations, processing factories, storage facilities and fertiliser factories. However, in the current global financial system, a number of factors frustrate the development of solid financial services in rural areas in most developing countries. First, transaction costs in rural areas are higher than those in urban areas due to a more dispersed population with weak infrastructure (International Fund for Agricultural Development [IFAD], 2009a).
Second and more importantly, the risk factors inherent in agriculture often inhibit financial institutions from lending. These include production risks linked to natural hazards (such as droughts, floods and diseases), farmers’ weak ability to provide collateral (either because the farmer lacks title to land to offer as a loan guarantee or the value of the land may be too low) and the volatility of prices (IFAD, 2009a).

Third, the financial sector may not be sophisticated enough in some developing countries. So, the availability and innovations on sector-specific financial instruments and services is usually minimal. In addition, although financial services may be available, they may not be suitable for all types of agricultural activities, which will have diverse needs with respect to timing for disbursements, amounts and risks, among others. For example, in seasonal farming, funding is needed in particular stages of the production process (IFAD, 2009a). At the same time, the offer of financial products may only be available to large-scale farming operations with sound track records, and therefore, may not meet the specific needs of the client.

Finally, the lack of records and statistics on farming in developing countries to assess credit suitability is challenging for financial providers. These change the conditions required to access financial products undermining opportunities for profitable investment.

BKB as a major financial provider in agriculture in Bangladesh, also faces similar challenges in providing credit to rural areas. Moreover, BKB usually faces some additional challenges, as enumerated below:

1. The quality of lending depends on careful screening of loan applications and quality of information assess the borrower’s intention and intention to repay. Due to low levels of farmers’ education and financial literacy (no record keeping, business plans, or bank accounts), it is hard to put together a credit profile for a loan and monitor the loan once it is disbursed. For the same reason, credit-scoring techniques, which would reduce the cost of loan appraisal, are difficult to apply due to a lack of standardised and objective data. High levels of rural poverty also mean that agricultural loans are easily diverted for consumption purposes because “business” and “private” are intermingled. Further, providing agricultural financing is challenging to both male and female farmers, though women face some unique challenges. These challenges relate to the role of women in the households that often restricts their control over assets and constrains their available time for productive activities.
2. Appraising or analysing a project or term-loan is complex, as these are typically technical with many activities and many unknown factors. However, making a loan to an urban trader is relatively easier. Agricultural lending requires highly capable and specialised loan officials, who are in short supply at present in BKB. The incredible fact is that there was no recruitment from 1986 to 2000. This has caused present manpower shortage and resulted in a disproportionate manpower structure in respect of age. Majority of the employees are now 58+ irrespective of their ranks and positions, usually find it difficult to adapt changes.

3. In many cases, more than three unions are allotted for a rural branch. On an average, 4 to 5 persons are working there. Apart from the regular banking activities, branches are also involved in carrying out a number of Corporate Social Responsibility (CSR) type of activities, such as, receiving electricity bills from the customers of Polli Bidyut Samity, providing agricultural subsidy to farmers, allowances to the beneficiaries under social security programme, widow, old age & disability allowances programmes and pension for the retired military personnel, etc. This indicates that rural branches are playing an important role in enhancing ongoing financial inclusion initiatives of Bangladesh Bank. The magnitudes of workforce involvement in CSR-type of activities hinder main business, such as, loan recovery, deposit mobilisation and loan disbursement.

4. To verify the prospective and existing borrowers, at present in bank; on average, the ratio of field workers to borrowers exceeds 3000. Credit supervision is the approach to ensure loan utilisation for the stated purpose. Bank cannot use this approach due to its high administrative costs including that of maintaining a staff trained in extension work.

5. In general, old attitude towards credit still prevails today: a loan is the result of support, and does not essentially have to be repaid. This is especially true in the case of loans from the BKB, which are viewed as grants originating from government which in general does not expect the grants to be repaid. In the aftermath of flooding in 1984, the government said that the crop loans among those who lost their crops did not have to be repaid. In April 1987, the government decided to forgive overdue interest on outstanding loans to weavers in the handloom industry, and explore the possibility of a reduced rate of interest on new credit. Thus, borrowers are doubtful about the necessity to repay loans. Moreover, responding to the periodic natural calamity (worst flooding, drought), the GOB encouraged the BKB to
expand the number of agricultural loans and relax the repayment schedules of many outstanding loans. This expansion took place so rapidly that the branches did not properly screen the borrowers, resulting in dismally low rates of loan recoveries that now jeopardize the entire recovery process and will continue to do so. The extent and net effect that these GOB-inspired rescheduling and interest forgiveness actions have had negative impact on the recovery of loan in the end.

6. Loans are backed by some form of security, either land or hypothecation usually of crops. Hypothecation requires that the branch adequately supervises the loan so that more than one person, for example, does not claim the same cow, as collateral at a time. In addition, the number of branch staff is too inadequate to be present at the time crops are harvested or fish sold to ensure that the banks receive what is owed to them. Using land as security poses some problems, such as, problem of proof of land ownership due to outdated and incomplete land records. Indeed, there are examples of dodging of court action. This creates unusual conservatism among the bankers in assessing and disbursing the loans.

7. The ratios of non-performing loans (NPLs) particularly bad & loss (BL) to total loan are alarming in BKB. Sometimes, indecisiveness in the attitude of the borrowers to repay the loan and lack of experienced workforce to streamlining the recovery drives are the main reasons for aggravating non-performing loans (NPLs). In order to alleviate this aggravating NPLs situation, recruiting of a required number of employees is a crying need right at this moment.

8. At present, the banking system does not have a system to satisfactorily manage loans affected by natural disasters. This results in an unreasonable excuse to default completely. To be fair to disaster victims, the banking system could enhance its credibility.

Agricultural insurance can reduce the negative impacts of crop failure and livestock illness and may improve a farmer’s ability to access credit and willingness to invest in labour and inputs. Agricultural insurance can support farmers’ efforts to mitigate and provide access to value propositions that lead to higher yet somewhat riskier incomes. Agricultural insurance is subsidised around the world and it should be expected at least in the early stages of development.

9. Increased urbanisation has changed the character of rural areas of some regions of the bank, which creates some additional challenges as follows:
a. In recent trend, commercial investment in land seems more lucrative to the landowners than farming.

b. Because of creation of antagonistic environment by careless urbanization and industrialisation lands lose fertility.

c. Environmental degradation is one of the main obstacles on the way of agro-financing.

d. Lack of inputs (like- insufficient water for irrigation, high cost of labour and scarcities of fertiliser) are main reasons behind the lessening of agro-production in urban areas.

e. Lack of proper documentation for loan and failure of the sharecroppers to collect proper documents from landowners

10. In pursuance of the objective of the bank and the government, socioeconomic considerations were given most priority in credit analysis and decisions. Many rural branches were opened without considering viability aspects. Lending rates especially for crop, fisheries and livestock (which cover 60% of total loan) are kept at such a lower level, which do not cover the risk, and actual cost factors. A huge proportion of the asset profiles of the bank became overdue. All these had been reflected through decline in the profitability of the bank.

11. Present Management has unearthed a few cases of unethical practices, irregularities and misappropriation of funds in some branches. The frequency and magnitude of such fraudulent activities inflicted huge burden on the bank. It is generally recognised that such types of unscrupulous activity cannot take place without the active collaboration or passive approval of the officers/staff of the branch. Practically, the incidences reflect the importance as well as failure of internal control and internal audit in bank.

IV. Conclusions and Recommendations

Through a consistent progress, BKB has brought itself to the present stage. Nevertheless, this progress faced enormous challenges and succeeded to overcome those. It is, however, a continuous process. Actually, achievements are not free from challenges. New challenges emerge as well as old challenges also appear with new dimensions. Despite these it is improving its performance consistently. However, it should be stressed that this does not imply that progress has been highly satisfactory due to some challenges which are unique in nature.
For sustainable agricultural finance one need to address: a) risks, b) costs/distribution channels, c) find bankable opportunities and d) offer the right product to the right people. Value chain finance is most relevant to address points a), b) and c) above. Insurance focuses on a) but is also confronted with b), demand assessment is critical for d), technology is driving innovation for b), and financing women entrepreneurs is for c) and d). While not comprehensive, innovation in these five areas makes an important contribution to global learning. In recent times, policy makers of some countries of the world support initiatives that help bring transparency and strengthen business relationships and cooperation among value chain actors that also helps increase the inclusion of smallholders into competitive value chains and access to improved finance. In Bangladesh, these are the vital issues, which need timely policy interventions. These polices are even out of the organization’s authority. It is generally agreed that better quality management of resources is the main factor contributing to improved bank performance.

The present authority of BKB has taken some initiatives for addressing some challenges as follows:

1) From traditional agro (crops) financing, some regions are gradually shifting to the non-crops, like-poultry, fisheries, dairy, beef fattening, grain storage and marketing, poverty alleviation, income-generating activities, etc.

2) BKB now prefers to finance newly emerging profitable sectors, such as SME.

3) It is generally agreed that better quality management of resources is the main factor contributing to bank performance. So, management has taken initiatives to improve attitudes of the existing workforce. Importance is attached to recovery of BL. Now, branches keep records of credit outstanding with records about what is due or overdue. Employees are to act with the notion that loan collection is an integral part of banking, and it should be done in an organised way.

4) By maintaining proper chain of command, bank has become successful to inculcate change in the field officers’ mindsets to be more devoted and honest in discharging their duties.

5) Authority has applied some new techniques so that clients can get access to the higher officials for any kind of query or complaint. For example, GM notices those are issued from his/her office, and shares personal contact information.
6) Frequent inspections and effective monitoring system by the controlling authority also made a rapid change among the staffs to ensure timely and hassle free disbursement of credit to real farmers and to achieve the disbursement and recovery targets.

7) Priority has been accorded to timely and proper legal measures against the willful defaulters to enhance loan recovery and enforce stricter contract compliance. Moreover, encouragement is given to pursue certificate cases.

The overall situation of BKB gives us reasons to be optimistic. To add pace to the steps of BKB, some changes may be fruitful. However, based on the above discussions and conclusions, the following recommendations are being put forward:

a. BKB should enjoy greater independence in matters of selection and recruitment of employees of the bank. Right at this moment, BKB as a whole, needs to recruit more than 6000 new employees as per existing vacancies.

b. Employee incentives should be considered for BL recoveries and be given bonuses for high levels of loan collections so that bank can attract and retain skilled staff.

c. There must be a policy of zero-tolerance against any major violations of the banking norms. ‘Monkeys should not be allowed to handle the bananas’. Failure of internal audit in bank should be handled very strictly. There must be a policy of reward and penalty for well-performing and underperforming employees respectively.

d. In order to properly assess and monitor prospective and existing borrowers, the ratio of field workers to borrowers should not exceed 250.

e. Need-based practical training courses should be designed and be implemented frequently by the Staff College.

f. Recently, BKB has introduced ‘Annual Performance Agreement (APA)’ clarifying the goals for each level of the organisation- from the Managing Director (MD) to the GM, to the Head of the Regional Office, to the Manager of each branch. All employees of the bank should be evaluated through this APA and then set up a plan for rewards and penalties, accordingly.

g. With the growing complexities and challenges, effective and vigorous supervision and monitoring of senior level executives’ activities related to agricultural credit at rural branches are imperatives.
h. The branches of BKB are extensively involved in CSR type of activities for which branches do not receive any additional benefits at all. Moreover, BKB is playing an important role in enhancing ongoing financial inclusion initiatives of BB. Therefore, the magnitudes of branches’ workforce involvement in CSR-type activities may need to be reviewed and a policy must have to be developed so that branches’ involvement in CSR-type activities does not hinder their main business activities. The government should allow ‘fair service charge’ considering the magnitudes of branches’ workforce involvement in CSR-type activities.

I. Last but not the least, the balance sheet of the performance of the bank during 1972-2017 was thus mixed - success in achieving economic objectives of expending branch network with business operations and providing easy credit to priority areas, but failure as far as ensuring financial viability of the bank is to be considered by giving subsidy for ‘concessional interest rate’ and allowing proper ‘service charge’ for ‘workforce involvement in CSR-type activities’. These will ultimately help the BKB turn as a financially viable organisation.

In closing, ethics is still elusive in Bangladesh and elsewhere. Rampant unethical conducts at lending and borrowing ends are the root causes of high percentages of non-performing loans in the banking sector. Political pressures and financial corruption within add to the problem. The BKB seeks to address the issue through close scrutiny of loan requests, fair and truthful lending, financial inclusion, periodic asset quality review including mitigation of potential moral hazards and adverse selections within the existing regulatory framework. Despite these efforts to many, ethics seems to be situational and as if “Beauty lies in the Eye of the Beholder”. The banking sector in Bangladesh has a long way to travel in this regard.
Reference


Appendix - Box 1: Glossary of Terms Used in Value-Chain Finance

1. **Internal Finance**
   - Trade credits: the trader pays the farmer for the goods in advance and the farmer agrees to repay at harvest time or another agreed time.
   - Input supplier credits: the producer receives inputs from the supplier and repays them after harvest or another agreed time.
   - Marketing company credit: a marketing company, processor or other upstream buyer finances the farmers or local trader in cash or in kind. The buyer then locks the price of its purchases. The farmer or trader gets access to credit, supplies and secured sales (IFAD, 2012).
   - Lead firm credit: a large company finances its clients, for example, to increase their production.

2. **External Finance**
   Receivables financing:
   - Trade-receivables finance: a financial institution buys account receivables or confirmed orders from a business advancing its working capital (IFAD, 2012).
   - Factoring: a financial institution (factor) buys those invoices of business discounting commissions and fees, consequently advancing most of the payments to the person/company (Investopedia, n.d.).
   - Forfeiting: used in exportation of goods, a financial institution (forfeiter) purchases the amount importers owe to the exporter in freely negotiable instruments, discounting commissions and fees and paying cash. The importer is obliged to pay its debt to the forfeiter (Investopedia, n.d.).
### Appendix -Box 1: Glossary of Terms Used in Value-Chain Finance (continued)

#### Physical-asset collateralization
- **Warehouse receipts**: a documented proof of the ownership and specific characteristics of certain commodities stored in a warehouse. They “provide a secure system whereby stores agricultural commodities can serve as collateral, be sold traded or sued for delivery against financial instruments” (Giovannucci, Varangis, & Larson, 2000).
- **Repurchase agreements (repos)**: short-term borrowing. A buyer receives securities as collateral and agrees to repurchase them at a later date. Commodities are stored with accredited collateral managers who issue receipts with agreed conditions for repurchase agreements and provide a buy-back obligation on sales, and are therefore employed by trading firms to obtain access to more and cheaper funding based on that security (IFAD, 2012).
- **Leasing**: used popularly to finance machinery, automobiles and equipment in agriculture. The lessee usually makes a down payment and can use the asset while paying periodic contributions. At the end of the term, the lessee may have an option to purchase the asset.

#### Risk mitigation products
- **Insurance**: businesses make periodical payments to an entity (insurer) to partially or absolutely cover its losses from a particular adverse event.
- **Forward contracts**: sales agreement to buy or sell an asset for an agreed price and moment set at the time of the sale. It reduces the risk of adverse price movements in an asset (hedging) and can be used as credit collateral (IFAD, 2012).
- **Futures**: standardized forwards contracts traded in specialized futures exchanges.

#### Financial enhancement instruments
- **Securitization instruments**: a business creates a cash flow of illiquid assets (for example, receivables) that are sold to a special-purpose vehicle (an entity insulated from the management of the business) that will issue securities backed by these assets. The amounts entering from the sale of these securities finances the business.
- **Loan guarantees**: a third party to the loan provides a guarantee to the borrower to lower the repayment risk.

Appendix-Box-2: Agricultural value chain finance instruments (according to Miller, 2011)

Miller categorises the various instruments used in agricultural value chain finance as follows:

A. Product Financing:
   1) Trader credit; 2) Input supplier credit; 3) Marketing company credit; 4) Lead firm financing.

B. Receivables Financing:
   5) Trade receivables financing; 6) Factoring; 7) Forfeiting.

C. Physical Asset Collateralisation:

D. Risk Mitigation Products:
   11) Insurance; 12) Forward contracts; 13) Futures.

E. Financial Enhancements:

For a detailed presentation, see the annexes in Miller, Calvin (December 2011), “Agricultural Value Chain Finance Strategy and Design”, Technical Note, FAO, Rome. Some instruments listed by Miller are not presented in this chapter on financial innovations because these instruments are not normally used by smallholder farmers.
Appendix-Box-3: shows a variety of financial relations and linkages from inside and outside the value chain

Figure: Financial relationships and support services that affect the value chain

Source: Using the Value Chain in Financing Agriculture, FAO (n.d.)
### Appendix – Box-4: Demand for finance within a value chain

<table>
<thead>
<tr>
<th>Value chain partner</th>
<th>Role in the value chain</th>
<th>Demand for finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input suppliers</td>
<td>Provide seeds, fertilisers, chemicals, fuels, equipment, sometimes technical knowledge.</td>
<td>Working capital to buy and stock inputs in adequate amounts and at the right time. Provide these on credit to farmers. Want to be paid by day's end.</td>
</tr>
<tr>
<td>Day workers Farmers</td>
<td>Provide seasonal labour. Grow crops and raise Animals. May take part in some postharvest processing and marketing.</td>
<td>Working capital to buy inputs and pay seasonal labour. Capital or term loans for investment in equipment, storage, animals and land, including clearing hitherto unused land. Payment services, saving products, various types of insurance including crop insurance.</td>
</tr>
<tr>
<td>Farmers’ organisations (e.g. associations, cooperatives)</td>
<td>Bulking inputs and/or farmer outputs to gain economies of scale and better prices. Advocacy, access to technology.</td>
<td>Working capital to buy farm inputs for distribution to farmers. Working capital to buy produce from farmers for delivery to traders or other off-takers. Capital or term loans for investment in storage, transport and (pre)processing facilities.</td>
</tr>
<tr>
<td>Rural traders Collection centres</td>
<td>Buy agricultural produce and bulk-sell it. Sometimes testing and Quality certification.</td>
<td>Working capital to buy agricultural produce. Capital or term loans for investment in storage facilities, transportation equipment or testing/certification equipment. Insurance.</td>
</tr>
<tr>
<td>Processors</td>
<td>Transform the product into a marketable commodity or Consumer product.</td>
<td>Working capital to buy agricultural produce. Capital or term loans for investment in production facilities. Insurance (calamities, theft, loss).</td>
</tr>
<tr>
<td>Distributors, wholesalers</td>
<td>Sell to local retailers, Supermarkets.</td>
<td>Working capital to buy processed agricultural products. Working capital to provide stock finance to retailers. Capital or term loans for investment in storage facilities and transportation equipment.</td>
</tr>
<tr>
<td>Exporters, importers</td>
<td>Sell to international buyers (commodities or processed Products).</td>
<td>Working capital to buy processed agricultural products or unprocessed agricultural commodities. Factoring/forfaiting services (on behalf of suppliers). International trade finance (e.g. L/C). Insurance (calamities, theft, loss).</td>
</tr>
<tr>
<td>Consumers</td>
<td>Consume the product!</td>
<td>Personal loans or salary advances.</td>
</tr>
</tbody>
</table>
Appendix-Box-5: Key Lessons from Research and Roundtable Discussions

Understanding Demand
• Smallholders are a complex group and segmentation is critical.
• Non-agricultural income is generally more important than agricultural-related income.
• Digital innovation in rural financial services has the potential to be a game changer.
• Automating data on smallholders can improve bankability.
• A large portion of smallholders do not need credit. Rather, they need digital payments services/savings-based products.
• There is a disconnect between research and practitioners/policy makers.
• Continued research is needed on households/smallholders and on putting research findings into practice.
• Research on the demand side should lead to action, and tailored products and services by financial institutions.
• The costs for generating and collecting demand data need to be carefully watched. Financial institutions should only cover those portions that are directly related to their business.

Financing for Women
• Market research is essential to understanding the needs of women clients.
• The right financial products must be offered to fit women’s needs based on market research.
• A dedicated implementation strategy, which is embedded with a gender lens, is needed (GENDERNET 2015). Cultural and sociological barriers need to be identified and considered in market development and product design.

Digital Technology
• Digital technology opens many avenues for financial inclusion of smallholder families and the rural poor. However, it will require public as well as private support to scale up and reach those currently excluded.
• Financial inclusion efforts will need to focus on complementing existing DFS with new innovations that are designed based on a better understanding of the needs of smallholder families.
• Given the potential of the technologies and scope for scaling up, the reach and impact at present is still minute.
Agricultural Value Chain Finance

- Successful value chains are driven by consumer demands.
- Selling produce in organized VCs tends to improve market returns. As quoted, “If you cannot sell your produce to VC, you have to sell it to miserable markets.”
- VCF is always finance+ (research, extension, ICT, insurance, and so on).
- Some known financial products such as factoring, which is almost never used in agriculture in an isolated way, have become more important when integrated into a VC context.
- Commitment, governance and standards are essential at all levels; the functioning of the agricultural VC finance system has to be understood by farmers, financial service providers, and policy makers.

Agricultural Insurance

- An emerging trend in the last few years is the bundling of insurance with credit or input suppliers.
- There is also increased interest and use of insurance as a safety net.
- Agricultural insurance is subsidized around the world and it should be expected at least in the early stages of development. However, the use of subsidies must be SMART, that is its purpose must be clear (to address equity or market failure), and well targeted to the specific segment of farmers or herders and specific areas that are intended to benefit so as to minimize leakages to others.
- SMART subsidies will usually be less distorting if made directly to the insurer to offset administration and development costs rather than subsidizing the premium rates paid by farmers. Examples of this include support for data, customer awareness and education, and product design support.
- There is a need to better understand the impact of insurance for product design and how best to target support.
Do Mobile Financial Services Promote Ethical Banking in Bangladesh?

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MD. GOLAM MOULA***
MD. WAHEDUZZAMAN SARDER****

Abstract: Ethical banking emphasizes on sustainable and community development for improving living standard of backward population. A banking system cannot contribute to inclusive growth keeping vast segment of population out of its network. Bangladesh financial services industry has achieved phenomenal success in terms of branch expansion, viability, profitability, innovation and competitiveness during the last two and half decades following implementation of financial sector reform programs and infusion of new technology. Despite such progress, a vast segment of the population, especially the underprivileged sections and rural people still cannot enjoy different financial services due to lack of direct access to financial institutions, suitable financial products, high operational costs and risks arising from asymmetric information. Given this, Bangladesh has allowed banks to introduce mobile financial services (MFS) in Bangladesh in 2011 that has now emerged as a powerful driver of financial inclusion towards promoting ethical banking. The present paper will assess the growth performance and potentials of mobile financial services as a promoter of ethical banking in Bangladesh.

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1. Introduction

Ethical banking emphasizes on sustainable and community development for improving living standard of backward population. A banking system cannot contribute to inclusive growth keeping vast segment of population out of its network and ignoring environmental and other social issues. A good number of empirical literatures reveal that finance contributes to growth by allowing the efficient intermediation of resources among savers and investors (Beck and de la Torre, 2006; Beck, Demirgüç-Kunt, and Levine, 2004); Honohan, 2004; Levine, 2005). Researchers have also focused on the link between financial development, reduced income inequality and poverty alleviation. In Bangladesh financial services rendered by banks, NBFIs, MFIs and cooperatives are playing crucial roles in the development activities by augmenting saving-investment process. During the last two decades following implementation of financial sector reform programs and infusion of new technology, Bangladesh financial services industries have achieved phenomenal success in terms of branch expansion, viability, profitability, innovation and competitiveness.

Despite such progress, there are concerns that banks have not been able to include vast segment of the population, especially the underprivileged sections and rural people into the fold of basic banking services. The key reasons for exclusion of large number people include lack of direct access to financial institutions and suitable products, high operational costs and risks arising from asymmetric information. Financial industry needs to find more cost effective ways to serve the unbanked poor with customized products. Mobile technology may be effective channels in serving the poor by reducing the cost of operation through using low cost technology channels instead of setting up a typical branch that is not always viable due to huge expenses. Bangladesh has already millions of mobile phone users and wider range of the coverage of Mobile Network Operator’s (MNO) that are now used as alternative delivery channel for extending mobile financial services to the unbanked/banked population. The present paper will assess the growth performance and potentials of mobile financial services as a promoter of ethical banking in Bangladesh.

The objective of the paper are two-fold: first, to review present roles of mobile financial services promoting ethical banking in Bangladesh and second, to put
forward policy options for expanding mobile financial services as a promoter of ethical banking for inclusion unbanked low income people in financial network. More specific objectives of the proposed study project will be: (a) to find out links among ethical banking and mobile financial services; (b) to analyze types, benefits and economic significance of mobile financial services; (b) to review present growth performance of mobile financial services in Bangladesh; (d) to investigate the existing challenges of mobile financial services; (e) to suggest policy options for smooth expansion of mobile financial services aiming at promoting financial inclusion. To achieve the objectives, descriptive methodological tools have been applied.

The paper is structured as follows. Section two deals with literature review and section three analyzes links among ethical banking and mobile financial services. Section four focuses on types, benefits and significance of Mobile Financial services and section five examines current growth performance of Mobile Financial services. Section six investigates challenges, contains policy options and conclusions.

2. Literature Review

The aspect of mobile financial service is also popular in countries where most of their population is unbanked. Most of the places where banks can only be found in big cities and customers have to travel hundreds of miles to the nearest bank where mobile banking is used as alternative financial service with little or no infrastructure in many of these emerging economies.

Ivatury and Mas (2008) finds that branchless banking has a large contribution to make toward financial inclusiveness in developing countries. It helps address the two biggest problems of access to finance: the cost of roll-out (physical presence) and the cost of handling low-value transactions. The sharp cost reduction creates the opportunity by branchless banking can dramatically reduce the cost of delivering financial services to poor people to significantly increase the share of the population with access to formal finance particularly in rural areas where most of the poor people live. They mention that the poor people are not early adopter of technology and have less access to information about new offerings. They also analyze the key uncertainties relating to branchless banking. So Government programs in India, Russia, Malawi, South Africa and Brazil distribute social protection payments to customers through branchless banking channels. As a result it has significant pro-poor, pro-growth impacts on households, communities and national economies.
Anyasi and Otubu (2009) finds that the economic impact of mobile banking and how mobile banking can help to create a pace on employment and economic development where most of the people have no access to formal financial institutions. Mobile banking systems may prove to be an important innovation for the developing world to manage money without handling cash.

Deb et al. (2011) find that financial services industry particularly mobile commerce is being popular in remote and rural areas in many parts of the world including Bangladesh in particular. The Banking industries of Bangladesh at present have been matured to a great extent than earlier period and create attention for all section of the people by their various activities including electronic banking. They try to analyzes the dependable factors of mobile banking by a regression model and find that mobile phones will be the most preferred and convenient device for conducting banking transactions and emerge as one for the major payment channels.

Makin (2009) highlights that branchless banking through mobile banking is consider as most powerful option for the emerging countries of Africa and large parts of Asia where a good number of people has no access to formal financial services and there are a variety of mobile services springing up to address their needs. This paper explores relevant issues by building on Consult Hyperion’s experiences from two directions: firstly involvement in the conception, development and deployment of M-PESA and other branchless banking initiatives and secondly, conversations with a range of financial regulators from around the world. The role of the regulator and regulatory developments regarding branchless banking where he highlights the establishment of the Alliance for Financial Inclusion (AFI) at the end of 2008, with funding from the Bill & Melinda Gates Foundation is a positive development. Principal technical issues and key regulatory issues have discussed.

Parvin (2013) analyze the traditional banking business pattern where branchless banking is a blessing both for the bank and the customer. She mentions that branchless banking providing unparallel services and easily satisfies the customer in Bangladesh and she tries to predict the future of mobile banking by regression analysis using secondary data mainly. She tries to give some insights and recommendation in this regard which may be use for flourish of branchless banking in future in Bangladesh.
3. Ethics, Banking and Mobile Financial Services

3.1 Concepts of Ethics and Its Uses in Business

The concept of ethics comes from the Greek word, “Ethos” that means both an individual’s character and a community’s culture. Though there are diverse views regarding ethics expressed by many scholars, it is not difficult to have a simple concept of ethics from literatures. Ethics may be defined as:

- “Good behaviour” that recognize the rights and interest of others as well as society as a whole (Rahman, Muhammad Habibur, 1999).
- The study of morality that is concerned with the standards that an individual or a group has about what is right and wrong (Velasquez, Manuel G., 2011).
- The study and philosophy of man with emphasis on the determination of right and wrong and also as the basic principles of right action, moral principles, moral philosophy etc. The word ethical has been variously interpreted as morally correct, honourable, decent, fair, good, honest, just, noble, principled, righteous, upright, virtuous and so on (Islam, A. B. Mirza Md. Azizul, 2011).
- Ethics are principles that explain what is good and right and what is bad and wrong and that prescribe a code of behavior based on these definitions (Gomez-Mejia, L. R., & Balkin, D. B., 2012).
- Ethics are based on value a system which refers to important and lasting beliefs pertaining to right and wrong, fair and unfair, good and bad and desirable and undesirable handed down in society through customs, tradition, religion and anchoring these families (Alamgir, M., 2015).

A business is a productive organization—an organization whose purpose is to create goods and services for sale, usually at a profit. Business is also an activity. One entity (e.g., a person, an organization) “does business” with another when it exchanges a good or service for valuable consideration. Ethics plays an important role in developing a business’ strategic plan as it serves as the backbone of the firm’s principles (Oluwafisoye, O., & Akande, O., 2013). The firm’s goal is to provide services and products, and acquire profit through the business’ sales and operations (Ethics Resource Centre, 2009; Kalshoven et al., 2011). In spite of the business’ goal to acquire profit and their return of investment, it is important that the strategies they employ in their operations are bound by moral and ethical standards for their stakeholders (Lewis, 2002). Ethics is believed to be a set of moral beliefs and conduct that discourages acts of self-gain and encourages honest and modest ways of generating business income (Ghosh et al., 2011).
3.2 Mobile Financial Services: Promoter of Ethical Banking

Banking business is regarded as the financial intermediary that mobilizes funds from savers to allocate the gathered funds as loans among deserving economic entities. Banking offers deposit, loans, payment and other utility services. Banks play crucial roles in the economy to keep its wheel moving forward by accelerating saving-investment process, managing risks, smoothing payment system, promoting domestic and international trade and working as conduit for implementation of monetary policy. Mobile financial services (MFS) are one type of banking services which refer to financial services that are provided through mobile phone among people, unbanked people in particular. Mobile financial services (MFS) also known as mobile banking performs finance related functions on a mobile device like a Smartphone or tablet. With the use of a mobile device, the user can perform mobile banking via call, text, website, or app. MFS can bring myriad benefits for all, particularly for unbanked people.

Alamgir, M (2015) defines ethics in banking as trust, efficiency, openness, transparency and accountability, development and community involvement. Trust brings savers and borrowers together through bank’s intermediation. Trust allows banks to borrow short and lend long. Trust bestows authority in banks to allocate resources to alternative uses albeit with some prompting from policy makers and supervisory authorities. Trust underwrites banks’ role in payments and fund flow. The author also opines that efficiency is at the core of sound and ethical banking which can be attained through efficient mobilization of deposits and use of funds efficiently. All payments and charges, advances and investments and annual audited financial accounts and statements should be transparent and available in public domain should. Openness and transparency will enhance public trust in banks. Alamgir, M (2015) also opine that ethical banking is also about inclusive growth and socioeconomic development that is environmentally sustainable.

It is clear from the preceding analysis that mobile financial services can promote ethical banking in Bangladesh in the following ways.

- Bringing unbanked poor people under financial network.
- Offering deposits, loans and other financial facilities among unbanked poor people.
- Smoothing payment system including salary and remittances services for all people.
- Ensuring real time, fast and secured financial services.
4. Types, Benefits and Significance of Mobile Financial Services

4.1 Types of Mobile Financial services

Mobile financial services (MFS) refer to such financial services that are provided through mobile phone among people, unbanked people in particular. Mobile financial services (MFS) also known as mobile banking performs finance related functions on a mobile device like a Smartphone or tablet. With the use of a mobile device, the user can perform mobile banking via call, text, website, or app. MFS can bring myriad benefits for all, particularly for unbanked people.

Among two models of MFS, Bangladesh has adopted bank-led model in delivery Mobile Financial Services (the other model is telephone company led model, telco model in brief). According to guidelines issued in 2011, Bangladesh Bank permits the following Mobile Financial Services (in broad categories): (i) Disbursement of inward foreign remittances; (ii) Cash in/out using mobile account through agents/Bank branches/ATM’s/Mobile Operator’s outlets; (iii) Person to Business Payments (e.g. utility bills payment); (iv) Business to Person Payments (e.g. salary disbursement by corporate bodies/industries/offices etc); (v) Government to Person Payments (e.g. elderly allowances, freedom-fighter allowances, subsidies, etc); (vi) Person to Government Payments (e.g. tax, levy payments); (vii) Person to Person Payments (among registered account holders of the same bank) and (viii) Other payments like microfinance, overdrawn facility, insurance premium, DPS, etc. To reap benefits of mobile technology based financial services, banks in Bangladesh have undertaken many initiatives motivated by Bangladesh Bank, the central bank of Bangladesh.

4.2 Benefits Mobile Financial services

MFS can bring myriad benefits for all.

- Expands financial intermediation by increasing access to finance for a large segment of the unbanked population.
- It reduces transaction costs, and saving also help households manage cash flow spikes, smooth consumption, as well as build working capital.
- Allows firms to invest and build capital over time, fostering the creation of business.
- Allow for faster and more efficient government transfers
- Offer great potential for cross border economic linkage
- With Mobile financial services, users of mobile phones can perform several financial functions conveniently, quickly and securely from their mobile.
Users can check account balance, review recent transaction, transfer funds, pay bills, locate ATMs, deposit cheques, manage investments, etc.

Mobile banking is available round the clock 24/7/365,

It is easy and convenient and an ideal choice for accessing financial services for most mobile phone owners in the remote rural areas at lower cost where formal banking is not feasible from commercial viewpoint.

Mobile financial services utilize the mobile connectivity of telecom operators and therefore does not require an internet connection.

Mobile banking is said to be even more secure than online/internet banking.

4.3 Significance of Mobile Financial Services

There are growing studies on impacts of mobile financial services on socio-economic condition in the countries that adopts mobile financial services. Here we examine the findings of the two documents relating to impact of mobile financial services.

A study by the Boston Consulting Group (2011) reveals positive impacts of mobile financial services. The major findings of the study include:

- Mobile financial services (MFS) drive financial inclusion. The study of the Boston Consulting Group on Pakistan, Bangladesh, India, Serbia and Malaysia finds that the impact of MFS ranges from a 20 percentage point increase in financial inclusion in Pakistan (from 21% to 41%) to a 5 percentage point increase in Malaysia (from 90% to 95%). The other three countries are likely to experience an impact of around 10-12 percentage points.

- The Boston Consulting Group (2011) reports that mobile financial services can increase GDP by up to 5 percent. MFS could accelerate economic growth by up to 5% in the case of India. GDP in Pakistan, Bangladesh and Serbia could be between 2-3% higher in 2020 as a result of MFS, while the impact on Malaysia is more modest, at around 0.3% reflecting the smaller financial inclusion impact.

- MFS can help the poor prepare for and respond to shocks, including natural disasters. In Pakistan, Easy Paisa launched a relief payment distribution system. The same concept was used in Haiti to provide earthquake relief. Another example is Kenya M-Pesa’s UAP Insurance, which insures poor farmers through mobile phones against weather-induced crop failures.
MFS will help reduce income inequality by increasing opportunities for the poorest segments of society to experience the benefits of financial services, and hence mitigate income and expenditure volatility.

A survey of research evidence by Masha, I. (2016) shows that Mobile financial services (MFS) or mobile money have important micro and macro-economic impacts. The author identifies three key macroeconomic impacts: Impact on economic growth, Impact on inequality and Impact on financial system stability.

The impact of mobile money at the macro level comes mainly from research that extends financial development theory in cross country context.

- The growth of mobile money services represents an expansion of financial intermediation, both in breadth and depth.
- According to financial development theory, the degree of financial intermediation is not only positively correlated with growth and employment, it is generally believed to causally impact growth (Levine 2005 and Pasali 2013)
- Key channels: (i) lower transaction costs (ii) better distribution of capital and risk across the economy (iii) broader access to bank deposits can also have a positive effect on financial stability.
- Empirical evidence shows that expanded financial services are positively correlated with growth and employment. (Sahay et al, 2015)
- Studies found that lower transaction costs and better distribution of capital and risk across the economy increased reach, enabling new private-sector business models that help address other development priorities.
- In addition to the direct economic benefits, financial inclusion can improve the effectiveness and efficient execution of government payment of social safety net transfers (government-to-person payments), which improves the efficiency of government spending

Expanded access to financial services seems to relax the credit constraints on poor people, who lack collateral, credit history, and connections. At the macro level, the impact should, all things being equal be a reduction in aggregate income inequality. The research evidence shows that:

- Inequality as measured by the Gini coefficient increases as countries progress through early stages of financial development (measured by private credit and bank branch growth), but it declines sharply for countries at intermediate and advanced stages of financial development (Jahan and McDonald 2011).
There is a robust negative relationship between financial depth and the Gini coefficient (Clarke, Xu, and Zhou 2006). Moreover, financial depth was associated with increases in the income share of the lowest income quintile across countries from 1960 to 2005, and countries with higher levels of financial development also experienced larger reductions in the share of the population living on less than $1 per day in the 1980s and 1990s.

Controlling for other relevant variables, almost 30 percent of the variation across countries in rates of poverty reduction can be attributed to cross-country variation in financial development (Beck, Demirgüç-Kunt, and Levine 2007).

The explosion of mobile financial services and payment usage impacts the financial system in a variety of ways. Cross country research suggest that:

- Broader financial inclusion can coincide with greater financial stability. Greater access to bank deposits can make the funding base of banks more resilient in times of financial stress. (Han and Melecky 2013)
- On the other hand, there are potential risks to financial stability from an unchecked broadening of access to credit. Financial buffers could decline with broader access to credit, and in countries with weaker supervision, the erosion of buffers is larger. (Sahay et al, 2015). Expansion of noncredit access does not create risks.
- Countries with strong supervision could see some financial stability gains from expanded access.

5. Present Performance of Mobile Financial Services in Bangladesh

Mobile Financial Services are promoting ethical banking by bringing unbanked people under financial network and making payment systems smooth and pro-poor in Bangladesh. Bangladesh Bank has provided approval to banks for running mobile banking services; out of approved banks, 17 banks have started to convey mobile financial services up to January, 2017. The number of registered clients stood at 41.9 million at the end of January, 2017. The number of monthly transitions and amount of monthly transaction stood at 139.8 million and BDT 252.06 billion in January 2017. The statement on mobile financial services is depicted in table 1.

The two types of mobile financial services namely cash in and out cash services dominate among different services. The amount of cash in and cash out transaction stood at BDT 10,833 billion and BDT 98.64 billion in January, 2017.
The other mentionable services include P2P transaction, salary disbursement, utility bill payment and inward remittances. The statement on different types of mobile financial services is depicted in table 2.

In Bangladesh, a large number of NGOs have emerged to provide collateral free credit to the poor inspired by the apparent success of Grameen Bank and due to failure of formal financial institution in reaching the poor. Yet outreach of microfinance remains well below its potential. One of the key hurdles for providing financial services to poor people is high operational cost and resultant interest rate keeping a large number of poor people excluded from formal

### Table 1: Key Information on Mobile Financial Services in Bangladesh

<table>
<thead>
<tr>
<th>Serial no.</th>
<th>Description</th>
<th>January, 2017</th>
<th>January, 2016</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No. of Banks Launched the Services</td>
<td>19</td>
<td>20</td>
<td>-5</td>
</tr>
<tr>
<td>2</td>
<td>No. of Banks started to convey the service</td>
<td>17</td>
<td>18</td>
<td>-5.56</td>
</tr>
<tr>
<td>3</td>
<td>No. of agents</td>
<td>723,112</td>
<td>569,656</td>
<td>26.94</td>
</tr>
<tr>
<td>4</td>
<td>No. of registered clients in Lac</td>
<td>419.33</td>
<td>331.38</td>
<td>26.54</td>
</tr>
<tr>
<td>5</td>
<td>No. of active accounts in Lac</td>
<td>165.04</td>
<td>136.33</td>
<td>21.06</td>
</tr>
</tbody>
</table>

| Total transaction in taka (in crore BDT) | 3   | 118,832,401 | 17.67 |

8. No. of daily average transaction 4661118 3,961,080 17.67

Source: Payment System Department, Bangladesh Bank, 2017

### Table 2: Product-wise information on Mobile Financial Services in Bangladesh

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Inward Remittance</td>
<td>8.12</td>
<td>3.72</td>
<td>118.28</td>
</tr>
<tr>
<td>b.</td>
<td>Cash in transaction</td>
<td>10,833.03</td>
<td>6,969.25</td>
<td>55.44</td>
</tr>
<tr>
<td>c.</td>
<td>Cash Out transaction</td>
<td>9,863.65</td>
<td>6,128.01</td>
<td>60.96</td>
</tr>
<tr>
<td>d.</td>
<td>P2P transaction Salary Disbursement (B2P)</td>
<td>3,527.48</td>
<td>2,862.69</td>
<td>23.22</td>
</tr>
<tr>
<td>e.</td>
<td>Utility Bill Payment (P2B)</td>
<td>349.21</td>
<td>157.79</td>
<td>121.31</td>
</tr>
<tr>
<td>f.</td>
<td>Others</td>
<td>380.03</td>
<td>509.07</td>
<td>-25.35</td>
</tr>
</tbody>
</table>

Source: Payment System Department, Bangladesh Bank, 2017
financial services. Mobile financial services have opened new windows for banking the unbanked. Though Bangladeshi leading MFIs use ICT in handling top management issues, they are lagging behind in case of mobile microfinance programs. Some MFIs like BRAC, ASA are providing mobile financial services only in the form of remittances. If a more enabling environment can be created, the higher number of microfinance institutions (MFIs) will come forward to provide all sorts of mobile financial services. According to recent survey of Institute of Microfinance (Access to Financial Services, Funded by UK Aid, 2011), about 41% of poor HH do not have access to any type of credit. 38% of all HHs have access to MFI service. So, Banks and MFIs can use mobile financial services for promoting financial inclusion among unbanked people.

6. Challenges, Policy Options and Conclusion

Challenges

Bangladesh has huge potentials in promoting financial inclusion which lies in presence of over 100 million mobile phone users, expanding green banking, massive presence of youth people, more involvement of corporate and Govt. sector in providing Staff salaries via MFS and over 10 million foreign remitters. However, there are challenges in reaping benefits of MFS:

- Preventing wide use of OTC channel instead of personal account
- Misuse of mobile accounts in collecting foreign remittances by passing formal banking channel
- Protection of privacy of customers’ security number
- Agent’s insecurity in handling big amount of cash
- Addressing ML and TF issues.

Policy Options

Mobile banking has brought immense benefits in case of financial inclusion of unbanked people and smoothing of payment system. The following policies need to address challenges faced by MFS industry.

- Encouraging users to use personal account in transactions
- Misuse of mobile accounts in collecting foreign remittances by passing formal banking channel
- Protection of privacy of customers’ security number
- Ensuring insecurity problems of agents in handling big amount
- Coordinated steps to lower transaction cost
- Monitoring ML and TF issues in MFS closely.
Conclusion

Ethical banking means inclusive banking system that embraces environmentally and socially-conscious practices. As financial inclusion promotes growth and alleviates poverty, expansion of mobile financial services has become imperative to promote financial inclusion and ethical banking. Since mobile financial services have great potentials in Bangladesh due to presence of more than 10 million users of mobile phone, possibility of making payments of salaries among staff working in public and private sectors and 1 million foreign remitters, Bangladesh Bank has introduced mobile financial services (MFS) in 2011. MFS has now become a strong tool for building digital Bangladesh. Since inception, growth of mobile financial services (MFS) is encouraging and it now provides services among 41.9 million customers. However, much effort needs to expand MFS market with customized services which include encouraging users to use personal account in transactions, concerted efforts for removing insecurity problems of agents in handling big amount, coordinated steps to lower transaction cost and monitoring ML and TF issues in MFS closely.
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An Ethical Analysis of Quick Rental Power Plants in Bangladesh

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Abstract: Energy is a strategic determinant of economic growth. Therefore, energy crisis can negatively affect the development process of any small economy like Bangladesh. Hundred percent excess to electricity to all the citizens is one of the main agendas of Bangladesh government. Therefore, to reduce the energy crisis and provide the electricity to all, Bangladesh government invited Quick Rental companies in 2010 as a short term solution. The duration of these Quick Rental companies were 3-5 years but their activities are still going on. Since these companies burn imported oil to generate electricity, there is a growing ethical consensus about the impact of these Quick Rental companies in the energy sector of Bangladesh. To the best of our knowledge, there is no paper so far assessing the impact of Quick Rental companies considering ethical aspects. Therefore, the main objective of this paper is to discuss the role of Quick Rental companies towards Bangladesh economy through an analytical and ethical discussion.

1. Introduction

Bangladesh has been maintaining a very significant GDP growth rate over the past few years which cause high electricity demand among the consumers. In 2009, when the current government came into power there were high pressure on them
to provide adequate amount of electricity to the different sectors. Especially the manufacturing sector which is considered as the “Thrust Sector” of our economy was hampered due to inadequate supply of electricity causing disruption in their production process. So, there was a clear problem for the government as the demand exceeded the generation by 2000MW. The problem was not very easy to mitigate given the state of the plants producing electricity during that time. Also, to add to this problem were no proper planning on how to improve this sector causing very little improvement in this sector. As a result of this problem the government had to take some emergency initiatives to mitigate the problem. So, the government planned to produce 5000MW by 2011 and 7000MW by 2013. But the problems of lack of financial resources and primary energy source, the plan became very difficult and challenging to achieve.

The primary source of producing electricity in Bangladesh has been natural gas as more than 80% were generated using gas fired power plants. But in 2008-09 there were shortages in gas supply and predictions by Government agencies showed that supply of natural gas would run out by 2031 at current extraction rate. So, there was pressure to switch to different sources. There was abundance of coal but lack of extraction and pressures from the environmental groups made it less convenient for the government to start extensive use of coal for generation of electricity.

As a result, the government went for “Quick Rental Power Plants” (QRPP) and encouraged private firms to participate through tendering. Some 33 power plants were given permission to produce electricity using furnace oil and diesel. Agreements were signed with the private sector electricity generating companies to purchase electricity from the rental power plants which would be then added to the National Grid for transmission and distribution.

This sums up why and how quick rental power plants were initiated in Bangladesh during 2009. At present, there are around 34 oil-fired power plants and the numbers may increase this year as there have been recommendations to increase the generation capacity using the private plants. According to the Bangladesh Power Development Board, “If we rely on the existing power plants there will be chaos in the hot season. We have no alternative but to allow more rental power plants as mega and medium capacity power plants will come into operation after 2019.” So, this idea of quick rental power plant is actually helping Bangladesh throughout this process and has reduced the number of blackouts/ load shading compared to the earlier times.
As the government will have to wait until 2018 to implement any coal-based power plant, the government has decided to extend the tenures of the quick rental power plants. So the QR power plants has given the government sufficient time to plan for the future ahead and fix the energy problem (electricity) crisis with ease. But the continuation of these policies will affect the long-run sustainable electricity generation capacity of Bangladesh. Moreover, seven of these QRPP companies in on the verge of receiving extension in their contract ranging from 5-15 years. This can prove to be dangerous for the economy and the long-term energy security of our country as short-term fixes have a lot of opportunity cost. The government is selling the electricity at a subsidized price due to the high cost production of the rental power plant electricity. This is putting a lot of pressure on the budget as the deficit is increasing. The other sectors such as education, health care and infrastructure are losing out because of the wastage of funds in filling out the deficit.

Despite fulfilling the energy demand, Quick rental companies are liquid fuel based which causes environmental degradation. We know that these oil production industries contain significant risks like toxic chemicals, water contamination, irreversible environmental degradation and destruction of ecosystems. There are many advantages to using renewable energy sources instead of non-renewable energy sources. Unlike coal, oil, or gas, the renewable energies of the sun, wind, water, and geothermal are clean, accessible, abundant and sustainable. Using renewable energies lowers carbon (CO2) emissions. Most are available everywhere in the world. Together, the supply is everlasting. They can support ecosystems and ensure future availability. The benefits of renewable energy are clear. Yet, approximately 80% of the energy human beings use around the world still comes from non-renewable sources that are environmentally destructive.

There are many reasons why this is the case, including: Economic and political systems of the developed world which are deeply rooted in fossil fuel use Lifestyle habits of people in the developed world that are shaped by these economic and political systems and expend large amounts of non-renewable energy Although the government has decided to extend the contract of QR companies to generate electricity, still there is a question regarding the fact that whether the QR companies affects negative impacts in the long run. It should be ensured the benefits of QR companies will outweigh the negative consequences cost by fiscal burdens. So, decisions should be taken from ethical considerations.

To the best of our knowledge, there is no paper so far assessing the impact of Quick Rental companies considering ethical aspects. Therefore, the main
objective of this paper is to discuss the roll of Quick Rental companies towards Bangladesh economy through an analytical and ethical discussion.

The rest of the paper is organized as follows. Chapter 2 focuses on Importance of Energy Sector towards Economy. Chapter 3 gives a brief Overview. Chapter 4 critically describes the linkage of Ethics and Energy Economics. Chapter 5 highlights The Benefit of Quick Rental Companies in the energy sector of Bangladesh. Chapter 6 ethically examines the effectiveness of Quick Rental companies as a solution to mitigate energy sector. Finally, the Conclusion is at Chapter 7.

2. Importance of Energy Sector towards Economy

Energy is considered as the lifeblood of the economy. It is an essential input for almost every good and service. Energy plays a important role in the development process of a country. It not only enhances the productivity of factors of production, but also promotes higher living standards. The term “energy” mainly covers a wide range of products such as electricity, oil, natural gas, coal, biomass and other renewable sources. According to World Bank (2000) no country has managed to develop beyond a subsistence economy without ensuring at least minimum access to electricity services for a broad selection of its population. Moreover, in a study of over 100 countries, Ferguson et al. (2000) find a strong correlation between electricity usage and the level of economic development and growth.

The general conclusions of this research are that wealthy countries have a stronger correlation between electricity use and wealth creation than do poor countries and that, for the global economy as a whole, there is a stronger correlation between electricity use and wealth creation than there is between total energy use and wealth. The study also shows that, in wealthy countries, the increase in wealth over time correlates with an increase in the electricity ratio.

Electricity is known as one of the most widely used forms of energy and therefore the electricity industry is an important sector for any economy. Electricity, being an energy carrier, provides energy input to different development processes that vary depending on consumer group such as industrial, service, residential and government. Oil is another vital source of energy in the economy and always been considered as an indicator of economic stability due to the world’s high dependence on oil products.

Energy price is a crucial driver of the world economy and changes in the price of energy can have significant effect on macroeconomic condition and welfare in
both developed and developing countries around the world. The transmission mechanisms through which energy prices have an impact on real economic activity include both supply and demand channels. There is the classic supply side effect according to which rising energy prices are indicative of the reduced availability of a basic input to production; leading to a reduction of potential output (Brown and Yücel, 1999). An energy price increase may also have a negative effect on consumption through its positive relation with disposable income. From demand side perspective, when energy prices rise, consumers are unable or unwilling to reduce energy consumption and may reduce expenditures on other goods and services, potentially upsetting the macroeconomic condition (Lescaroux et al., 2008).

Naturally, the bigger the energy price increase and the longer higher prices are sustained, the bigger the macroeconomic impact. The strength of the link between energy and macro economy is affected by different factors. The long run level of economic activity is determined principally by labor productivity, which is determined part by the net supply of energy. In the short run, economic theory argues that an increase in energy prices leads to an increase in the domestic price level and a decrease in output due to higher cost. There is growing recognition that energy supply can transform people’s lives and does serve as an engine for economic and social opportunity (World Bank, 2013).

Recent empirical literature till to date observes over a hundred studies on causality between GDP and energy (both at aggregate and disaggregate level) consumption using various methodologies across the countries. The existing empirical literature finds support for four possible hypotheses between energy consumption and economic growth; they are growth, conservation, neutrality and feedback hypotheses. The growth hypothesis suggests that an economy is energy dependent where energy consumption leads to economic growth and a shortage of energy may negatively affect economic performance, leading to a fall in income and employment. The hypothesis suggests that energy is a vital and necessary input along with other factors of production such as labor and capital.

On the other hand, the conservation hypothesis suggests that an economy is not energy dependent where energy conservation policies may be implemented with no adverse effect on growth and employment. The feedback hypothesis suggests that energy consumption and real GDP are interrelated and complementing each other. Finally, the neutrality hypothesis suggests that there is no causality in either direction and changes in energy consumption are not associated with changes in GDP, so that energy conservation policies may be pursued without adversely
affecting the economy. They have argued that since the cost of energy is a very small proportion of GDP, it is unlikely to have a significant impact; hence there is a “neutral impact of energy on growth.”

3. Overview of Electricity Sector in Bangladesh

Energy plays a vital role in the socioeconomic development of a country. Thus, the government of Bangladesh has been putting its best efforts to develop the indigenous energy resources. In fact, to upgrade the socio-economic condition and to alleviate poverty, electricity sector has been prioritized by the government. Bangladesh has one National Grid with an installed capacity of 15,379 MW as on February 2017. Electricity is one of the major reasons of slow GDP growth so government has decided to build more power projects through private sector and public private partnership.

As 2015, 92% urban population and 67% rural population have the access to the electricity for their source of light. Average 77.9% population have the access to the electricity in Bangladesh. Bangladesh’s total installed electricity generation capacity (including captive power) was 15,761 MW as of 30 August 2017. Energy use in Bangladesh is quite low when compared to other developing countries in South Asia. According to US Energy Information Administration, USEIA, 2015, total energy use in Bangladesh in 2012 is only 0.20% of world consumption. Per capita consumption of electricity is still low in Bangladesh.

However, the annual growth rate of energy use was about 5% during 2000-2010, which is a lot faster than the other neighboring countries in South Asia.

Problems in the Bangladesh’s electric power sector include, high system losses, delays in completion of new plants, low plant efficiency, erratic power supply, electricity theft, blackouts, and shortages of funds for power plant maintenance. Overall, the country’s generation plants have been unable to meet system demand over the past decade. Bangladesh has small reserves of oil and coal, but very large natural gas resources. Commercial energy consumption is mostly natural gas (around 66%), followed by oil, hydropower and coal.

Electricity generation in Bangladesh was almost entirely dependent on natural gas because of its local availability and there was a sharp increase in oil prices in the early 1970’s and Bangladesh switched fuel sector from oil to natural gas. But, Bangladesh’s natural gas reserves are expected to last till 2031 at current extraction rate which would endanger the energy security of Bangladesh (Ministry of Power, Energy and Mineral Resources, 2015). The growth in gas
demand will exceed supply in future. According to PETROBANGLA (2015), recent reserve estimation, current gas production and consumption rates and future demand projections suggest that known recoverable reserves of gas will not be able to cater the growing energy needs of the country and Bangladesh is now on the threshold of a critical stage.

During 1992, the country’s total installed capacity of electricity generation was 2,350 million watts (MW), while the derated capacity was 1,719 MW. The installed capacity increased to 4,680 MW in 2002 and further to 10416 MW in 2014, with the corresponding derated capacities of 3,428 MW and 9821 MW respectively. That means, the addition in installed capacity is not reflected in terms of proportional increase in electricity generation. There are many factors that contribute to the difference between the installed capacity and the maximum available generation (derated capacity). For example, some plants may remain out of operation for maintenance, rehabilitation and overhauling, and the capacity of some plants may be derated due to aging. However, the shortage of natural gas, which is the major fuel used for electricity generation, is the most important factor for low-capacity utilization in Bangladesh.

To mitigate this supply-demand mismatch, government entered into contractual agreements for high-cost temporary solution, such as quick rental power plants and small independent power producers (IPPs, mostly diesel or liquid-fuel based) on an emergency.

“In 2009-10, the generation was about 3,500 MW while the peak demand was about 5,500 MW indicating a deficit of 2,000 MW. Moreover, the deficit was continuously rising as new demand for electricity was generated in the growing economy.” (Mustafa.K.M, 2013).

The change in the fuel mix of electricity generation has significant implications for the cost structure and total subsidy cost. The use of liquid fuel high speed diesel and furnace oil has increased significantly in the last few years, which has, in turn, increased the per-unit generation cost of electricity at present.

With furnace oil and diesel now accounting for around 21% of fuel mix for electricity generation, the average cost for bulk supply stands at BDT 5.88/KWH in 2014. This was BDT 5.36/KWH in 2012. The increase in generation cost is due to the increase in share of liquid fuel based power plants and also the increase in prices of liquid fuel.

Power generation sector is rising but power transmission and distribution are still lacking behind. one of the reason might be the Single Buyer System prevailing in
the power sector. Most of the electricity generated is either produced or purchased by BPDB making it the sole customer of power generation companies. To get the complete benefits of the power supply these three sectors (generation, transmission and distribution) should work separately.

4. Ethics and Energy Economics

Energy is not an ethical issue. Indeed, it is a very young subfield of applied ethics. Energy is part of our everyday lives and is often taken for granted. This is not surprising, as energy appears to be artificially cheap and seemingly plentiful. This “illusion of plenty” has likely contributed to the problem by diluting ethical issues related to our energy systems. Greenhouse gas emission and climate change have also put attention to several ethical issues with our energy systems.

Fereidoon P. Sioshansi, President of Menlo Energy Economics, emphasizes “The key question is not how are we going to get more energy, but rather why are we using so much of it and what for?”

The ethical issues with energy can be divided into three categories: producers, consumers and policy. Although these categories are not solid and some of the issues will overlap between two or all categories. Energy producers face ethical issues in the way energy is extracted and produced. All energy sources will involve the transformation of nature. Several energy industries (oil and gas production, mountaintop removal coalmining, uranium mining) contain significant risks such as: toxic chemicals, water contamination, irreversible environmental degradation, destruction of ecosystems, and relocation of communities. These raise important ethical issues that environmental philosophy deals with.

Another major concern is the issue of externalities in energy. The current energy market does not pass on the full cost for the energy that is produced, but some of the major costs of energy production have been externalized. This cost is never actually ‘paid’ by consumers or producers, the cost becomes externalized as a social cost. In addition, the “illusion of plenty” which is created by the “extensive supply and distribution network that connects consumers to virtually endless supplies of energy” followed by the lack of price signals at the point of consumption, disconnects consumers from the costs and the environmental impacts of energy production.

The ethical issues that face energy consumers are questions about responsibility and complicity. Are individuals morally responsible for purchasing energy from energy sources that promote climate change? Are individuals morally required to
change their energy-intensive lives? The most important issue related to consumers is linked to lifestyle choices, the way they use energy. Surprisingly, the way we use energy in our daily lives has not received nearly as much attention as it deserves. It is much easier to make changes on an individual level than governmental (policy) or collective levels (producers).

An important ethical issue facing energy policy is the issue of trade-offs. Every single energy technology has its negative impacts and energy policy must make difficult decisions between the different choices available. Even if the most environmentally friendly technologies are chosen or available, still there will be always technological negative impacts.

So, consideration of energy issues has many implications on human society. The use of fossil fuels has been identified as a major contributor to global climate change, with serious ethical implications. Replacement of fossil fuels by hydroelectricity involves dam construction and flooding, displaces rural populations, destroys forest and wildlife habitats, interferes with fish populations, and changes sediment transport and deposition patterns. The construction of concrete dams releases large amount of greenhouse gases to the atmosphere, and in many areas dams have a limited life span. Decommissioning dams raises significant environmental questions, is very costly, and will require further substantial releases of greenhouse gases.

Development of nuclear power, once seen as the answer to the energy dilemma, has proven to be difficult, a possible health risk, and less reliable and more expensive than initially predicted. Solar energy, geothermal energy and wind have significant potential for generating electricity in some areas, but may involve aesthetic alterations to human environments that are deemed unacceptable. Tidal and wave action as a source of energy have been little developed, and while they could have local significance, energy storage and distribution issues remain to be solved, and there may be environmental and aesthetic constraints.

Energy is not just a technological issue but involves difficult ethical choices. Science and engineering are crucial in finding more ethical and environmentally friendly technologies for our energy systems, but technology can never estimate our choices. We are faced with serious ethical decisions and choices, and ethics must be involved to ensure that important aspects of our energy systems are not overlooked. Ethics play an important role in issues of development for the future by clarifying values at stake in policy decisions and giving moral reasons for alternative courses of action. Environmental and development questions are loaded with moral implications that need to be understood and carefully weighed.
before intelligent choices are made. With the help of ethics, a new social paradigm should evolve that would promote sustainable development with the maintenance of cultural diversity, social justice and equity.

5. **Benefits of quick rental companies in Bangladesh Energy sector**

The name quick rental power plants itself suggests that the rental power plants are easy to set up and therefore, can supply electricity to the national grid within a very short period of time. In times of crisis this is very helpful for quick generation of electricity. These power plants are typically installed within 4-6 months and hence are ideal for meeting short-term electricity needs; they utilize scarce resources efficiently and create local employment. The quick rental power plants provide an easy and short-term solution. It needs to be remembered that the fast-track development of the rental plants is a widely used option across the world to resolve the power crisis on an urgent basis, and there does not seem to exist any better solutions to the crisis at present.

Most of the rental power plants are private and therefore it means government does not have to invest on building the plants. Since quick rental plants do not involve capital investment on the part of the government in these power projects, this saves a lot of funds for the government which can be used for the long-term electricity generation projects. The cost of purchase and setting up of power plants are borne by the sponsors and the government in no way guarantees any repayments to the lenders of the rental plants. The quick rental plants can create efficiency and competence to the country’s other power plants particularly of the public sector.

One additional benefit of these rental projects is that technically only the amount of electricity supplied would be liable for payment. Quick rental plants in Bangladesh have the same configuration of 15-20 years IPPs and hence these can be used, if necessary, as IPPs with a lower, structured payment.

In 2011-12 year, the contribution to the GDP of additional electricity generated by the QRPPs (5,067.8 MkWh) has been between Tk. 23,312 crore and Tk. 54,226 crore at constant 1995/96 prices. Obviously, if electricity from the QRPPs was not produced, along with lower GDP growth and reduced sectoral output, would have reduced the export growth rate and created adverse impact on other macroeconomic and sectoral indicators including employment generation and poverty reduction.

The additional power supplied to the national grid through the QRPPs has made significant positive impact in many areas of the economy. The supply of
Additional power has no doubt contributed to the expansion of economic activities in various sectors including manufacturing industries, RMGs, commercial and business activities, agriculture through providing irrigation and better marketing and processing services, and in trade, communication, and other services. This has significantly helped to keep the GDP growth rate over 6 percent along with a healthy export growth despite global recession and other constraints.

Quick rental power plants provide electricity in the short-run while the policy makers can develop and implement strategies for the long-run. So, the government is buying itself some precious time while the quick rental power plants are working it can solve the energy crisis issue and ensure sustainable long-term growth of the country.

Moreover, if government did not go for the quick rental option during the power crisis time, the power situation could have been much worse. For a country like Bangladesh, increasing the gross generation capacity by 3,100 MW within a period of around three years is no doubt a big achievement even though the demand over the period also shot up by 7,500 MW which did not have much impact on the consequent load shedding.

6. Can Quick Rental Companies be considered as a solution to mitigate energy crisis: An ethical discussion

Over the last few years, severe power crisis compelled the government to enter into contractual agreements for high-cost temporary solution, such as rental power and small independent power producers (IPPs, mostly diesel or liquid-fuel based) on an emergency basis. A significant portion of the additional electricity generation has come from liquid fuel based power plants which has raised the total contribution of liquid fuels in power generation to 17 percent in 2012 from 13 percent in 2011 and 5 percent in 2010. Even though quick rental power plants have increased electricity generation, the use of liquid-fuel or diesel in energy sector raises many ethical dilemma in our energy system.

Petroleum is extracted beneath the Earth’s surface. Then it is refined into various type of fuel. These fuels are then used to produce energy as a form of electricity. As the demand of electricity increases, also the usage of fuel rises in the energy sector. But these fuels cause massive environment degradation across the world because it is toxic to almost all forms of life and it causes climate change. Large amount of petroleum is burnt to produce fuel which creates large amount of CO₂ (carbon dioxide) gas that traps heat in the Earth’s atmosphere. This CO₂ is the main greenhouse gas which causes global warming. The other produced
compounds are often toxic to life. Examples are carbon monoxide and methanol which pollutes the air severely. High temperatures created by the combustion of petroleum cause acid rain. It causes many problems such as dead trees and acidified lakes with dead fish. Acid rain leads to increased corrosion of machinery and structures and to the slow destruction of archaeological structures. Petroleum hydrocarbons such as gasoline, diesel, or jet fuel intruding into indoor spaces from underground storage tanks or brown fields threaten safety and causes adverse health effects from inhalation. Also, sea oil spills cause the mammals, reducing its insulating ability, and making them more vulnerable to temperature fluctuations. Lastly, the waste oil is produced due to the combustion of petroleum which has become unsuitable for its original purpose due to the presence of impurities or loss of original properties. This oil contains toxic like Benzenes which poisons both soil and drinking water. Runoff from storms carries waste oil into rivers and oceans, poisoning them as well. Thus, it implies that excessive use of fuel is a threat to the ecosystem and all forms of life around the world.

Every single energy technology has its negative impacts and energy policy must make difficult decisions between the different choices available. So, Government must choose energy policy which is the most environmental friendly and the price of the energy is cheaper with the highest efficiency. Currently the government has taken a lot of plans to increase the electricity generation capacity of our country. This a positive sign as the economy will benefit from it. However, the amount of policies being undertaken lacks a clear and precise vision. Also, it seems that the policies in the plans are not followed instead they remain in the books only and other policies are being undertaken. According to the “Power System Master Plan 2016” the government would focus more on long term project using coal and other renewable sources.

However, this policy is not being maintained as the Government recently granted rental power plants extension ranging five to fifteen years. So, this show there is a clear discrepancy between what the policy and the actions being taken. Many people suggest that these steps are taken because in the current tenure of the government long-term projects cannot be finished so they are going for short term fixes. Also, some influential people are making money out of these power plants by extending their contracts and getting permission for new ones. Renewable energy is one of the long term options for Bangladesh. For example, renewable energy helps in reducing poverty and environmental degradation. It makes it easier for everyone in the economy to be able to attain electricity and get benefits from it. This energy comes from sunlight, wind, rain. River current, geo-thermal heat, etc. all of these is renewable. This policy will also benefit the excess demand scenario in Bangladesh.
It is true that to mitigate short-term energy crisis, quick rental power plants are very effective, but for the long-term sustainable economic growth and development it is not an ideal solution. It is harmful for the environment as well as expensive compared to its efficiency whereas; successful long-term projects will ensure energy security and reduce the energy cost.

7. Fuel Diversification as an alternative Solution

The use of imported High Speed Diesel (HSD) and Furnace Oil (FO) has risen alarmingly which, although added electricity to the national grid, actually meant that the government’s public expenditure budget was inefficiently allocated to pay the corresponding import bills. This had probably crowded out the nation’s potential investment in other productive sectors creating adverse economic impacts. The country’s growth prospects are being hampered. Moreover, the nation’s vast dependence on imported fuel has also attributed to an unnecessary fiscal burden, exerting multidimensional pressures on its economic development drives. Thus, it is crucial for Bangladesh to prepare itself for the near future and plan its fuel diversification strategies keeping in line with the trends in the global energy markets. It is also important to utilize the domestic energy sources other than relying on imported resources.

In the past, there was a global trend of being heavily dependent on the use of fossil fuels and non-renewable energy resources which not only minimized their reserves but also caused environmental degradation. Bangladesh can look forward to replacing fossil fuel and non-renewable energy with renewable energy in order to match its local energy demand.

Biomass is one of the main non-commercial resources of Bangladesh. Biomass as a versatile source of energy is primarily used in rural areas to meet the energy needs for cooking. The traditional biomass sources include agricultural residue (rice husks, rice and jute stalks, sugarcane bagasse, etc.), animal waste (mainly dried form, but some biogas plants, too) and fire wood. These renewable biomass resources are considered to have significant potential to meet the energy demand, especially in the rural areas. In addition to these, biomass can be extremely helpful for farmers who no longer have to rely on expensive diesel and kerosene to run irrigation pumps and lighten houses, using biogas as a substitute to these fuels. The abundant supply of solid biomass can even be converted into compressed natural gas that can be employed to run vehicles whereby the import bills, arising from petroleum imports, could be reduced. Furthermore, second generation bio-fuels from Jatropha, etc. can also supplement the national energy supply.
Bangladesh can also tap its superior quality coal deposits for clean coal-based electricity generation purposes, provided skills development in the energy sector is ensured. Large scale coal-based power plants can be set up which, although is subject to time, can resolve the nation’s electricity deficit to a great extent, provided measures to protect the environment are ensured. Although substantial amounts of coal reserves in seven fields have been discovered in the north-western part of the country, still the coal sector of Bangladesh is quite underdeveloped. The Government was in the process of reviewing the country’s coal policy, which would set the regulations for the development of the coal industry and help establish a reliable source of energy for the country through the use of coal as the primary fuel for power generation. The Rampal Power Station is a proposed project which is a coal-based power plant with a 1320 MW production capacity.

Bangladesh is expected to have enormous potentiality in renewable energy development. Renewable energy is energy, which comes from natural resources such as sunlight, wind, rain, tides and geo thermal heat which are renewable. Renewable energy helps in reducing poverty, aid in energy shortage and environmental degradation such as desertification, biodiversity depletion and climate change (Power Division, 2015). Regarding the institutional development, government power utilities like Bangladesh Power Development Board (BPDB), Rural Electrification Board (REB), Local Government Agency like Local Government Engineering Directorate (LGED) and a significant number of private sector agencies including NGOs are already involved in renewable energy development. A nodal agency, i.e. Sustainable and Renewable Energy Development Authority (SREDA) as envisioned in the Renewable Energy Policy is established and in the process of manning this organization so that it can work according to the desire of the people. This organization will provide policy support to the government as well as work to promote, expand and develop the renewable energy and to enhance energy efficiency both in public and private sector.

Moreover, this organization facilitate private sector to get involve in renewable energy and energy efficiency business. Electrification of villages in remote areas generally requires huge investment and leads to power losses associated with transmission and distribution networks. Additionally, at the current annual rate of growth of consumption of 10% the natural proven reserve of natural gas may not last more than 15-20 years. One of 12 the great promises offered by the renewable energy technologies is their potential to provide electricity in areas not served by national power grids. There is no doubt about the fact that renewable energy will
take a crucial role not only for off grid electrification in the country but also for future electricity generation as a whole. Among the renewable energy sources, hydropower currently represents less than 5% of total installed electricity generation capacity. Among the renewable energy sources, hydropower currently represents less than 5% of total installed electricity generation capacity. Since the country is a flat one, opportunities for installing further hydropower plants is negligible, although micro hydro and mini hydro have limited potential in Chittagong Hill Tracts.

However, the country is blessed by considerable solar radiation. Bangladesh receives an average daily solar radiation of 4-6.5 kWh/m². Solar photovoltaic (PV) are gaining acceptance for providing electricity to households and small businesses in rural areas where electricity is not available from national grid. However, potential of other renewable resources is still at the exploration stage. Potential of wind energy is mainly in coastal areas and offshore islands and to determine extent of potential wind resource mapping project is in process. Some of the development partners and companies come forward for wind mapping in different parts of the country.

Finally, Bangladesh is advised to participate in cross-border electricity trading across the South Asian region, importing hydropower, the cheapest form of electricity, from Bhutan since Bangladesh do not have geographical advantages. However, regional trade among South Asian economies is not as much as strong between other countries, especially amongst the developed ones. At present, Bangladesh mainly imports electricity from India. However, it can also look to diversify its import partners and look towards countries like Bhutan and Nepal that have comparative advantages in producing hydropower.

8. Conclusion

The benefits from “Quick rental power plant” policy implemented during 2009 cannot be scrutinized as they came onto the economy’s rescue when we needed energy the most. The excess demand of electricity was around 2000MW during 2009 so QRPP helped a lot in reducing this gap. Different sectors benefited from it as the supply went from erratic to adequate. We can see it that the amount of load-shedding has decreased substantially thus reducing the troubles of the households. The manufacturing and service sector also benefited from these QRPP as they could maintain steady level of production and service.

However, this cannot be a solution for the long-term energy security. These power plants have duration of 3-5 years. Recently, government has granted rental power
plants extension ranging five to fifteen years. The government is selling the electricity at a subsidized price because oil market is very volatile across the world. This has certainly created pressure on the budget as the deficit is increasing. So, long-term energy policy should be taken for the energy sector which is less costly with more efficiency and environment friendly.

More importantly, these power plants generate electricity by burning imported oil which is extracted from petroleum. This raises an ethical consensus about the effects of quick rental companies in Bangladesh. By burning oil, huge amount of Carbon dioxide and harmful greenhouse gas are being released in the environment. Excessive use of oil in the energy sector contributes to the environment degradation by releasing more toxic gases which are mainly responsible for global warming.

Therefore, Electricity production is the single biggest contributor to the emissions that cause climate change. To government should grant energy policies and solutions where less fossil fuel are being used and since our rising electricity consumption requires more and more power to be generated, and although peoples’ energy efficiency can help reduce this, the real alternative is to source electricity from renewable resources. Switching to a green energy (renewable energy) supplier is a positive step to take – it is a win-win situation both for the environment and the energy consumers. Government can easily make policies that are less costly and more environment friendly, renewable energy as the long-term solution and this will remove the burden of short-term quick rental power plants in the long run.
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Are Margins Excessive in Retail and Wholesale Sugar Markets in Bangladesh?

MOHAMMED HELAL UDDIN*

Abstract: There are claims that business people make excessive profits at the retail and wholesale markets of essential supply chains. Believing in such claims the commerce ministry has directed that wholesale traders can make 1 percent profit after meeting their transportation and other costs. Expenses of retailers are higher as they sell products to the consumers directly. So, they are allowed to make profit up to 10 percent. But the analysis of margin shows no strong evidence in support of such claims. Any kind of syndication or cooperative behavior at retail and wholesale layers is found nonexistent in case of Bangladesh sugar industry. The price variability is often driven by speculation of supply shortage and changes in world market prices. No significant difference in profit margins is also detected between Ramadan and non-Ramadan periods.

1. Introduction

The government agencies in Bangladesh have undertaken different regulatory actions to curb “extraordinary” profits by retailers and wholesalers of essentials such as edible oil, sugar and so on. One of the policies was to regulate gross margins charged by them. As per the commerce ministry’s directive “Wholesale traders can make 1 percent profit after meeting their transportation and other costs. Expenses of retailers are higher as they sell products to the consumers directly. So, they are allowed to make profit up to 10 percent.” (The New Nation, June 20, 2014). As per the directive, the importers can make 1 per cent profit on

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the wholesale prices after meeting their import costs. Among other policies, forcing retailers and wholesalers to post their price lists everyday is notable. The ministry has asked shop owners to display price lists of commodities and provide supply receipts to customers during purchase of essentials. Display of price lists is often enforced strongly during Ramadan to check price hike of essentials. Recently, the government has formed a ‘commodity price review and forecast cell’ to keep the prices of essentials within a tolerable limit (Daily Ittefaq, Daily Sun: 26th April 2016). This cell is also authorized to oversee the local and international production of commodities in question.

The purpose of all these policies is to stabilize the prices of essentials to ease middle class lives in Bangladesh. But the question is whether the undertaken policies are warranted. The noncompetitive price behavior is not expected from the retailers due to their sheer large number. There are numerous investigative studies on this issue in the other countries. Whereas, there has only been few of such systematic efforts in Bangladesh; looking into the market structure and the competition issues for a commodity whose supply is almost entirely import-determined. Recently, Helal and Taslim (2010) assessed competition in edible oil sector in Bangladesh. They have found concentration in the upper echelon of the supply chain, but no conclusive evidence in support of collusive behavior in any of the layers of the edible oil supply chain. The study did not find any wrongdoing by retailers and wholesalers as such.

The Centre for Policy Dialogue (CPD) undertook a diagnostic study to find out the causes of the recent food inflation. The CPD study attempted to trace the supply chain of different essential commodities as well as the market intermediaries who were assumed to play an important role in causing price inflation. The study asserted collusive behavior and syndication by importers even though it had no credible evidence of such behavior among the relevant firms. The conclusions were mere assertions rather than derivation from credible evidence or data. Rahman et al of CPD conducted another study in 2008, as a follow-up of the aforesaid diagnostic study. This study traced more recent trends in aggregate inflation levels and analyzed movements in price levels of a number of essential food items.

A large number of studies have been performed on the food grain especially on rice which is almost entirely locally produced. Several studies have been performed on the effectiveness of rice procure by the government of Bangladesh (Ali, 2010; Islam and Thomas, 1996; Ahmed and Bernard, 1989). Only a very few studies attempts to discuss the structure, conduct and performance of rice market
in Bangladesh in a limited scope (Naser and Rahman, 2002; Chowdhury, 1992). Lack of competition in the rice market is asserted in these studies. However, to the best of my knowledge, there is no systematic study relating the supply chain of a commodity beyond rice in Bangladesh.

The objective of this study is to gather evidences on the price behavior of the retailers and wholesalers operating in the sugar supply chain in Bangladesh. To assess the average margin charged by retailers especially and to conclude on the necessity of the ministry’s directive in this market paradigm. In addition, it is purported to compare their price behavior during Ramadan vis-à-vis non-Ramadan.

2. Methodology and data

On an average, retailers hold sugar in their store for a week before selling them to customers. Therefore, a 7 days’ lagged price of wholesale layer is used in case of calculating margins here. A proxy of margin is calculated based on retail and wholesale prices. Here the margin is defined as retail price of refined sugar \( p_r \) minus wholesale price of refined sugar \( p_w \) divided by wholesale price of refined sugar \( p_r - p_w \)/\( p_w \). There are other components of costs needed to be accounted for to obtain net profits. Thus, the margin calculated here provides us with the approximate price-cost margins, not the actual margins. Since one of our purposes is to examine the inter-temporal dynamics of margins this definition will do. To conclude on the ministry directive we need to be a little bit cautious. The margin calculated here is the maximum margin because it excludes retailer costs involved in retailing.

This analysis uses information available from several data sets. They are - the Department of Agricultural Marketing (DAM), Ministry of Agriculture Tariff Commission of Bangladesh, Ministry of Commerce, Bangladesh Bureau of Statistics (BBS), and National Bureau of Revenue (NBR). Daily prices on sugar and other related commodities are available from DAM. However, price data is available for Dhaka City Corporation only. Price data is available from January 24, 2008 to October 4, 2012. The size of the sample is thus 1226. There is however some data gaps due to lack of price data during weekends and holidays as well as some missing data in the DAM original data set.

3. Results

It is easier to examine inter-temporal variability in prices than the variability in margins. Comparing the variability in prices and margins over Ramadan vis-à-vis
non-Ramadan is relatively difficult. Multivariate analysis to explain the factors behind variability is challenging because it requires information on many facets of the economy and on the shifting factors in sugar demand and supply. Obviously, this is not the focus of this study.

3.1 Price variability

There is a huge variation in prices of sugar at retail level as shown in Graph 1 below. There is an upward trend in prices over 2008-12, but with a huge variation in them. In a short span of few months prices shot up by more 50 percent whereas in a span of a year or so prices shot up by 70 to 80 percents. On the other hand, prices went down from peak points similarly even though in slightly smaller magnitude. The claims that once go up prices do not go down is not true for sugar. Sugar prices did not show the extreme downward rigidity as claimed by many including the media.

Persistent high prices of sugar during Ramadan were not evident either. As is obvious in Graph 1, sugar prices go up often and go down frequently even though up trend is evident over long run. The overall dynamics of the macro economy especially the consistent increases in price level and the exchange rate imply an uptrend in sugar prices over the longer horizon. This is true for all other commodities in an economy irrespective of import dependent or not.

Graph 1: Movement of daily retail prices of sugar, 2008-12

Are these variations created by retailers or transmitted from wholesale level? If these variations come from wholesale prices then we need to focus on wholesale or upper layers to analyze these variations. It is obvious from the co-movement of daily retail prices and daily wholesale prices of sugar, as depicted in Graph 2, that the retail price variations have their origin in wholesale price variations. The two prices are seen to always move together and they are found co-integrated at the
1% significance level. Transmission of wholesale prices in retail level is expected in a competitive market environment. Since they are co-integrated, we need to look into the nature of transmission in detail.

Graph 2: Movement of daily Retail and Wholesale prices of sugar, 2008-12

Co-integration of retail and wholesale prices does not necessarily imply low markups charged by retailers. Rather stability of markups is the more relevant indicator of competitive behavior among retailers. It is the stability of the profit or price-cost margins that would be of greater analytical interest. A steady margin is not expected in a competitive scenario. Various demand and supply shocks affects margins in a competitive scenario. Only a non-competitive market can maintain a steady margin. The stability of margin is explored in the following section.

3.2 Margin estimation

The retailers who sell sugar often sell edible oil at their stores too. Like sugar the supply of edible oil is also almost entirely import-determined. For the comparison purpose, margin is also calculated for soybean oil. The average mark-up for soybean oil received by the retailers over the wholesale prices over 2008-12 is 4.8% (Table 1). It is well below the average mark-up in sugar retailing which is 6.9%. Mixing palm oil with soybean might be the reason for this lower mark-up in case of soybean oil. Actual mark-up for soybean oil is likely to be higher than what is estimated here, once adulteration is considered. It is also well below the maximum limit of 10% margin set by the Commerce Ministry. There are only 8 instances of greater than 10% mark-up for soybean oil.
Even though the average margin is 6.9% for sugar, the story of maximum 10% profit is binding only in case of 209 days out of total 1219 days over the years (Graph 3). It is about 17 percent cases observing more than 10% mark-up for sugar. Needless to say, it’s still a large number to consider.

<table>
<thead>
<tr>
<th></th>
<th>Soybean oil</th>
<th>Sugar</th>
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<tr>
<td>Average (gross) Markup</td>
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<td>6.90%</td>
</tr>
<tr>
<td># of times exceeding 10%</td>
<td>8</td>
<td>209</td>
</tr>
<tr>
<td>Exceeding during Ramadan</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Exceeding 2 weeks before Ramadan</td>
<td>0</td>
<td>8</td>
</tr>
</tbody>
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Even though the average margin is 6.9% for sugar, the story of maximum 10% profit is binding only in case of 209 days out of total 1219 days over the years (Graph 3). It is about 17 percent cases observing more than 10% mark-up for sugar. Needless to say, it’s still a large number to consider.

Graph 3: Gross mark-up of retailers over wholesale prices of sugar, 2008-12

Ramadan vs. Non-Ramadan

Is there any significant change in the margins or spreads of retail and wholesale prices during certain period (such as Ramadan) suspected as collusive? Of the 209 instances of more than 10% margin, only 20 of which were observed during any of the Ramadan, with 8 of them being within 2 weeks before Ramadan. None of the 8 instances for edible oil occurred during Ramadan (Table 1). However, the hypothesis of equal margins across Ramadan and non Ramadan periods could not be rejected even at the 5% significance level.

Obviously, fluctuating margins are more suggestive of a competitive behavior on the part of the retailers than otherwise (Graph 3). Still one can think of collusion when the retailers agree to charge a common margin over wholesale price so they
move in tandem with the \((p_T - p_W)\) within given bounds. But this is not the case here. When the plots for the denominator \(p_W\) were superimposed on the same chart, the fluctuations of margin and wholesale prices did not imply such pattern (not shown here).

### 3.3 Asymmetry in retail price transmission

An asymmetry in wholesale price transmission appears to exist in the retail prices of sugar. For the phase of increasing wholesale prices, the average margin was 8.1% whereas the margin was 6.3% for the phase of falling wholesale prices. For unchanged wholesale prices the margin was 6.9% (Table 2). The average margin is different for the falling and rising phase of wholesale prices. This asymmetry in price transmission has been on the media focus for the last couple of years. This is not a statistical aberration at all.

<table>
<thead>
<tr>
<th>Type</th>
<th>Markup</th>
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<tbody>
<tr>
<td>When wholesale prices increase</td>
<td>8.10%</td>
</tr>
<tr>
<td>When wholesale prices decrease</td>
<td>6.30%</td>
</tr>
<tr>
<td>When wholesale prices unchanged</td>
<td>6.90%</td>
</tr>
<tr>
<td>Overall</td>
<td>6.90%</td>
</tr>
</tbody>
</table>

When a retailer observes a decrease in wholesale price he sells sugar at a lower price than the previous day. If a retailer tries to charge the same price regardless, he would have to compete with the ones who will be charging a lower price on that day expecting lower retail price due to decrease in wholesale price. Thus, every retailer sells sugar at a lower price even though everyone’s cost (i.e., purchase price) remains the same. As a result, their margin falls. When they observe rise in wholesale prices they increase their retail prices on the expectation that rising wholesale prices will push retail prices up soon despite their purchase price being the same. So this asymmetry in price transmission is logical and driven by profit maximizing behavior. The downward adjustment during the decreasing phase of wholesale prices is slower and smaller than the upward adjustment during the increasing phase of wholesale prices.

### 3.4 Wholesale Layer

As described in earlier sections, retail prices were found to follow wholesale prices very closely, eliminating any major wrongdoing by the retailers. We need to assess the nature and extent of transmission of refiners/importers prices to the
wholesale prices. For this purpose, we need to know the purchase prices of the wholesalers. That is, we need to know the prices charged by refiners/importers. Information on the prices charged by the refiners is not available. This missing data restricts us from analyzing the wholesale pricing behavior considerably. Even though we cannot look into the transmission of prices from refiners to wholesalers still we can look at the movement of the wholesale prices and raw sugar prices to conclude about the transmission of raw sugar prices into wholesale prices.

It is obvious from Graph 4 that the two price series (raw sugar prices and wholesale prices) are not showing a fitting close to what was observed between retail and wholesale price series. There is still co-integration between the series but not at the extent which was observed in the retail layer. Thus, we cannot conclude about the behavior of wholesalers as well as all other players operating in the upper layers of the chain. Since transmission is not smooth then we will not be able to conclude about this wholesale layer. But still, it is hard to believe any kind of noncompetitive behavior by thousands of wholesalers all over the country. In such cases, we will need to examine upper layers of the sugar supply chain for noncompetitive behavior.

Graph 4: Co-movement of daily raw and wholesale prices of sugar, 2008-12

Storage capacity at wholesale layer sometimes found to neutralize market power by the refiners, in case they might possess any. Storage by wholesalers appears to smooth transmissions of international prices into retail prices. However, when wholesalers face a down trend of prices for a prolonged period they dry up their
inventories and they do not replenish their stock until they expect to see the reverse trend. In this kind of situation, wholesalers play a tiny role with respect to retail price smoothing.

It appears from Graph 4 that there is a decrease in spreads for a few months during the 1st and 2nd quarters of year 2011. It is the transitional period from DO to SO when the raw and wholesale sugar price spreads decreased. Uncertainty relating the transition may be the reason for such decrease in the spreads.

4. Conclusions

The claims that business people make excessive profits at the retail and wholesale layers of essential supply chains are examined in the context of sugar supply chain in Bangladesh. The analysis of margin shows no strong evidence in support of such claims. Any kind of syndication or cooperative behavior at retail layer is found nonexistent in case of Bangladesh sugar industry. The price variability is often driven by speculation of supply shortage and changes in world market prices. No significant difference in profit margin is also detected between Ramadan and non-Ramadan periods.

The commerce ministry’s directive that wholesale traders can make 1 percent profit after meeting their transportation and other costs could not be substantiated due to lack of appropriate data. As per the directive, expenses of retailers are higher as they sell products to the consumers directly. So, they are allowed to make profit up to 10 percent. The examination of gross margins shows less than 10 percent gross margin for most of the time over the periods consider. The average margin is different for the falling and rising phase of wholesale prices. The asymmetry in price transmission has been on the media focus for the last couple of years. This is not a statistical aberration at all. The asymmetry in price transmission is logical and driven by profit maximizing behavior. The downward adjustment during the decreasing phase of wholesale prices is slower and smaller than the upward adjustment during the increasing phase of wholesale prices. However, availability of prices charged by refiners may help us to conclude on puzzles with greater degree of precision.
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Abstract: This study investigates the impact of increased carbon emissions on per capita health expenditure exploiting the panel data with Engle – Granger based cointegration test, Fully Modified Ordinary Least Square (FMOLS) and Dynamic Ordinary Least Square (DOLS) method. Data for the South Asian Association for Regional Cooperation (SAARC) countries from 1995 to 2014 have been collected from World Development Indicators (WDI). The confirmation of integration order of the variables has been made using two panel unit root tests suggested by Im – Pesaran – Shin, 2003 (IPS) and Levin, Lin & Chu, 2002 (LLC). Following the procedure suggested by Pedroni (1999, 2003) and Kao (1999), existence of long run relationship has been examined among the variables. Application of Fully Modified Ordinary Least Square (FMOLS) and Dynamic Ordinary Least Square (DOLS) further confirmed the presence of long run significant positive relationship between carbon emissions and per capita health expenditure. The coefficients of carbon emissions varied from 0.246 to 0.355 under the model estimated by FMOLS while the coefficients varied from 0.198 to 0.283 under the model estimated by DOLS. The findings can be generalized by saying that increased carbon emissions due to environmental degradation would increase the health expenditure as well as cost of the nations.

Key Words: Health Care Expenditure, Carbon Emission, Panel Cointegration, FMOLS, DOLS, SAARC

JEL Classification: Q54, H51, C33

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1. Introduction

The traditional concept of growth and development has come to a new dimension in the present days. The world now opts for a sustainable economic development ensuring equal opportunity and prospect for all across the different cohorts. A mere economic growth resulting from an unbridled aggression and destruction towards the nature and environmental resources would be nothing but a curse for both the current and the future generation. Even after a long journey of human civilization for more than ten thousand years a significant part of the world is still suffering from hunger, illiteracy, malnutrition, deadly diseases and so on.

The deprivation of equal opportunity is not rare as well. In order to cope with all these the nations are continuously revising their goals and the policies towards achieving those. Their road to growth and development sometimes becomes a hindrance to the healthy coexistence of humans and the nature. The deterioration of environment not only has an abrupt impact on human health and productivity but a thousand fold negative influences on the economy in the long run as well. A persistent growth of carbon emission due to high industrialization and increased economic activity has been considered a peril of this modern era. This environmental degradation due to rapid industrialization as well as increased unfriendly economic activity has changed the world climate significantly over time.

Globally the SAARC region is considered to be a key economic zone. Although the countries of the region are experiencing attractive economic growth, these developing countries are still struggling in ensuring primary education, poverty alleviation, sanitation and birth control. Despite an approximate seven percent growth rate with a little fluctuation since 2009 (World Bank, 2017), poverty is still a widespread phenomenon in this part of the world. World Bank (2017) also shows that around 399 million people were still living below the poverty line till 2011.

The HDI (Human Development Index) which is a combined measurement of social and economic development shows very poor value, 0. 621, which is only higher than that of Sub-Saharan Africa, 0.523 (United Nations Development Program (UNDP), 2016). These countries are under tremendous pressure to achieve higher economic growth and competitiveness in order to upgrade their status from least developed or developing countries. This leads them towards a rapid expansion of industrialization and urbanization.

This transition is no doubt a panacea for them but inevitably this drags them to a threat of hazardous environmental degradation. Industrialization along with rapid
urbanization has increased the demand in the economy in terms of materials and energy in this region. The change in the pattern of consumption and production, introduction of new technologies and development of infrastructures accelerated environmental degradation causing the change in climate. Since climate change indicates the long term significant statistical change of whether including temperature, rainfall, storm patterns and other measures of climate (Wu, Lub, & Chen, 2016), one of the main causes of climate change is believed to be the explosion of carbon dioxide, methane, nitrous oxide, fluorinated gases concentration in the atmosphere.

The health risks driven by climate change are of long term and difficult to reverse. Recent changes in climate in the south Asia region have had adverse impacts on health. These impacts are thought to be disproportionately greater for the vulnerable groups in terms of age and health condition i.e. the children, the elderly and the medically ill people or in terms of geography i.e. people living in the areas with high possibility of climate-sensitive diseases, living on islands, coastal areas or mega cities.

High population density has significantly worsen the scenario in south Asia. Carbon dioxide, one of the most harmful greenhouse gases is classed as the ‘substance hazardous to health’. These health hazards would create a two dimensional burden for these low and middle income countries. Firstly, it would inflate the cost of healthy living by incurring more expenditure to tackle the health problems both at public and private level. Whereas these countries are already sunk in poverty, malnutrition, illiteracy and so on, these increased health expenditure would undoubtedly create extra pressure on the government and individuals. Secondly, despite taking necessary health facilities and medical interventions, sick leave would noticeably increase.

More alarming, this would cause the decline in labor productivity of the economy in the long run. As a result, this demands some empirical works in the field of health and environment. Despite the importance of environment on health care expenditure as well as on the economy, the number of studies that have been explicitly dedicated to find out the causal relationship between the health care expenditure and environment would be mare small. Against this backdrop the current study has given effort to contribute to the literature of the long run causal relationship between health care expenditure and carbon dioxide emission in the SAARC countries.
Section one describes the background and motivational aspects under introduction. Section two covers the discussion on existing literature in the field of health and environment. Section three comprises the discussion regarding methodological process and data. The estimation results and finding of the paper have been analyzed in section four. Finally, concluding remarks and policy suggestion have been explained in section five.

2. Literature Review

There are many literatures in the fields of Economics and Health Economics where researchers have devoted much effort to find out the determinants of health care expenditure for different countries and different regions of the world over the time. Most of them estimated the income elasticity of health care expenditure and many of those found it to be inelastic showing that health belongs to goods of necessity. Some of the recent studies reviewed here are Hansen & Selte (2000), Tekabe (2012) and Abdullah, et al. (2017). Since environment is considered as the most important determinants of health status, environmental degradation due to rapid climate change might affect the health status negatively.

Numerous diseases like respiratory and cardiovascular disease, injuries and premature deaths can be thought as the result of climate change which may necessarily accelerate the public health care expenditure. However, very few studies are found which were dedicated to explore the causal relationship between health care expenditure and climate change. A few empirical literatures on Middle East, some parts of Africa and Canada revealed quite expected results. Nevertheless, the effect of carbon dioxide emission (as a measure of climate change) on health care expenditure of this south Asian region is yet to discover.

Matteo & Matteo (1998) tried to find out the determinants of real per capita provincial government health care expenditure of Canada using the pooled time series and cross section data spanning from 1965 to 1991. They established the real provincial per capita income, proportion of provincial population over age 65 and real provincial per capita transfer revenues as the major catalysts. They found that established program financing had a negative and significant influence in Newfoundland and Quebec. It was found that the elasticity of real provincial per capita income of real per capita provincial government health care expenditure is 0.77. This implies that the real per capita provincial government health care expenditure is necessarily good. Applying Fully Modified OLS (FMOLS) and Dynamic OLS (DOLS), a panel study based on 36 Asian countries found health
care as necessary goods in nature for those countries (Abdullah, Siddiqua, & Huque, 2017).

A similar study using cross section data tried to find out the link of certain socioeconomic and demographic factors in determining health care expenditure in Africa (Gbesemete & Gerdtham, 1992). The explanatory variables of the study - GNP per capita, percentage of birth attending health staff and per capita foreign aid, explained about 78% of the variations of health care expenditure. Like Matteo & Matteo (1998), this study found health care expenditure is inelastic with respect to GNP per capita.

However, crude birth rate and percentage of population under 15 years of age were found not to be significant in case of Africa. Another study (Tekabe, 2012) based on low-income countries and sub-Saharan Africa found the existence of simultaneity between GDP per capita and health care expenditure. Although the study failed to find out any causal relationship between income and per capita health expenditure, it found an evidence of two way relationship between GDP per capita and mortality.

Gerdtham et al. (1992) has tried to explore the factors that determine and explain the variation of aggregate health care expenditure of OECD (Organization for Economic Cooperation and Development) countries. This study explained the importance of institutional factors that enhance the health system besides GDP (Gross Domestic Product). The main finding of this study (Gerdthama, Søgaard, Andersson, & Jönsson, 1992) is the significant contribution of institutional factors of health system in explaining the variation of health care expenditure among the countries. Another study on OECD countries during the period of 1960 to 1987 found a positive relationship between income and population aged over 65 with health care spending (Hitiris & Posnett, 1992).

An extensive study on 70 countries made a comparison between low and high income countries to figure out the importance of public health expenditure. They showed that public health expenditure in lower income countries provides a higher return compared to high income countries (Gupta, Verhoeven, & Tiongson, 2001). This higher return might come by increasing labor productivity because a good health can make a worker more productive by working efficiently in lower income countries. A non-linear panel analysis for the period 1960 to 1990 has examined the impact of health care expenditure on labor productivity (Bloom, Canning, & Sevilla, 2001). It found a significant positive impact of health care expenditure on economic growth. More precisely, a one year increment of life expectancy of the population led a 4% increment in the production.
Although a number of studies have attempted to find out the determinants of health care expenditure as mentioned earlier, very few studies attempted to outline the causal relationship between health care expenditure and climate change. The relationship between environmental quality and economic growth based on the Middle East and North African region (MENA) countries for the period 1995 to 2014 has been examined by Yazdi & Khanalizadeh (2017). By using Autoregressive Distributed Lag (ARDL) method, they found cointegrating relationship among health expenditure, income, CO₂ and PM₁₀ emission. As the measures of climate change, CO₂ and PM₁₀ emission were found to have statistically significant positive relationship with health care expenditure (Khoshnevis Yazdi, 2017). Yazdi & Khanalizadeh (2017) also found health care as necessary goods like the other studies (Abdullah, Siddiqua, & Huque, 2017), (Matteo & Matteo, 1998).

Using data of 49 regions, counties and districts of Ontario, Canada, a study tried to find out the relationship between health care expenditure and environmental variables (Jerrett, Eyles, Dufournaud, & Birch, 2003). They aimed to chalk out the complex system that determines the health expenditure in a two stage regression model by controlling for the endogenous relation between past health care expenditures, mortality and the influence of mortality on current health expenditure. Besides, they controlled the other influences on health care expenditure to avoid any muddy relation between health care expenditure and environmental variables. Their result showed strong relation between toxic pollution and municipal defensive expenditure with current health expenditure. Almost 67% of the variation in current health expenditure was from four significant variables that they had used. It revealed that counties suffering from higher pollution tend to have higher per capita health care expenditure whereas those that are imprudent to spend for environmental quality have lower expenditures on health care.

Unlike the cross section and panel data analysis, a time series study for Iran has been done for the time period 1967-2010 to find out cointegrating relationship (Yazdi, Tamhasebi & Mastorakis, 2014). They used ARDL model of cointegration to estimate the short run and long run impacts of environmental quality on health care expenditure. They found that different kinds of emission, income and health expenditure were cointegrated series. Both the long run and short run elasticity showed that income and different kinds of emissions had a significant positive impact on health expenditure in Iran for the period of time they studied.
Pollution can cause different types of illness and health hazard which might hamper the productivity of workers (Hansen & Selte, 2000). They focused on the channel that air pollution would lead to a bad health condition and that would induce workers taking more sick leaves and as a result labor productivity would be hampered. They actually found the evidence that yearly increase of small particulate matter induced more sick leaves and negatively impacted the trade and industry. This implies that it might necessarily increase the health expenditure.

3. Data and Methodology

Data, Variables and Model

For investigating the long run causal relationship between carbon emission and health expenditure, heterogenous panel data model has been adopted. To exploit the objective, this study wielded the annual data spanning from 1995 to 2014 of the South Asian Association for Regional Cooperation (SAARC) countries from World Development Indicators (WDI) of World Bank (World Bank, 2017). Due to unavailability of the data, the current study used the data of seven countries, namely Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, excluding Afghanistan.

Together with several other factors it is well accepted that environment is one of the most vital determinants of health status. Environmental degradation in any form would have worse implication for health leading to increase in expenditure in the long run. As the prime objective of the current research work is to explore the effect of environmental pollution measured by carbon emission on health measured on the other hand by expenditure on health care, we tried to model the health care expenditure with carbon emission alongside its other potential determinants. More specifically, the model that we are concerned with can be presented in the following implicit manner:

\[ PHE = f(PGDP, DP, CO_2) \]

In the above expression PHE stands for per capita health care expenditure, PGDP and DP indicates per capita Gross Domestic Product and dependent population respectively. Where dependent population is defined as the sum of two individual dependent age groups (sum of total population ages 0-14 and total population ages 65 and above). Lastly, \( CO_2 \) stands for carbon emission. As a priori it is expected that all the three independent variables would carry positive coefficients. Consciousness regarding health among people is positively influenced with the stimulation of their income. Increase in per capita income hence would lead to
more allocation for health both in personal and public level resulting in higher per capita health expenditure.

There is no denying the fact that dependent populations are the most vulnerable to health hazards in any area. The health care sector would require more fund to ensure the health security whenever the size of this dependent population rises resulting in higher health care expenditure. Besides these factors as environment is considered as an important component in determining the health status, the model has been augmented with the $Co_2$ variable. It is evident that increase in $Co_2$ emission worsens respiratory and cardiovascular illnesses, emphysema and asthma which may lead to higher mortality rate. Hence with the increase in $Co_2$ emission reducing health risk and fighting with diseases would require more health care expenditure.

For the ease of explanation and receiving the elasticity measurement we have performed logarithmic transformation of all the variables and have estimated the following regression model:

$$\ln PHE_{it} = \alpha_0 + \alpha_1 \ln GDP_{it} + \alpha_2 \ln DP_{it} + \alpha_3 \ln CO_{2it} + \epsilon_{it}$$

Here, $i$ denotes the cross sectional dimension that varies from 1 to 7 (SAARC countries) and $t$ denotes the time series dimension that varies from 1 to 20 (1995 to 2014).

**Testing Variable Characteristics**

Since the constructed panel is long in nature and the time dimension is considerably large, the stationarity property of the variables would be essential. Regression with non-stationary variables would be spurious and provide misleading results even though the data is panel. The stationarity characteristics has been diagnosed statistically following the testing procedure developed by Im, Pesaran and Shin (2003) and Levin, Lin and Chu (2002). Both of these tests (Im, Pesaran, & Shin, 2003), (Levin, Lin, & Chu, 2002) are considered as first generation test of stationarity as they require cross sectional independence. The null hypothesis that would be tested here in two tests is quite different. While IPS considers the presence of unit root (non stationarity) of the variables in each cross section, LLC considers the non stationarity of the variables assuming they have common unit root for the panel as a whole. In terms of alternative hypothesis IPS argues that at least in one of the cross section the series is stationary, in contrast LLC requires all has to be stationary.
Technically the test regression for both IPS and LLC tests are quite similar, nevertheless they differ in terms of formulating null using the autoregressive coefficient. For convenience consider the following autoregressive of order one, AR(1) process for panel:

$$y_{it} = \rho_i y_{i,t-1} + \varepsilon_{it}$$

Where, $i = 1, 2, \ldots, N$ cross section units observed over time, $t = 1, 2, \ldots, T$. Any fixed or random effect is included in $z_{it}$ and $\varepsilon_{it}$ is the error term. The coefficient of interest here is $\rho_i$ which if found to be less than unit in absolute value would imply the weakly stationarity of the variable $\gamma_{it}$. The IPS procedure formulates the null saying “$\rho_i$ may vary across all cross section units”, in contrast the null for LLC procedure argues “$\rho_i$ is identical across all cross section units”. For performing the test the following Augmented Dickey Fuller (ADF) test regression has been estimated:

$$\Delta y_{it} = \alpha \gamma_{it} - 1 + \sum_{j=1}^{P} \theta_j \Delta y_{i,t-j} + z_{it} + \varepsilon_{it}$$

The appropriate null and alternative hypothesis under LLC would be $H_0 : \alpha = 0$ and $H_0 : \alpha < 0$ respectively. Under the null we assume a common unit root for the variable $\gamma_{it}$ over all cross sections i.e. $\alpha = \rho - 1$. On the other hand the null hypothesis under IPS would be $H_0 : \alpha_i = 0$ for all cross sectional units, therefore the autoregressive coefficient might differ section to section.

**Testing the Presence of Cointegration**

In pure time series framework whenever a group of variables are found to be difference stationary then perhaps there might be some linear combination of those variables which is expected to be stationary. This idea is referred to as cointegration which is also very common in macro panel i.e. a panel structure where time dimension (T) is sufficiently larger than cross section (N) one. As in the current study the time period is larger than cross section assuming that the variables would be difference stationary we performed panel cointegration test. In particular two procedures developed by Pedroni (1999, 2004) and Kao (1999) have been followed. All these three tests (See (Pedroni P., 1999); (Pedroni P., 2004) and (Kao C., 1999) formulate the null arguing that there would be no correlation among the variables. Construction of the test statistic for these tests requires the residuals of panel statistic regression. The idea is that if the variables form cointegration then the residuals of the panel regression would be stationary i.e. I(0).
Allowing for short run dynamics as well as the long run slope coefficients to be heterogeneous across sections, the residuals have been estimated following Pedroni (1999, 2004) from the regression written below:

$\ln PLE_{it} = \alpha_i + \beta_t + \gamma_{1i} \ln FGD_{it} + \gamma_{2i} \ln DR_{it} + \gamma_{3i} \ln CO_{2i} + \varepsilon_{it}$

Here, $i = 1, 2, \ldots, 7$ and $t = 1, 2, \ldots, 20$. All the variables are expected to be I(1), $\alpha_i$ and $\beta_t$ are respectively standing for section specific fixed effect and linear trend and $\gamma$’s are the cointegrating slopes. Under the null of “no cointegration” it is expected that $\varepsilon_{it}$ would be I(1). Thus the test regression involving $\varepsilon_{it}$ would be as follows:

$\varepsilon_{it} = \theta \varepsilon_{it-1} + \sum_{j=1}^{p} \phi_{ij} \varepsilon_{it-j} + \gamma_{it}$

The null is tested on the significance of autoregressive coefficient $\theta_{it}$ against two alternatives; one is within dimension, $H^*_{i1} \theta_i = \theta < 1 \forall i$ other is between dimension, $H^*_{i1} \theta_i = 1 \forall i$.

The test elucidated by Kao (1990) follows the similar procedure we observed in Pedroni (1999, 2004). However, unlike the later one, the former one does not allow heterogeneity under alternative hypothesis and assumes cointegration vectors are homogeneous across sections. Thus, we would estimate the regression model of Pedroni (1999, 2004) subject to the fact that $\alpha_i$ would be heterogeneous, $\beta_t$ the trend coefficient would be zero and $\gamma$’s would be homogeneous across sections. Similar residual based regression has been then estimated and ADF $t$ – statistic employed to perform the test.

**Estimation Problem**

With an expectation that the variables under consideration would be cointegrated we would be estimating the cointegrating relationship employing the Fully Modified OLS (FMOLS) and Dynamic OLS (DOLS) method. The FMOLS estimates are unbiased asymptotically while DOLS results in asymptotically efficient estimators because of its control over serial correlation and endogeneity. Following Phillips and Moon (1999), Kao and Chiang (2000) and Pedroni (2000, 2001), three different FMOLS estimators namely, Pooled, Weighted and Group Mean would be estimated. The first one removes the deterministic components from the variables and applies the FMOLS method on the pooled sample. The weighted version differs from the pooled one as it weights the data ahead of the estimation by the country specific long run covariance. This helps the weighted method over standard pooled method to capture the heterogeneity. Finally, the
group mean uses individual country FMOLS estimates to calculate the cross sectional averages. To explain the estimators consider the model written below:

$$\ln PHE_{it} = \alpha_i + \chi_{it}^t \beta + \mu_{it}$$

Here $\alpha_i$ are the country specific intercepts, $\beta$ is the vector of slope coefficients, is the error term with $I(0)$ feature and $\mu_{it}$ is vector of independent variables consists of $\ln PGDP$, $\ln DP$ and $\ln CO_2$. Besides the entire number of variable in, $\chi_{it}$ $\ln PHE$ is assumed to be $I(1)$. Following the notation of EViews technical details, here the FMOLS estimators could be written as follows:

$$\hat{\beta}_{\text{FMOLS}} = \left( \sum_{i=1}^{n} \sum_{t=1}^{T} \chi_{it}^t \chi_{it}^{\prime} \right)^{-1} \left( \sum_{i=1}^{n} \sum_{t=1}^{T} \chi_{it}^t \ln PHE_{it} - \hat{\chi}_{it}^t \right)$$

Here $\hat{\chi}_{it}^t$ and $\ln PHE_{it}$ and are the demeaned variables, $\ln PHE_{it}^{*}$ and $\hat{\chi}_{it}^*$ while and are the modified version of dependent variable and serial correlation term.

$$\hat{\beta}_{\text{Weighted}} = \left( \sum_{i=1}^{n} \sum_{t=1}^{T} \chi_{it}^t \chi_{it}^{\prime} \right)^{-1} \left( \sum_{i=1}^{n} \sum_{t=1}^{T} \chi_{it}^t \ln PHE_{it}^{*} - \hat{\chi}_{it}^* \right)$$

Here $\ln PHE_{it}^{*}$ and $\hat{\chi}_{it}^*$ and are the weighted versions variables and serial correlation term, where estimates of country specific long run covariances has been used as weights.

$$\hat{\beta}_{\text{Group Mean}} = \frac{1}{N} \left( \sum_{i=1}^{n} \chi_{it}^t \chi_{it}^{\prime} \frac{N}{T} \sum_{t=1}^{T} \ln PHE_{it} - \hat{\chi}_{it}^{*} \right)$$

Thus group mean estimator is the cross sectional average of individual country specific FMOLS estimates.

Following Kao and Chiang (2000), Mark and Sul (1999) and Pedroni (2001), the model has been augmented with the optimum number of lags and leads of differenced regressors as well as differenced regressend. The model which would be estimated can be written as follows:

$$\ln PHE_{it} = \alpha_i + \beta_1 \ln PGDP_{it} + \beta_2 \ln DP_{it} + \beta_3 \ln CO_2 + \sum_{t=1}^{N} \gamma_1 \ln PHE_{t-\tau} + \sum_{t=1}^{N} \gamma_2 \ln PHE_{t+\tau}$$

$$+ \sum_{t=1}^{N} \gamma_3 \ln PGDP_{t-\tau} + \sum_{t=1}^{N} \gamma_4 \ln DP_{t-\tau} + \gamma_5 \ln CO_2 + \mu_{it}$$

Similar as FMOLS, the above model when estimated using DOLS would result in three group of estimators. Pooled version would adjust all the variables from the deterministic components, weighted version would adjust for heterogeneity and group mean version completes the estimation using the average of country specific DOLS estimates.
4. Estimation Results and Findings

Summary Statistics

Table 1 and Table A1 (Appendix) provide summary statistics of the variables included in the model. We have explained the summary statistics in two categories. Table 1 describes pooled summary statistics and Table A1 of appendix indicates the summary statistics of SAARC countries separately. During the study period, the average per capita health expenditure (current US $) of seven countries has been measured to be approximately 88 US $ while average per capita Gross Domestic Product (GDP) has been observed to be approximately 1461 US $. The economies of seven countries studied here have carried approximately 220 thousands CO₂ emissions measured in kiloton (kt) on average during this time. Summary table (pooled) also consists of the size of average population of seven countries against two specific age groups needed to estimate size of dependent population.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health expenditure per capita (current US $)</td>
<td>88.158</td>
<td>165.454</td>
</tr>
<tr>
<td>CO₂ emissions (kt)</td>
<td>220211.100</td>
<td>493114.300</td>
</tr>
<tr>
<td>Population ages 0-14, total (‘000)</td>
<td>70581.220</td>
<td>125261.900</td>
</tr>
<tr>
<td>Population ages 65 and above, total (‘000)</td>
<td>9880.3410</td>
<td>18685.940</td>
</tr>
<tr>
<td>Dependent population (sum of ages 0-14 and above 65, in 000)</td>
<td>80461.560</td>
<td>143681.000</td>
</tr>
<tr>
<td>GDP per capita (current US $)</td>
<td>1460.931</td>
<td>1709.619</td>
</tr>
</tbody>
</table>

Source: Prepared by authors

Average population of ages below 14, above 65 and the sum of both age groups defined as dependent population are approximately 71 million, 10 million and 80 million respectively. Table A1 shows that Maldives experienced the highest average per capita health expenditure with a value of 388 US $ followed by Bhutan with 73 US $. In contrast Bangladesh spent the lowest amount with an average value of around 16 US $. For the purpose of health, in case of carbon emissions as expected, India as a large country geographically produced the largest amount of carbon emissions, approximately 1.4 million (kt) followed by Pakistan 0.13 million (kt). On the other hand, Bhutan as an environment friendly country produced the lowest amount of emissions, approximately 0.0005 million (kt).

Graph A1 (Appendix) contains the trends of per capita health care expenditure and carbon emission of the seven countries chosen for this particular study. For being consistent, we take natural logarithm of per capita health expenditure (current
US$) and carbon emissions (kt). It is clear from the graph that both the variables have been consistently trending upward implying a positive relationship between health care expenditure per capita and carbon emissions.

**Testing variable behavior**

Considering the relative time length in relation to the number of units (i.e. countries), the data current study exploited can be thought to be as “long panel” in nature. If the concerned variables in the regression model where time length is large, move together then there might arise the problem of spurious results. Therefore behavior of all the variables has been diagnosed as a first step. More specifically, to confirm the presence of well behavior of the variables (measured in terms of presence of stationarity property) two panel unit root tests have been applied; namely Im, Pesaran, & Shin (2003) and Levin, Lin & Chu (2002). Both of these tests are characterized as the first generation because of their reliance on the assumption of “cross sectional independence”. It implies that all the variables here are assumed to be independently distributed over the sample countries.

Table 2 contains the IPS panel unit root test results. The null hypothesis which is tested here can be stated as “panels contain unit roots (individual)”. The test has

<table>
<thead>
<tr>
<th>Variables</th>
<th>Im – Pesaran – Shin (IPS) Test for Panel Unit Root</th>
<th>Null: Panels Contain Unit Roots (Individual)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnPHCE (Current US $)</td>
<td>4.107</td>
<td>1.00</td>
<td>-1.962**</td>
</tr>
<tr>
<td>D(lnPHCE)</td>
<td>-6.865*</td>
<td>0.00</td>
<td>-5.548*</td>
</tr>
<tr>
<td>lnPGDP (Current US $)</td>
<td>5.460</td>
<td>1.00</td>
<td>1.100</td>
</tr>
<tr>
<td>D(lnPGDP)</td>
<td>-6.591*</td>
<td>0.00</td>
<td>-5.960*</td>
</tr>
<tr>
<td>lnDP</td>
<td>-1.200</td>
<td>0.11</td>
<td>0.083</td>
</tr>
<tr>
<td>D(lnDP)</td>
<td>0.234</td>
<td>0.59</td>
<td>-0.977</td>
</tr>
<tr>
<td>lnCO2 (KT)</td>
<td>2.439</td>
<td>0.99</td>
<td>-1.362***</td>
</tr>
</tbody>
</table>

Note: * Indicates 1 per cent level of significance, ** Indicates 5 per cent level of significance, *** Indicates 10 per cent level of significance
been performed with two regression specifications; one with drift term and the other with both drift and trend term. It can be observed from the results that the stated null can be rejected at one per cent level of significance in both regression specifications for the per capita GDP at first difference. Hence it can be considered as integrated of order one, I(1) in nature. Both the per capita health expenditure and carbon emission become stationary at the difference when test regression considered the intercept term. Thus, these two variables has also been treated as I(1). Nevertheless, the null arguing presence of unit root in panel from individual perspective did not have enough evidence against it in case of dependent population. Hence this variable is detected to be non-stationary irrespective of test regression following IPS procedure.

One potential weakness which can be argued for IPS test procedure is that it tests the non stationarity nature of the panel variable considering its unit root property for each cross sectional unit that the particular panel contains. Improvement of the credibility of findings is further possible to be made by following a procedure that can test the unit root property of the panel variable considering the panel as a whole. As LLC test procedure formulates the null hypothesis arguing presence of common unit root in the panel, it has been applied as a further option.

The results have been presented in table 3. It can be stated here that per capita GDP and carbon emission both behaves expectedly in the difference form regardless of the specification of test regression. Therefore, they can be treated as I (1). Similar as before here the null hypothesis of presence of common unit root in the panel can be rejected for per capita health expenditure at its difference form when the test regression contains intercept. So, this variable can also be considered as I(1). Finally, the dependent population which was characterized as non-stationary under IPS test procedure has been found to be difference stationary when the null changed from individual unit root to common unit root following LLC procedure both in intercept specification and intercept and trend specification. Hence the variable would be I(1)

**Testing for Cointegration**

Since all the variables considered in the panel construction has been observed to become stationary at a common level suggesting a common integration order, there might present cointegration among the variables formulating long run relationship among them. The existence of such relationship among the concerned variables has been diagnosed applying two Engle Granger based cointegration tests suggested by Pedroni (1999, 2004) and Kao (1999) While testing for
Table 3: Panel Unit Root Test Results of the Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>None</th>
<th>Intercept</th>
<th>Intercept and Trend</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LLC t−Stat</td>
<td>Prob.</td>
<td>LLC t−Stat</td>
<td>Prob.</td>
</tr>
<tr>
<td>lnPHCE (Current US $)</td>
<td>8.782</td>
<td>1.00</td>
<td>2.433</td>
<td>0.992</td>
</tr>
<tr>
<td>D(lnPHCE)</td>
<td>4.483*</td>
<td>0.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>lnPGDP (Current US $)</td>
<td>10.075</td>
<td>1.00</td>
<td>2.338</td>
<td>0.990</td>
</tr>
<tr>
<td>D(lnPGDP)</td>
<td>4.457*</td>
<td>0.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>lnDP</td>
<td>0.693</td>
<td>0.24</td>
<td>0.025</td>
<td>0.510</td>
</tr>
<tr>
<td>D(lnDP)</td>
<td>4.608*</td>
<td>0.00</td>
<td>-1.125</td>
<td>0.130</td>
</tr>
<tr>
<td>lnCO2 (KT)</td>
<td>9.860</td>
<td>1.00</td>
<td>-0.508</td>
<td>0.307</td>
</tr>
</tbody>
</table>

Note: * Indicates 1 per cent level of significance, ** Indicates 5 per cent level of significance, *** Indicates 10 per cent level of significance

cointegration, Kao (1999), allows heterogeneity in terms of intercepts only (slope coefficients are assumed to be homogeneous), Pedroni (1999, 2004) permits heterogeneity both in terms of intercepts and trend. The test results are presented in table 4 and table 5.

Following Pedroni (1999, 2004), the null of “no cointegration” has been tested using a total of eleven statistics under three different specifications. Among which eight statistics namely “panel statistic” are within dimension and evaluate the null against homogeneous alternative. The rest three are “group statistics” based on between dimensions and evaluate null against heterogeneous alternatives. When the test regression is considered to be free of intercept and trend five out of eight within dimension statistics and two out of three between dimensions statistics has been found to be statistically significant arguing for the possible presence of cointegration among the variables.

Similar number of statistics has been observed to be significant rejecting the null of no cointegration when the test regression was augmented with intercept term only. Considering both intercept and trend term in the test regression, PP and ADF
statistic has been detected to be statistically significant in within as well as between dimensions. Thus, it can be argued with evidence that the long run relationship among the variables exists. Alongside the cointegration test procedure suggested by Pedroni (1999, 2004), the procedure developed by Kao (1999) has also been applied. The ADF test statistic for Kao has been observed to be statistically significant at one per cent level rejecting the null of no cointegration.

**Estimation of long run coefficients**

As majority of the test statistics suggested by Pedroni (1999, 2004) and the statistic suggested by Kao (1999) turned out to be significant, the long run relationship among the variables would remain present. Also, since all the variables have been found to have common integration order the estimation techniques such as FMOLS (see (Phillips & Hansen, 1990) and DOLS ((Saikkonen, 1992) and (Stock & Watson, 1993)) can be applied to receive the long run coefficients. These estimation techniques have been extended further for panel during later time. Specifically, Pooled FMOLS, Weighted FMOLS and Grouped Mean FMOLS proposed by noteworthy works mentioned in the methodology parts (Phillips & Moon, 1999), (Pedroni P., 2000) and (Kao &
Chiang, 2000) and (Pedroni P., 2000, 2001). Likewise Pooled DOLS, Weighted DOLS and Grouped Mean DOLS contributed respectively by Kao and Chiang (2000), Mark and Sul (1999) and Pedroni (2001). Both the estimation techniques have been applied with all three extensions for the panel.

Table 6 contains the estimation results of long run relationship among per capita health expenditure, per capita GDP, dependent population and carbon emission. As all the variables involved in the regression has been considered after logarithmic transformation, the resulting coefficients will actually be the measurement of long run elasticities. The elasticity of per capita health expenditure with respect to per capita income was found to be positive and statistically significant under all three FMOLS estimates. Specifically the responsiveness varied between 0.820 to 0.851. Thus increase in per capita income leads to increase in per capita health expenditure suggesting health care to be a normal service in nature. When the estimation technique has been altered to DOLS, again all three coefficients of per capita GDP observed to be positive and significant, however with different magnitudes. Here, it varied between 0.871 to 0.991. The elasticity coefficient of dependent population was measured to be negative in all cases. This contradicts our expectation.

Although under the methods of DOLS it has been found to be significant, under FMOLS (Pooled and Grouped methods) it turned out to be insignificant. This implies a mixed result. Finally, the variable which measures the effect of environment on health in current study is carbon emission defined by CO2 emission. The elasticity of per capita health expenditure with respect to CO2 emission has been measured to be positive and statistically significant. Under FMOLS the coefficient varied between 0.246 to 0.355 while under DOLS it varied between 0.198 to 0.283. Therefore, increase in carbon emission in the long run would necessarily lead to increase in per capita health expenditure. The current findings reemphasize the fact that environment is an important determinant of health as well as health care expenditure. Degradation in
environment measured by increasing carbon emission would generate uncountable health care problems gradually. Fighting with which would require more and more fund allocation for health care both from private and public perspective. This would imply a higher health care expenditure than earlier.

### Table 6: Panel Cointegration, FMOLS and DOLS

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pooled</th>
<th>Weighted</th>
<th>Grouped</th>
<th>Pooled</th>
<th>Weighted</th>
<th>Grouped</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnPGDP</td>
<td>0.841*</td>
<td>0.851*</td>
<td>0.820*</td>
<td>0.871*</td>
<td>0.873*</td>
<td>0.995*</td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>lnDP</td>
<td>-0.697</td>
<td>-0.596*</td>
<td>-0.199</td>
<td>-0.256*</td>
<td>-0.315*</td>
<td>-0.390*</td>
</tr>
<tr>
<td></td>
<td>0.107</td>
<td>0.000</td>
<td>0.732</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>lnCO2</td>
<td>0.270**</td>
<td>0.246*</td>
<td>0.355*</td>
<td>0.198*</td>
<td>0.283*</td>
<td>0.206***</td>
</tr>
<tr>
<td></td>
<td>0.012</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.058</td>
</tr>
</tbody>
</table>

Note: * Indicates 1 per cent level of significance, ** Indicates 5 per cent level of significance, *** Indicates 10 per cent level of significance.

### 5. Conclusion

A wide range of pioneering research works has been done in the field of health economics worldwide to explore the determinants of health expenditure employing different types of econometric models. Some of them wielded micro level data while others used macro level data (see (Hansen & King, 1996); (Abdullah, Siddiqua & Huque, 2017). However, very few studies have been devoted to explore the causal relationship between health care expenditure and environmental degradation.

Because of unplanned industrialization, environmental degradation has been resulting by causing rapid change in climate. Environmental degradation has become the major concern of the policymakers because it is distorting their anticipation and increasing the cost of the economy. Due to rapid climate change, health condition is deteriorating over time leading to the uncountable health care problems. As a result various types of diseases are spreading out worldwide which causes acceleration in the health expenditure. The present study tries to explore the causal relationship between health care expenditure and carbon emissions from a long run perspective. As mentioned earlier, it takes SAARC countries excluding Afghanistan data spanning from 1995 to 2014.

The findings of the study showed that the coefficients representing long run the elasticity of per capita health care expenditure with respect to carbon emissions
vary from 0.198 to 0.355 under different method of estimation following FMOLS and DOLS. Since all the coefficients of carbon emissions from different models are statistically significant, this leads to the conclusion that increased carbon emissions will increase health care expenditure in the long run. The findings hence reemphasize on environment as a crucial and important determinant of health care expenditure for SAARC countries. Like the coefficients of carbon emissions, the coefficients of per capita GDP representing the elasticity of health care expenditure with respect to per capita GDP are positive and statistically significant confirming the prior expectation.

The main contribution of this paper is that it can be thought of as one of the very few works that empirically investigated the causal relationship between health care expenditure and environmental degradation of SAARC countries using standard econometric methodology. This study has some strong recommendations for the policymakers. Firstly, since all the countries of South Asia region are at the stage of growing phase of the business cycle, they should adopt the environment friendly production technology. Secondly, as urbanization is considered as one of the major indicators that is responsible for carbon emission as well as climate change, policymakers should reemphasize on planned and decentralized urbanization. Lastly, a common fund could be generated to support the most victimized people of this region. On the other hand, since climate change is an integrated concept, the developed countries are also producing carbon emissions and deteriorating the world climate, the SAARC countries might claim contribution to this common fund.

The current exercise is not free from flaws. To begin with it embraces only SAARC countries. Although, Afghanistan is a member of SAARC, it is excluded due to unavailability of data. Secondly, the study could incorporate all the developing countries to provide better and strong implication of climate change. This could also be done by segmenting the countries based on income groups. Also, variation in the developed model would be possible to make changing the variables which would lead to expectedly different results. Nevertheless all these might generate and open the opportunities for further studies and research.
References


### Table A1: Summary Statistics (Based on individual countries)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Bangladesh</th>
<th>Bhutan</th>
<th>India</th>
<th>Maldives</th>
<th>Nepal</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Dev.</td>
<td>Mean</td>
<td>Std. Dev.</td>
<td>Mean</td>
<td>Std. Dev.</td>
<td>Mean</td>
</tr>
<tr>
<td>Health expenditure per capita (current US$)</td>
<td>15.56</td>
<td>7.29</td>
<td>72.87</td>
<td>28.89</td>
<td>36.84</td>
<td>20.34</td>
<td>387.89</td>
</tr>
<tr>
<td>CO2 emissions (kt)</td>
<td>42650.51</td>
<td>16812.65</td>
<td>477.26</td>
<td>211.46</td>
<td>1350938.00</td>
<td>440188.60</td>
<td>680.65</td>
</tr>
<tr>
<td>Population ages 0-14, total (000)</td>
<td>48697.12</td>
<td>642.97</td>
<td>228.16</td>
<td>6.014</td>
<td>371311.00</td>
<td>9060.69</td>
<td>105.26</td>
</tr>
<tr>
<td>Population ages 65 and above, total (000)</td>
<td>6003.72</td>
<td>1253.16</td>
<td>24.90</td>
<td>6.08</td>
<td>54154.95</td>
<td>8893.71</td>
<td>13.08</td>
</tr>
<tr>
<td>Dependent population (sum of ages 0-14 and above 65, in 000)</td>
<td>54700.84</td>
<td>1502.37</td>
<td>253.05</td>
<td>3.60</td>
<td>425466.00</td>
<td>18424.17</td>
<td>118.33</td>
</tr>
<tr>
<td>GDP per capita (current US$)</td>
<td>564.47</td>
<td>221.40</td>
<td>1384.76</td>
<td>699.65</td>
<td>820.88</td>
<td>454.95</td>
<td>4082.06</td>
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Graph A1: Trends of (ln) Health Care Expenditure and (ln) Carbone Emission (co2 in kt)
Livelihood Diversification in Rural Bangladesh: 
Economic Anthropology Perspective

KAZI SHAHEDUL HALIM*

Abstract: Diversification into business activities have been identified as the most important non-agricultural source of income for rural people in Bangladesh. My study in a Bangladeshi village showed that a considerable number of villagers were involved in petty business activities for their economic survival, creating a new view of the rural economy which was very different than in the past. It was found that rather than economic survival only diversification into business occupations had significant impacts on socioeconomic conditions of the villagers in Bangladesh. Nevertheless, research on this focus is still rare. The article aims to unveil this issue. The study ties in with economic anthropology. Its nature is inductive with taking subjective reports of the study respondents seriously and has relevance to diversification theory that can be used in actor oriented analysis of local economy. Mainly qualitative data such as observation and in-depth interviews and partially quantitative data obtained through the household survey were the basis of this study.

Key words: Diversification, rural Bangladesh, petty business

1. Introduction

Studies of the rural economy and rural labour markets in Bangladesh traditionally mainly examined the agricultural sector and have explored the expansion of agricultural wage labour and sharecropping relations as exemplars of rural transformation and employment generation (Feldman 1994, 99). Nevertheless, rural livelihoods in Bangladesh are becoming increasingly diverse. The existing structure of rural economy is composed of both farm and non-farm sectors. In the

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present structure of rural economy, the degree of business involvement is very high. This study focuses on the differences result from livelihood diversification into business occupation in a Bangladeshi village and connects it with diversification theory that can be used in actor oriented analysis of local economy (Seppälä 1998, 22).

A study conducted in 1974 in a Bangladeshi village called Katni, by two World Bank experts, found that agriculture provided the main source of livelihood for all households except for one carpenter (khatmistri) and two rickshaw pullers. The total number of the households in the village was 66, with 350 inhabitants (Hartmann & Boyce 1990, 7). In contrast to the previous study, my study in 2005 in a Bangladeshi village found that non-agricultural occupation provided the main source of income for 110 out of 258 households in the village, with 1015 inhabitants (Kazi 2010, 7, 118). Among the non-agricultural households a considerable number were involved in business activities.

The data used in this study shows that out of 258 households 53 (20.5%) in Bangdom ran a business as the primary source of income. A further 12 households (4.7%) were involved in business as a secondary means and 7 (2.7%) as tertiary sources of income. Although, the size of the businesses were tiny but had grave importance to the lives of the villagers in the study village (ibid.). The data reveal that business activities provided better livelihood security for them than in the past. As a result, business is becoming a common non-agricultural economic source for many poor households in rural Bangladesh. Except income generation only, my study found that diversification into business had further impacts on the socioeconomic conditions of the villagers. With respect to this, the research objective of the study was to know the differences result from livelihood diversification into business occupation in rural Bangladesh.

With this in mind, the article is structured as follows: After the introduction, study methodology is mentioned with particular emphasis on the methods used for collecting the primary data of the study. Then diversification theory is presented. Next, livelihood diversification into business occupation is discussed and analysed in the context of rural Bangladesh through presenting the cases from the village I studied. Finally, résumé of the diversification into businesses occupation is presented in the concluding part of the article.

2. **Methodology**

Generating mainly qualitative and partially quantitative data was the basis of this study. As to Max Weber combined use of both qualitative and quantitative data
can help in pursuing explanations, adequate at the levels of cause and meaning (Clive 2001, 17). Although, the use of quantitative data in this study was confined to know the numbers of households were involved in business livelihood in Bangladesh but it helped to understand the growing trend towards business occupation of the villagers in recent years. In order to focus the research to explain specific issues the qualitative data based on observation and in depth interviews were used to complete this article. The data originating in the key informant interviews with the villagers were analysed in narrative way.

The analysis of the data began during the data collection process and was thus well connected to the final analysis. Questionnaires related to the research objectives were prepared and the data was tape recorded during the in depth interviews with the key informants. And observation notes were written systematically for further analysis. All the data related to research objective were identified and examined using a process called ‘constant comparison’ (Glaser & Strauss, 1967) in which each instance of narrative text or item was checked and compared with the new data to classify the meaning of the qualitative data consistently. Relevant verbatim taken from field note and key informant interviews were quoted while deemed appropriate in the data analysis. Recall error was minimized by using culturally appropriate local language.

3. Diversification theory

Pekka Seppälä has developed diversification theory that can be used in action-oriented analysis of local economy. This theory is based on his anthropological study on the village economics of Tazania, situated in the Eastern part of Africa. Seppälä’s diversification theory has chambers’ concept of peripheral economy as complex, diverse and risk-prone (CDR) as basis of his theory. He defines two types of diversification processes in income generation in local economy. One is simultaneous diversification and the other is serial diversification. Simultaneous diversification takes place when several economic activities are conducted side by side. Whilst, in serial diversification one economic activity is terminated before another one is started (Seppälä 1998, 22).

Core issue of diversification theory is the tendency of the individuals and households to diversify their economic activities. A central part of the diversification theory describes that through diversifying economic activities villagers’ tendency is to cross over the boundaries, whether they are sectoral, geographical or cultural. The theory starts from the local scene and sees local unit as active actors (ibid.193). It highlights diversity as a means for the poor people
to avoid risk and obtain social security (ibid.195). Seppälä’s study claims that livelihood diversity in rural Tanzania provides an umbrella under which people can seek protection against the exploiting state or market. As to him in the insecure world, this is a definite source of security (ibid.224).

Although, the findings derive from Seppälä’s study have noticeable relevance to the findings of my study but there are some other issues that have resulted from villagers’ livelihood diversification in rural Bangladesh are absent in Seppälä’s study in rural Tanzania. Among these; gender and social capital issues are most conspicuous. The next part of the article will stress on the relevance derive from the two studies (i.e., Seppälä’s study in rural Tanzania and my study in rural Bangladesh) as well as the other issues that are absent in diversification theory through presenting the case studies from Bangdom village in Bangladesh.

4. Livelihood diversification in rural Bangladesh: A Case study

My data from the village of Bangdom, situated in the northern part of Bangladesh has relevance to the above mentioned diversification theory by Pekka Seppälä. Firstly, it was found that Seppälä stated two types of diversification in income generation (i.e., simultaneous and serial diversification) were prevalent in Bangdom. Secondly, similar to Seppälä the tendency of the people to cross over the boundaries though income diversification was obvious in the village I studied. Thirdly, diversity in income generation as a means for the poor people to avoid risk and obtain social security is quite same in both studies. Finally, Seppälä found diversity as an umbrella under which people can seek protection against the exploiting state or market as well as a source of security for the villagers was also a reality in rural Bangladesh. The case studies are presented here will put the issues forward.

**Case Study 1: Ena Begum**

From Bangdom was able to make a considerable economic progress by operating a mini grocery shop (ghumti/moodidokan) in her village. Although it is not common for women in Bangladesh to be directly involved in business activities, Begum is an exception from Bangdom. She was not born in Bangdom and married her husband from Bangdom 20 years ago. After some months of marriage, Begum and her husband moved to the village where she was born to try managing better living for the family. This migration did not bring any economic improvement, but rather more economic uncertainty to the family. As a result, the family returned to Bangdom and shared the same home as

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1. Did not ask the age of Ena Begum, as a woman she would probably not like asking the age.
her parents-in-law. On their return to Bangdom, her husband began pulling a rickshaw at Nazipur, whilst Ena found employment as a maid in Bangdom.

In 1993 Ena opened up a grocery shop (ghumti/moodidokan) in the village and worked as maid only part time. Within a year, she had made considerable economic progress and stopped working as a maid. The business development enabled her to increase the number of items she was selling and expand the shop.

Ena’s success encouraged her husband to start a petty business at Nazipur; selling bedi, cigarettes utilising a tiny space in the footpath. Income from the two businesses allowed them to buy land for building a home. They were able to send their eldest son to the district town to gain a diploma in tailoring and their youngest son to school regularly. They were able to improve their family’s economic status in the village from a very poor household. Ena explained that some years ago they were required to visit rich neighbours in order to have rice to fill their stomachs when there had no available jobs, however now they would be able to help their neighbours if any of them were suffering.

The case presented above reveals the fact that Pekka Seppälä stated simultaneous diversification is existed also in rural Bangladesh as Ena Begum opened up a grocery shop (ghumti/moodidokan) in the village and alongside this she worked as maid. Moreover, tendency of Begum’s households to diversify their economic activities is also seen as her success in business encouraged her husband to start another business by him. Furthermore, the tendency of the villagers to cross sectoral, geographical or cultural boundaries through livelihood diversification is obvious in the case of Begum’s household.

Although it is not common for women in Bangladesh to be directly involved in business activities, Ena Begum is an exception from Bangdom that was an example of crossing the cultural boundary in the context of rural Bangladesh. The most common livelihood in rural Bangladesh is confined to agricultural sector but by diversifying their livelihood into business Beugum’s household had the tendency to cross the sectoral boundaries. And by sending their eldest son to the district town to gain a diploma in tailoring was definitely a tendency to cross the geographical boundaries.

Diversity in income generation as to Seppälä is a means for the poor people to avoid risk and obtain social security which make a sense in the context of rural

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2 Nazipur is a small municipal town and Bangdom is situated 2 kilometres away from Nazipur bus stand bazaar.
Bangladesh too as it was obvious in this case study. Begum explained that some years ago they were required to visit rich neighbours in order to have rice to fill their stomachs when there were no available jobs, however now they would be able to help their neighbours if any of them were suffering. It postulates the fact that livelihood diversification made the family able to avoid the risk of running out of the basic needs and make the household economically better than ever before thus to obtain social security. The next case of a different villager is also an example to discuss the commonality lies in my study and diversification theory.

Case Study 2: Ahad Uddin a 45 years old man from Bangdom had a small tea stall (cha-er-dokan) in front of the mosque situated in the centre of Nazipur bus stand bazaar. In the beginning of his work life Ahad was involved in agriculture for 10 years. His work life began when he was in school because of economic problems in his fathers’ family. After completing nine grades he had to stop become involved in agriculture alongside his father. There were 6 members in his fathers’ family including him, his mother and 3 brothers. His 3 brothers also worked with their father. When their father became old he (father) stopped working in the fields and became unable to take care of family matters. As a result, the family was divided into smaller households but continued living in the same house.

After the separation, Ahad was married at the age of 22. His conjugal life began and he managed the needs of the family by cultivating arable land (1 acre) he inherited from his father. After some months of marriage, he planned to build a separate home because living in a shared home became difficult. Since he did not have any savings, he had to sell part of his land to build the new home. Gradually, his family became larger and required more income, not possible through only agriculture. The increasing cost and inadequate supply of fertilisers was the main obstacle for him retaining agriculture as source of income for his family.

Secondly, he was unable to receive facilities provided by the government of modern agricultural inputs to small peasants. He also could not get a loan from the government banks, although the banks had many projects to help peasants. According to him, the complicated bureaucratic procedures and other related problems made him unable to acquire a loan from the banks. In such a situation, he opened up a grocery shop at Nazipur bus stand bazaar in the mid-nineties. He was unable to continue making good profit from the business, due to overwhelming competition.
Finally, he began a tea stall and had been running that business as the primary source of income for his four members’ family. As to the diversification theory Uddin’s diversification into business falls in the sphere of serial diversification because in his case it was found that he terminated agricultural income before started the grocery shop and then ended up with the tea stall business (Seppälä 1998, 22).

In Bangladesh, the increasing cost of essential agricultural inputs, such as fertilisers and pesticides, is discouraging many marginal farmers to continuing farming occupations. In particular, poor and middle class farmers are caught in a dilemma with costly fertilisers and pesticides. Usually they do not have enough money to buy the costly fertilisers and pesticides when paying the market prices. In this case, the so called Green Revolution rarely benefited poor peasants. Consequently, the Green Revolution caused a serious increase in inequality between different classes of farmers in rural areas. It gave the opportunity for landlords to acquire more land and a trend towards some variation in the classical capitalist two-class dichotomy (Harry 1972, 182).

Unfortunately, Bangladesh and many other developing countries do not possess an efficient and well-developed administrative system suited to cope with the problems of social change and development planning (Choudhury 1978, 45). Rich farmers easily influenced management bodies of the Green Revolution to their advantage, disenfranchising poor and middle-income farmers. The poor and middle-income farmers did not have the financial self-sufficiency necessary to own agricultural technology. Eventually, many of them were forced to make their living through non-agricultural means of income.

An example from the microeconomic theory expressed that peasants were ‘efficient but poor’ (Schultz cited in Wilson 2004, 2), which has very practical relevance to the social reality in Bangladesh. The case of Ahad Uddin reveals that

3. The dealership of fertilisers is given to a few wholesale agents who create the occasional fertiliser crisis for mal profit. Many times poor farmers demonstrate against such brutal manipulation, but are rarely successful. Derived from such a background in 1995, 15 peasants were killed by government forces carrying out a demonstration protesting against the corruption of fertiliser distributors.

4. The Green Revolution was the rapid growth of Third World grain output, associated with the introduction of a new package of tropical agricultural inputs. The package essentially consisted of a combination of improved grain varieties, mainly rice and wheat, heavy fertiliser usage and carefully controlled irrigation. The Green Revolution also included inputs such as mechanical pumps, tractors, threshers, reapers, and combines, which all contributed to rising yields and output.
the effect of the “Green Revolution” did not benefit poor and middle class farmers, so much as it strengthened agricultural capitalism in the rural agricultural sector (ibid. 61). Therefore, his livelihood diversification into business provided an umbrella under which people can seek protection against the exploiting state or market and in the insecure world, this is a definite source of security (Seppälä 1998, 224).

On the opposite end of the spectrum, through my study it was found that livelihood diversification of the villagers in rural Bangladesh has other substantial impacts that were missing in diversification theory. Firstly, the trend towards business has effects for the composition of gender identities (see e.g. White 1992). Although, women’s work has always been of economic importance, traditionally its primary location was within households and in close association with consumption (processing crops for use as food, for example). As more women become involved in business, their work became more focussed on income generation and is therefore more easily recognised as economically significant, as indicated by Ena Begum’s case. Through business, Ena was able to shift her labour and capital into the market, changing her gender identity, as she was no longer only a housewife and hold also personal resources.

Additionally, she was seen as an independent woman in the community, which Ena Begum explained other women in Bangdom were interested in, due to her success. Moreover, her emergence as petty business entrepreneur highlights that through involving in business activities, she was able to share the public space that had been traditionally a male sphere of activity, and from which women had been barred historically.

Livelihood diversification into businesses affects the possible gain in social capital influencing the entrepreneurs’ ability to improve the condition of a business’ potential. Social capital in this case refers to the opportunity of building relations with influential individuals holding power where the businesses are operated, also known as developing connections (Bourdieu 1993, 32). This is illustrated below through presenting two case studies from Bangdom.

Case Study 3: Salam Mondol had a fertiliser and pesticide shop at Nazipur bus stand bazaar. He was 40 years old and the first person in the family in generations that was involved in business. He had two brothers, one of them worked in the village as an agricultural labourer and the other one worked in a garment factory in Dhaka. Salam’s grandfather had 3 acres of arable land, by which the family managed their necessities without much economic difficulty. When Salam’s father was married, he received only 1 acre of arable land and shared the home with his
two brothers. Salam’s father only received 1 acre of arable land, but managed through cultivating this land and sharecropping some further land. Nevertheless, when the family started to get bigger, he became unable to manage necessities as before. As a result, Salam quit school and he and his two brothers had to help their father meet the family requirements.

Salam began to work as an agricultural labourer at the age of 12 and continued to do so for 10 years. By that time, he was married and had 2 children. The jobs he did were very hard and paid very little. The expansion of the family required more income, but could not be managed through agricultural labouring. Visiting Nazipur to find a job, he enquired at different shops for employment. Salam mentioned that it was one of the happiest days of his life, when he was accepted for a job in a fertiliser shop as a sales person.

It was in the mid-eighties when he received the opportunity to do something else other than agricultural labouring. He continued there for 6 years as a sales person. As the salary he received was not as good as he deserved, he planned to open his own fertiliser shop, although he did not have enough financial capital.

After discussing the matter with the shop owner, they made a deal that everyday Salam would take a small amount of fertiliser from the shop to sell and would pay the shop owner in the evening, after taking his own profit. The business begun in 1990 utilising a public place (footpath) at Nazipur bus stand bazaar and was successful. Gaining confidence, he planned to make a permanent shop in the public place, although this was illegal. With the help of some local political leaders, whom he came to know through his business, he managed to do so. Having spent all the savings he made in a year to construct the shop, he did not have any money left for buying the goods to run the business.

Again he talked to his previous employer, to acquire fertilisers to sell. The owner gave him fertiliser equivalent to 20,000 taka ($500), which he had to pay back in 6 months, with interest. Although it was a very tough deal, he took up the challenge, and succeeded. Salam had moved from operating his business in a public place to a rented room in a mini market place at Nazipur bus stand bazaar in the beginning of 2004, when government authorities drove out all illegal occupants from public places.

**Case Study 4:** Sabosher, a 24 year old man in Bangdom, had five brothers and two sisters. Due to extreme poverty in the family resulting from mis-management of funds by his father, Sabosher had to find work at the age of 6-7 years. One of his relatives in the village took him in, where he took care of the cattle and received the chance to complete his primary education.
When he was 12 years old he wanted to do something else than work as a cowboy/cow shepherd (rakhal) or agricultural labourer (kamla), as his grandfather was one of the richest farmers in the village and it would go against the family’s prestige. With this in mind, he moved to a bazaar 20 kilometres away and found a job as a microphone operator in an enterprise that rent microphone to people.

The small salary he received frustrated him and consequently he quit and moved to another Bazaar with a similar job, but with a better salary. After 5 years he quit as he was not given an increase in salary, which he duly deserved. He returned to Bangdom and started a business renting CDs and CD player to customers utilising a public place at Nazipur bus stand and investing 30,000 taka ($500). In 2004 Government authorities ordered that public places be vacated and Sabosher was forced to close until he found a place in a newly constructed market, which was acquired with the help of one of his customers.

5. Conclusion
As with previous studies, such as Seppälä in Tanzania (1998), I found diversification into petty businesses by the villagers in Bangdom as a means to obtain social security in rural Bangladesh. In the context of rural Bangladesh, diversification into petty businesses provides an umbrella under which villagers can seek protection against the uneven development of the world economy (see e.g. Human Development Index 2009). In an unevenly developed world a diversification into petty business activities provides for many people in rural Bangladesh a definite source of at least some socioeconomic security. The tendency of the people to cross over the boundaries, whether they are sectoral, geographical or cultural was prevalent because once a household diversifies its livelihood into business gains the ability to cross over the boundary which has been clearly viewed in Ena Begum’s case. Moreover, Ahad Uddin’s livelihood diversification into business provided protection against the exploiting state or market and in the insecure world that is a definite source of security for him. (Seppälä 1998, 193, 224).

The trend towards petty business has effects for the composition of gender identities which found in Begum’s case. Through business, Ena was able to shift her labour and capital into the market, changing her gender identity, as she was no longer only a housewife and hold also personal resources. Then, an important dimension of social capital in the context of my study can be highlighted through the cases of Salam Mondol and Sabosher. When Mondol built a permanent shop
utilising a public place he called for help from some local political leaders, whom he came to know through his business, without which, he might not have been able to develop his economic progress.

By the same token, when Saboshuer was forced to move from the public place of his business by the law enforcers, he kept his business closed for a couple of months until he found a room in a market building where his business was finally situated. A well-known person (his customer) channelled his efforts into helping Saboshuer find the room. Without this opportunity, Saboshuer may have had to terminate his business. Many other petty business entrepreneurs I interviewed had obtained the opportunity of utilising their connections with local influential individuals in times of need that I was told.

To sum up, similar to Seppälä’s study it can be said that livelihood diversification into business for many villagers in Bangladesh is a definite source of a socioeconomic security; side by side its further effects are also conspicuous that are missing in Seppälä’s study – the case studies from Bangdom portray these.
References


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- Then give name(s) of editor(s). The last name of an editor precedes his or her initials, to distinguish editor(s) from the name of the writer of the chapter. Indicate single editor by an abbreviation: (Ed.), or editors: (Eds.).
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