Skills for Dynamism in Labour Market of Bangladesh: Assessment of Allied Factors

Nobinkhor Kundu[1]
Asma Banu[2]
Dr. Nur Hosain Md. Ariful Azim[3]

Abstract

Bangladesh labour market is characterized by dynamism as well as unskilled in all broad sectors local and global demonstrating much hope and promise. The study focused on the importance of a very dynamic aspect of Bangladesh labour market is required that skill development allied factors for fulltime employment. This analysis is partially helpful for the macroeconomic goals, although, there are deficient serious studies on labour market in Bangladesh at aggregate level. Using cross section data to analyzed econometrics model, as multinomial logistic regression model, are used and fit them to identify the significant inputs of skill development for underemployed and unemployed labour. This empirical result suggests that log of hours of employment, which *p-value* is statistically significant, have been estimated to obtain the effect of statistically significant coefficient of allied factors of log of hours of employment. It might also be found that the most significant in case of skill development training and access to credit for labour market in Bangladesh.

Keywords: Professional Labor Markets, Skills, Labor Productivity
JEL Classification: J24, J44

I. Introduction

The contemporary labour market of Bangladesh is characterized by an increasing rate of labour force participation and increases in underemployment. This is not an active one to have a low rate of unemployment but one-third labour force is underemployment - an average Gross Domestic Product (GDP) growth of around six percent over the last ten years especially for those in the sectors- agriculture, industry and service. Among other fundamental factors, this growth has been accompanied by labor and hours of employment, which has risen above five percent per year over the last decade.

---

[1]Assistant Professor, Department of Economics, Comilla University, Comilla-3506, Bangladesh. Phone: +88-01911662226 and e-mail: kundunobin@gmail.com. The corresponding author wishes to thank the Comilla University for partially funding the research.
[2] Director, FinExcel Limited, House No. 4, Road No. 10, Baridhara, Dhaka-1213. e-mail: asmbanu@gmail.com
[3]Associate Professor, School of Business Studies, Southeast University, Dhaka-1213, Bangladesh, e-mail: nhmarif1@gmail.com

Economic development is expected to be associated with changes in the structure of employment. Acceleration of economic growth and productivity of the labour market situation depend on skilled labour force. Thus, skill allied factors are important role in giving access to employment opportunities and its measure by output elasticity of labour, that is, percentage change in marginal productivity of labour in terms of percentage change in average productivity of labour. Hendricks (2002) found that when chooses an elasticity of substitution between low skilled and high skilled workers to fit the cross-country pattern of skill premia, he is able to explain a moderate additional part of cross country income difference. The key features of the strategy include need oriented, multi skill and flexible training to meet changing needs of local employment- employment or self employment, and overseas employment.

The skill composition of workers overseas has become skewed towards semi-skilled and unskilled over time. This may be due to employers in foreign countries feeling that Bangladeshi workers lack appropriate skills. Considerable Workers' remittance for economic growth is important variable, which is the second leading amount of capital inflows in Bangladesh. According to World Bank statistics (2012), about eight million Bangladesh's are currently working aboard, with each migrant sending $1,672 per year on average, but in India, the average remittance per head is $4,843, where as for China it is $6,112. The reason for that the majority of Bangladeshi wage earners are unskilled labor.

Skill development need for earning will increase substantially if workers could be internally and/or externally fulltime employed with appropriate skill and training. Lack of Technical Education and Vocational Training (TVET) is obstacles of potentiality industrialization in Bangladesh, although labour supply is unlimited but there have not much skilled labour. Instead of technical education and training, they are hopeful to get a job very soon and entered in labour market and to become a member of unemployed pool. A priori condition of growth and development is urgent required allied factors for unskilled and semi-skilled labour. Implication of skilled labour force has to capable a shaping nation for a balanced economy by full employment generation.

The main challenge for the 'skills development'[4] system is to overcome its inadequate orientation to the labor market. As new areas evolve, a strategy to promote and increase labour in TVET is essential. The great surge in 15 - 35 age groups requires creation of employment opportunities through provision of training for self-employment and/or employment in Small Medium Entrepreneurship, SME (planning commission, 2012). Bangladesh Bank through Banking Regulation and Policy Department (BRPD) circular no.18, January 31, 2011 for SME and its circulars issued at different times, have offered various refinance schemes, to commercial banks at reduced interest rates. Policy guidelines and instructions have also been circulated to commercial Banks for their adoption. The purpose of these schemes is to encourage Schedule Banks to accelerate growth by providing loans to priority specific sectors.

The specific objective of the study is to – Empirically test the skill developed allied factors of the labour market using cross section data analysis technique for the case of Bangladesh. The logistic regression model analysis will be done to find to identify between the hours of

---

[4]'Skills development' is understood in broad terms to mean human resources training and development, basic education, initial training and lifelong learning (ILO, 2000a).

employment and its determinants for full employed labour of a nation. The remainder of this paper is organized as follows. Section-ii discusses the review of literature, Section-iii describes analysis of the Bangladesh labor market profile, section-iv includes data and methodology framework for the analytical analysis and it also identifies the variable considered. Section-v examines and discusses analysis of results of hours of employment. Finally, summary and conclusions are presented in Section-vi.

II. Review of the Literature

The labour market of Bangladesh has been a surprising deficient in researched area, due to the lack of serious studies at aggregate level. Although labour market conditions are not mentioned continuously, Labour Force Survey (LFS) and Household Income and Expenditure Survey (HIES) in Bangladesh by Bangladesh Bureau of Statistics (BBS) are conducted intermittently and not at regular intervals (Chowdhury, 2010). We take the extended definition of international labour organization (ILO) for consideration of unemployment. He said that, the ludicrous rate of about 4 percent unemployment does not convey the labour market slack in Bangladesh, estimated by the BBS following the 'ILO method'[5].

In the absence of serious macro level studies of the issue people make various conjectures. At one end, notion of frictional unemployment on BBS's 4.0 percent unemployment estimate. The LFS of BBS estimates underemployment rate by considering all people. Ahluwalia and Hussain (2004) shown that over the last 15 years, GDP growth rate has accelerated, which resulted in growth of employment opportunities. Chowdhury (2010) understood annual negative a growth of underemployment little over 5.0% till to 2005-06. About 25% of employed people in agriculture were of underemployed category in 2005-06. Industry and service sectors are underemployment about 7% of the respective employed people.

The unemployment rate is only about four percent – which is consistent with rates in other developing economies worldwide – with a slightly higher unemployment rate for youth. The underemployment rate is high and rising – from 17 percent in 2000 to 38 percent in 2003 (World Bank, 2010). Rahman (2005, 2007) provides unemployed rate above 4 percent, underemployed rate above 10 percent and underemployment rate has declined during recent years as a result of skill development through Technical Training Centers (TTCs) and Vocational Trainings Institutions (VTIs). Skill development may be defined as a process to acquiring and sharpening capabilities to perform various functions associated with their present and future roles (Tripathi, 2003).

When people acquire skills, they commonly also make themselves more adaptable (Booth and Snower, 1996 and ADB, 2004). Thus, adaptability becomes crucial in order to keep the labour and capital employed and yet maintains competitiveness. It not only raises the rate of return on investment and increases employability but ensures also the implementation of various development projects in the time (O'Conner and Lunati, 1999). To further it is imperative to align skill development with the dynamics of the labor market. TVET are indispensable

---

[5]All employment is defined as full time plus underemployment, full time employment as number of people working over 35 hours per week, underemployment as number of people working from 15 to 35 hours per week, unemployment as number of people working less than 15 hours per week including those who had no work but looking for job (ILO).

instruments for improving labour mobility, adaptability and productivity, thus contributing to enhancing firms' competitiveness and redressing labour market imbalances (Cailods, 1994). The skill level and quality of the workforce will thus increasingly provide the cutting edge to successful competition in the global economy (ILO, 1998a).

III. Bangladesh Labor Market Profile

It is possible to bring light some significant characteristics of the labour market and their trends from secondary data which review the present scenario of total labour force, employed, under/unemployed labour in Bangladesh based report on LFS in Bangladesh by BBS. Bangladesh's LFS changed the definition of labour force from time to time.

The LFS 1989, 1990-91 and 1995-96 used the 'extended definition'[6], and 1999-00, 2005-06 and 2009-10 used the 'usual definition'[7], that reflects the usual definition of economic activity following UN system of National Accounting. In the present section, a few indicators such as (i) civilian labour force - participation, (ii) its proportion, and (iii) sectoral composition of employment suggest the size and structure of the labour force over the 1989s to 2010s. It can be shown, *in appendix-A.1,* that Bangladesh labor force grew from 50.7 million in 1989 to 56.7 million in 2010, but in the LFS 1989-1995 the 'extended definition' would yield very high labour force participation rate, with usual definition an average annual growth rate of 3.28 percent in 1996-2010.
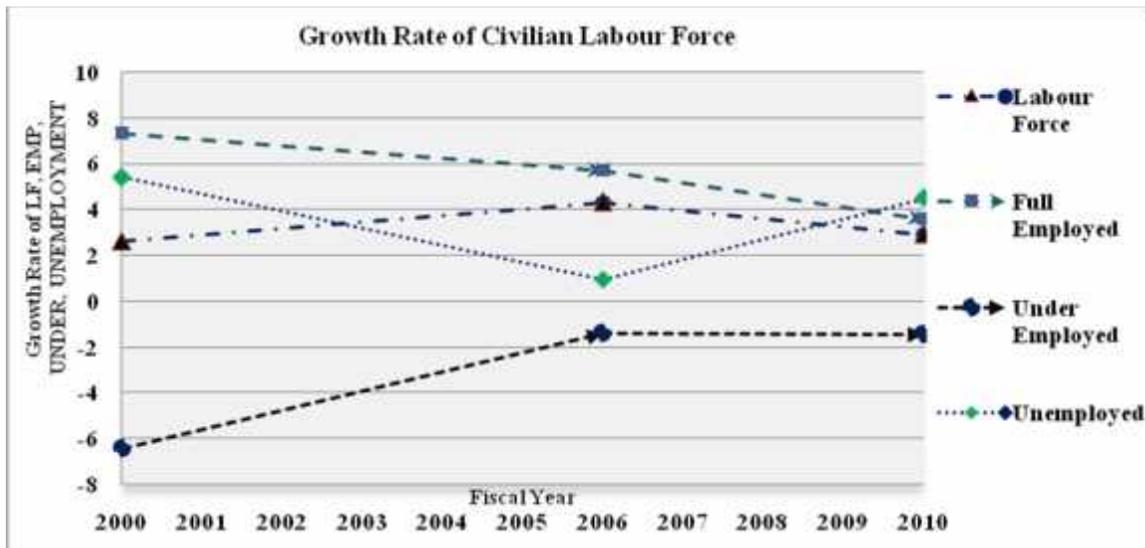

Figure: Trend analysis of growth rate of full employed, under/unemployed labour force

---

[6]Extended definition refers to any person aged 10 + years and over who was either employed with pay (profit) or unemployed (seeking/ available for job) during the reference period as economically activities. It includes without pay (own household economic activities, such as, livestock, drying and etc.) (LFS,1999-2000).

[7]Usual definition refers to any person aged 15+ years and over who was either employed with pay (profit) or unemployed (seeking/ available for job) during the reference period as economically activities. It excludes without pay (LFS, 1999-2000). BBS and most of the other South Asian countries follow the 'usual definition' from the 2000 LFS.

To trend analyze growth rate of, *from figure*, labour force, full employed, underemployed and unemployed labour is 3.28%, 5.54%, -3.08% and 5.41% during 1995-96 to 2009-10. The unemployment rate rose till to 1991, and this rate gradually falling till to FY 2006 and rising sharply again in FY 2010. Among the three broad sectors- agriculture, industry and service-suggest the sectoral composition of the workforce over the last two decades. The employment share of the agriculture sector including forestry and fisheries had reduced substantially from 54.5 percent to 47.5 percent.

Over the whole 22 year period, unemployment people with absolutely no work and people working less than 15 hours per week has risen from 0.6 million to 2.6 million representing annual growth of 5.41%. Against the labour force growth rate of 3.28% per annum, the unemployment declined in absolute number in the sub divided period i.e., from 1995-96 to 2005-06 and rising after 2005-06. According to ILO method, underemployment scale group of labour market has gone down from about 11.4 million in 1995-96 to about 6.7 million in 2009-10 representing an annual negative a growth of little over 3.0%, and the share of underemployment to total employment falls from 33% to about 12% during the period.

Fulltime employment consisting of people who work more than 35 hours per week is the most important means of livelihood for most of the people as 'usual definition'. In respect of share to total employment it grew from about 95.27% of 36 million in 1995-96 to about 95.4% of 56.7 million in 2009-10 that is implying an average annual growth of 3.28% which moderate significant growth rate of labour force. Despite the high growth of fulltime employment, growth rate of unemployment at 5.41% – that is lower growth rate of labour force, the main reason being the persistence of which is the significant underemployment.

According to age cut-off point for defining labour force, Bangladesh LFS reports of before 2002-03 used age 10 years and above, and after 2002-03 used age 15 years and above, but LFS 1995 provides for both age cut-off points. As a consequence inclusion of 10-15 year old persons in the civilian labour force and due to high unemployed and underemployed rates in FY 1989, 1990-91 and 1995-96. For better understanding of the nation of Status in employment, as regards underemployment relating to farm and nonfarm labour, it can be said that underemployment is mostly concentrated in self-employment and unpaid family workers categories. It is unlikely that wage earning people would be underemployed, evidence from earnings of industrial labour force and abroad labour force, and It is of interest to note that yearly average self employed/employer annual negative a growth of little over 2% that is suggest negative trend, labour's growth was over 3%, day laborers growth was over 1.2% and unpaid family workers growth was over 5.3% during 1995-96 to 2009-10.

IV. Data and Methodology

IV.1 Analytical Framework
IV.1.1 Logistic Regression Model
The advanced econometrics models such as logistic regression model are used for determinants of hours of employment that is full employed of a nation and fit them to identify the significant factor of skills for under/unemployed labour (Kramer, 1991 and Gujarati, 2004). The reason behind the use of logistic regression model is that outcome variable – full employment (usual

definition) - is dichotomous in nature, such model is helpful to predict the likelihood of factors options for selected variables to achieve reduction under/unemployed labour in Bangladesh.

Let Y_i denote the dichotomous endogenous variable for the ith observation.

Where $Y_i = 1$, if labour force is full employed
$= 0$, if labour force is underemployed or unemployed

The linear probability model (LPM) was

$$P_i = E(Y = 1 \mid Xi) = S_1 + S_2 X_i \qquad (1)$$

Where, X_i is an exogenous variables and S_i's the regression coefficients. Give a notation $P_i = E(Y = 1 / Xi)$ to represent the conditional mean of Y given X when logistic distribution is used. The method is to model the response using the logistic function given by

$$P_i = E(Y = 1 / Xi) = \frac{1}{1 + e^{-(S_1 + S_2 X_i)}} \qquad (2)$$

For ease of exposition, we write (2) as

$$P_i = \frac{1}{1 + e^{-z_i}} = \frac{e^{z_i}}{1 + e^{z_i}} \qquad (3)$$

Where $Z_i = S_1 + S_2 X_i$ and Equation (3) represents what is known as the, cumulative, logistic distribution function (Kramer, 1991). It is easy to verify that as Z_i ranges from $-\Gamma$ $to + \Gamma$, P_i ranges between 0 and 1 and that P_i is nonlinearly related to Z_i (i.e.,X_i), thus satisfying the two requirements[8]. We have created an estimation problem because P_i is nonlinear not only in X but in the S_i's also as can be seen clearly from (2). This means that we cannot use the familiar OLS procedure to estimate the parameters, which can be linearized shown as follows:

If P_i, the probability of full employed labour force, is given by (3) then $(1-P_i)$, the probability of underemployed or unemployed labour force is

$$1 - P_i = \frac{1}{1 + e^{z_i}} \qquad (4)$$

Therefore, we can write

$$\frac{P_i}{1 - P_i} = \frac{1 + e^z}{1 + e^{-z_i}} = e^z \qquad (5)$$

Now $\dfrac{P_i}{1 - P_i}$ is simply the odd ratio in favor of full employed labour force – the ratio of the probability of full employed labour force to the probability of under/unemployed labour force. If we take the natural log of (5), we obtain a very interesting result, namely,

---

[8] Note that as $Z_i \to +\infty, e^{-Zi}$ tends to zero and as $Z_i \to +\infty, e^{-Zi}$ increases indefinitely. Recall that e= 2.71828.

$$L_i = In\left(\frac{P_i}{1-P_i}\right) = Z_i$$

$$= S_1 + S_2 X_i \tag{6}$$

That is, L, the log of the odds ratio, is not only linear in X, but also linear in parameters. L is called the logit, and hence the name logit model. For the purposes of estimation of the logit model, we write (6) as follows:

$$L_i = In\left(\frac{P_i}{1-P_i}\right) = S_1 + S_2 X_i + u_i \tag{7}$$

To estimate (7), the values of the regressand, or logit, L_i. This depends on the type data we have analysis for data at the individual, or micro, level. If we have data on individual families, OLS estimation of (7) is infeasible. $P_i = 1$, if a labour force is full employed and $P_i = 0$, if a labour force is under/unemployed. These values directly into logit, L_i, we obtain:

$$L_i = In\left(\frac{1}{0}\right) \quad \text{if a labour force is full employed}$$

$$L_i = In\left(\frac{0}{1}\right) \quad \text{if a labour force is underemployed or unemployed}$$

Obviously, these expressions are meaningless. Therefore, if we have data at the individual, or micro, level, we cannot estimate (7) by the standard OLS routine. In this situation we may have to resort to the maximum likelihood (ML) method to estimate the parameters. Software packages *E-views-5.1* have built-in routines to estimate the logit model at the individual level.

IV.1.2 Determinants of Estimated Labour Market
To estimate the model, a widely used multiple logistic regression frameworks are taken to separate out the effects of key socio-economic factor of explanatory variables impact on log of the hours of employment. Using the individual or micro level data a logistic regression model has been estimated to examine how to the probability of being in hours of employment (EMPH) based on determinants of estimated labour market. Dependent variables as dummy for three status of employment (=1), if labour force is full employed, otherwise underemployed or unemployed and letting exogenous variables for hours of employment are being highlighted in the following discussion:

Dependent Variable:
log of hours of employment   = 1, if labour force is full employed,
(EMPH)   otherwise an underemployed or unemployed labour

Explanatory Variables:
Age of labour   '15-25 years', '26-35 years', '36-45 years' & '45+ years'

Sex of labour dummy   Sex (1= Male, 0 = Female)

Education of labour   '< class 5', 'class 6-10', 'class 11-12' & '> class 12'

Years of experience	'< 5 years', '6-10 years', '11-15 years', '> 16 years'
Skill training providers	'Government', 'NGO', 'Association' & 'IDA'
No. of dependent members	'<4 members', '4-6 members', '7-9 members', '> 10 members'
Amount of loan	'< TK. 100,000', 'TK. 100,001- 300,000', 'TK. 300,001 - 500,000' & '> TK. 500,000'
Sources of borrowing	'Relative/Neighbour/Friends', 'Mahajan', 'NGO' & 'Banks'
Collateral for loan	'nothing', 'land and building', 'machinery and equipment', and 'personal assets of owner'
Rate of interest annually	'< 10%', '10% to 15%', '16% to 20%' & '> 20%'
Vocational training dummy	= 1, if have vocational training, otherwise
Furniture making service dummy	= 1, if yes, otherwise
Construction service dummy	= 1, if yes, otherwise
Light engineering service dummy	= 1, if yes, otherwise
Electronics service dummy	= 1, if yes, otherwise

The expected sign of explanatory variables coefficients are positive and/or negative respectively. The error term is assumed to be random and serially independent having zero mean with finite variance. In order to determine the appropriate technique of estimation, the empirical model is estimated by logistic regression method. The direction and the strength of between the explanatory variables and log of hours of employment variability are determined from the sign of the coefficient and significance of *t-statistic*. Major evaluation statistical criteria which are, based on statistical theory, referred to as the McFadden R-squared (R^2_{MCF}), LR statistic (df) and Probability (LR stat).

IV.2 Sources of Data
To analysis primary data collect for used cross sectional study to be considered about allied factors for professional labour – those who have not to complete the training, called trainee, and – those who have to complete the training, called trained, in particular sectors. Professional services are furniture making, construction (mason, plumbers, and tiles fitting), electronics (mobile phone servicing, electricians) and light engineering (welding, lathe machine operator). Quantitative technique is used in the existence of the causes and their degree of accountability in bringing about the sustainability full employed options of under/unemployed trainee and trained data at the *individual, or micro*, level.

The systematic sampling design that is used in the study is appropriately performed based on the geographical location and also determined the size of sample by using the appropriate formula. The most practical way of a 4% sample is desired, the first item would be selected randomly from the first twenty-five and thereafter every 25th item would automatically be included in the sample. Thus, in systematic sampling only the first unit is selected randomly and remaining units of the sample are selected at fixed intervals. Moreover, it is an easier and less costly method of sampling and can be conveniently used even in the case of large populations (Kothari, 1990). The primary data were collected from the respondents during the time from June to July, 2014. The survey was conducted over one hundred and twenty respondents from a particular area Mirpur-Pallabi (zone-2) in Dhaka North City Corporation (DNCC), Bangladesh. A structured questionnaire was prepared in the light of the objectives of the study that was filled up by direct interview. All filled-up structured questionnaires, *appendix-A.2,* were fully scrutinized and the valid data thus collected were processed and analyzed to reach with research objective.

V. Analysis of the Results

This analysis begins with an attempt to understand the relationship of allied factors of labour market and status of labour with full employed, under/unemployed. Now let us interpret the regression results using the data. Since most modern statistical packages have routines to estimate logit models on the basis of ungrouped data. We shall estimate equations in the logit form of the regression results calculated by *E-views 5.1* are given in table-1.

Table-1: Results of Logistic Regression
Dependent Variable: Determinants of Hours of Employment (EMPH)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	23.02	6.13	3.76	0.00
Age of labour	-0.68	0.25	-2.72	0.01
Sex of labour dummy (male=1)	21.46	0.59	36.56	0.00
Education of labour	-0.62	0.15	-4.26	0.01
Light engineering, service (yes=1)	2.69	0.87	3.10	0.00
Electronics service (yes=1)	2.27	0.42	5.52	0.01
Construction service (yes=1)	3.43	0.77	4.43	0.00
Furniture making service (yes=1)	2.34	0.49	4.75	0.01
Years of experience	1.12	0.41	2.75	0.01
Skill training providers	4.41	0.79	5.58	0.00
No. of dependent members	0.92	0.48	1.98	0.04
Sources of borrowing	1.74	0.47	3.73	0.00
Amount of loan	2.04	0.66	3.09	0.00
Collateral for loan	-0.88	0.48	-1.97	0.04
Rate of interest annually	-2.85	1.23	-2.33	0.02
Vocational training dummy (yes=1)	2.14	0.83	2.58	0.01
McFadden R-squared	0.77			
LR statistic (15 df)	109.25			
Probability(LR stat)	0.00			

Each slope coefficient in this equation is a *partial slope* coefficient and measures the change in the estimated logit for a unit change in the value of the given regressor, assume other regressors constant. The coefficient of education is negative and highly significant. The negative coefficient reflects that most of the labors are relatively low educated, and when a person gets more education they are not working as workers in home and abroad. For the reason, higher unemployment rate among the more educated in one hand and other hand the coefficient of professional service (furniture making, light engineering, construction, and electronics) both have positive coefficient and highly significant. This positive coefficient reflects the relatively higher log of hours of employment in Bangladesh. Similarly, years of experience has a positive impact on growth of hours of employment in our equation, if a year of experience increases by a unit, on average the estimated logit increases by about 1.12 units.

Amount of loan has a significant coefficient and thus has advantage over the full employed labour. Skilled labour is better than semi/unskilled labour, later has a significant positive impact on the logit, although statistically the effect of rate of interest is significant, but the coefficient of rate of interest is negative. The negative coefficient reflects that most of the labors are relatively little amount of hours of employment. The trainee or trained labour may not have sufficient sources of borrowing from relative/neighbour/friends, mahajan, NGO (Non-Governmental Organisation) and Banks. The coefficient of collateral for loan is negative and moderate significant. Collateral for loan (land and building, machinery and equipment, personal assets of owner) is not only obstacles most of the labour and also highly significant rate of interest per annum is burden of borrower. The coefficient of sources of borrowing and collateral for loan is statistically moderate significant impact on growth of hours of employment.

The coefficient of skill training providers (Government, NGO, Association and IDA) is positive and highly significant in the equation. Similarly the coefficient of vocational training dummy form (yes=1) is 2.14 means, with other variables assume constant, that if vocational training receive increases by a unit, on average the estimated logit increases by about 2.14 units, suggesting a positive impact on hours of employment and statistically highly significant. Thus, under/unemployed labour skilled trained up to become a full employed labour, his/her marginal productivity will also most likely of rising out of sluggish growth of productivity.

However, together all the regressors have a significant impact on the log of hours of employment, as the LR statistic is 109.25, whose *p-value* is about 0.00, which is statistically significant. Whereas the McFadden R^2 (R^2_{MCF}) value is 0.77, although, this value is overplaying the importance of goodness of fit in models, where the regressand is dichotomous. Skill development needs for earnings will increase substantially if workers could be home and/or abroad fulltime employed with appropriate skills training. As we can see regression, respect to all others regressors, results show that under/unemployed labour has a higher probability of being low growth of productivity than the full employed labour.

VI. Summary and Conclusions

Bangladesh labour market is characterized by dynamism as well as unskilled in the agriculture, industry and service sector home and abroad indicative of acceleration of economic growth. On the *unskilled* aspect, under/unemployed labour is high and still significant, industrial employment is low and the proportion of day labour is quite high. On the *dynamic* aspect,

fulltime employment is slow increasing and self-employment is also ever increasing (Chowdhury, 2010), which have elaborately discussed in earlier sections. In respect of different social and economic indicators, it is observed that under/unemployed labour has shown higher performance in economic activities, if access to skill development allied factors. It complements our competitive advantages in the local and global economy and its resulting economic benefits.

The logistic regression result is difficult to predict on the basis of used only cross section data. This result suggests that log of hours of employment have been estimated to obtain the effect of significant coefficient of its determinants. Skills development training and access to credit on particular sectors like as furniture making, light engineering, construction, and electronics should be introduced in the labour market that has much potential for economic growth in Bangladesh. It can be understood that some of the skill development factors might be significant in becoming full/self-employed and to be resource a human capital from unemployed, which also might be found in case of underemployed labour – as a result of absorption of under/unemployed labour of total labour force.

This has shown that log of hours of employment and its skill development determinants is highly significant correlation in the model for full time employment. It observed that, the potential labor whose received any type of skill development allied factor, they are sustaining their economic activities and optimizing profit. In addition, access to financial inclusion is the key role in generating full employment and overcoming barriers. This may reveal many other issues, which agencies and government may need to focus upon, to make vocational education and training for skill development in Bangladesh a success story. This has much implication - access to skill developed allied factors can be influential for labour market in dynamism and economic development. To resolve this major challenge in Bangladesh, there are intense efforts to impart vocational skills among the youth and this process would be continuing for sustainable stability.

References

ADB (2004). *"Improving Technical Education and Vocational Training. Strategies for Asia",* Asian Development Bank, Manila, Philippines.

Ahluwalia, I.J. and Z. Hussain (2004). *"Development Achievements and Challenges",* Economic and Political Weekly, September 4, No. 36.

Bangladesh Bureau of Statistics (Various Years). *"Bangladesh Economic Review",* Ministry of Finance, Dhaka, Bangladesh.

——— (Various Years). *"Household Income Expenditure Survey"*, GOB, Dhaka.

——— (Various Years): *"Labour Force Survey"*, GOB, Dhaka.

——— (Various Years). *"Statistical Yearbook of Bangladesh"*, GOB, Dhaka.

——— (Various Years). *"Report on Bangladesh Census of Manufacturing Industries"*, GOB, Dhaka.

——— (2012). "*Report of Sixth five Year Plan"*, Ministry of Planning, GOB, Dhaka.

Booth, A. L., and Snower, D. J. (1996). *"Acquiring Skills: Market Failures, Their Symptoms and Policy Responses",* Cambridge University Press, Cambridge.

Caillods, F. (1994). "Converging Trends Amidst Diversity in Vocational Training Systems", *International Labour Review* 13(2):241–257.

Chowdhury, A.U. (2010). "Dynamism and Sclerosis in Bangladesh labour Market", *Bangladesh journal of Political economy*, BEA, Volume 26(1):59-66.

Gujarati, D. N. (2004). *"Basic Econometrics",* 4th Edition, McGraw-Hill, New York.

Hendricks, L. (2002). "How Important Is Human Capital for Development? Evidence from Immigrant Earnings," *The American Economic Review*, 92(1): 198–219.

ILO (1998a). "World Employment Report 1998-99: Employability in the Global Economy, How Training Matters". *International Labour Organization*, Geneva.

ILO (2000a). "*Yearbook of Labour Statistics 2000",* International Labour Organization, Geneva.

Kothari, C. R. (1990). *"Quantitative Techniques",* New Second Revised Edition, New Age International Publishers, New Delhi.

Kramer, J.S. (1991). "*The Logit Model for Economists"*, Edward Arnold Publishers, London.

O'Connor, D. and Lunati, M. R. (1999). *"Economic Opening and the Demand for Skills in Developing Countries: A Review of Theory and Evidence",* Technical Paper No. 149.

Rahman, R. I. (2005). "Performance of Labour Market in Bangladesh: Recent Changes and Policy Implications", *Bangladesh Institute of Development Studies*, Dhaka, Bangladesh.

——— (2007). "Labour Market in Bangladesh: Changes, Inequalities and Challenges", *Bangladesh Institute of Development Studies*, Bangladesh, Research Monograph 21.

Tripathi, B. D. (2003). *"Current Strategies and Future Approaches for HRD in Agricultural Extension"*. Paper presented in the Regional Workshop on Operationalising Reforms in Agricultural Extension in South Asia. May 6-8, 2003, New Delhi, India.

World Bank (1996). *"Bangladesh: Labor Market Policies for Higher Employment",* World Bank, Washington, DC.

——— (2006). *"The Bangladesh Vocational Education and Training System: An Assessment, Human Development Unit",* South Asia Region, The World Bank, November 2006.

Appendix

A.1: Bangladesh Labor Market Profile

Major Characteristics of LFS	LFS 1989[a]	LFS 1990-91[a]	LFS 1995-96[a]	LFS 1995-96[b]	LFS 1999-00[b]	LFS 2005-06[b]	LFS 2009-10[b]	LFS 1996-10[b]
Civilian Labor Force (million, m)	**50.7**	**51.2** *(0.67)*	**56.0** *(1.87)*	**36.0**	**40.7** *(2.61)*	**49.5** *(4.32)*	**56.7** *(2.91)*	*(3.28)*
Total employed (m) (full time +underemployed) % of labour force	50.1 98.8	50.2 *(0.13)* 98.0	54.6 *(1.75)* 97.5	34.3 95.27	39.0 *(2.49)* 95.8	47.4 *(4.30)* 95.7	54.1 *(2.83)* 95.4	*(3.20)*
Full time employed (m) % of Total employed	10.27 20.50	12.65 *(15.4)* 25.20	25.21 *(19.8)* 46.18	22.87 66.67	31.25 *(7.32)* 80.13	40.18 *(5.71)* 84.77	47.40 *(3.59)* 87.63	*(5.54)*
Underemployed (m) % of Total employed	39.83 79.50	37.55 *(-3.82)* 74.80	29.39 *(-4.35)* 53.82	11.43 33.33	7.75 *(-6.44)* 19.87	7.22 *(-1.37)* 15.23	6.70 *(-1.44)* 12.37	*(-3.08)*
Total unemployed (m) % of labour force	0.6 1.20	1.0 *(26.6)* 2.0	1.4 *(7.52)* 2.5	1.7 4.73	1.8 *(5.40)* 4.2	2.1 *(0.94)* 4.3	2.6 *(4.48)* 4.6	*(5.41)*
Total Employment in major occupation (m)	**50.1**	**50.2** *(0.13)*	**54.6** *(1.75)*	**34.3**	**39.0** *(2.49)*	**47.4** *(4.30)*	**54.1** *(2.83)*	*(3.20)*
Agricul, Forestry, Fisheries Share in total	37.0 73.8	34.3 *(-2.9)* 68.3	34.9 *(0.33)* 63.9	18.7 54.5	19.9 *(1.28)* 51.1	23.0 *(3.11)* 48.5	25.7 *(2.34)* 47.5	*(2.24)*
Production, Transport Share in total	5.4 10.7	6.9 *(11.1)* 13.7	8.5 *(4.37)* 15.5	6.58 19.2	8.1 *(4.62)* 20.7	11.5 *(8.39)* 24.2	13.5 *(3.47)* 24.9	*(5.49)*
Workers - sales & service Share in total	5.2 10.3	5.7 *(3.84)* 11.3	8.1 *(7.94)* 14.8	6.96 20.3	8.0 *(2.99)* 20.5	9.5 *(3.75)* 20.0	11.2 *(3.57)* 20.7	*(3.44)*
Professional, Technical Share in total	1.43 2.8	1.46 *(0.84)* 2.9	1.8 *(4.39)* 3.3	1.23 3.6	1.6 *(6.0)* 4.1	2.2 *(7.5)* 4.6	2.4 *(1.82)* 3.7	*(5.11)*
Admin, Clerical workers Share in total	1.1 2.2	1.3 *(7.27)* 2.5	1.4 *(1.45)* 2.5	0.83 2.4	1.4 *(13.7)* 3.6	1.2 *(-2.85)* 2.5	1.7 *(8.33)* 3.1	*(6.39)*
Not adequately defined	0.03	0.38	-	-	-	-	-	
Status in employment (percent)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	
Self employed/Employer	29.6	26.8 *(-3.7)*	29.6 *(1.97)*	57.8	47.0 *(-3.74)*	42.2 *(-2.04)*	40.9 *(-0.62)*	*(-2.13)*
Labours	9.5	11.7 *(9.26)*	12.4 *(1.13)*	12.1	16.7 *(7.60)*	13.9 *(-3.35)*	17.4 *(5.03)*	*(3.09)*
Day labourers	15.1	13.9 *(-3.2)*	17.9 *(5.42)*	17.9	24.3 *(7.15)*	18.2 *(-5.02)*	19.6 *(1.54)*	*(1.22)*
Unpaid family workers	45.8	47.2 *(1.22)*	40.1 *(-2.8)*	12.2	12.0 *(-0.33)*	21.7 *(16.2)*	21.8 *(0.09)*	*(5.32)*
Others	-	0.4	-	-	-	4.0	2.6	

Source: Various labour force survey reports. Author's calculation parentheses indicated that growth rate and the blank in the column (-) indicate non-availability of data, (-) less than 50,000.

Note: [a] The figures represent 'extended definition' of labor force at age 10 + population.

[b] The figures represents 'usual definition' at age 15+ population, but LFS 1995 provides for both age cut-off points.

A.2: Survey Questionnaires

Skills for Dynamism in Labour Market of Bangladesh: Assessment of Allied Factors

To be filled in an interview (if applicable) with stakeholders like: 1. Professional service holders like: furniture making, light engineering, construction, electronics, and others, 2. Trainers/Service providers, 3. Bankers, 4. Associations

Name of worker or owner:	
Age:	Sex:
Telephone-Office:	Factory:
E-mail:	Web-page:
Address:	

1. Age Group of worker or owner: *(please tick)*
a. 15- 25   b. 26- 35   c .36- 45   d. 45+

2. Gender of worker or owner: *(please tick)*
a.   Male   b. Female   c. Others _____

3. How many numbers of dependent members of your family? *(please tick)*
a.   4 members and below   b. 4-6 members   c. 7-9 members   d. 10 members and above

4. What is the education level of worker or owner? *(please tick)*
a.   primary education school
b.   secondary education school
c.   higher secondary education school/ Polytechnic Institutes
d.   Graduate degree (B.A, B.Sc., Diploma)

5. Did you offer Technical Education and Vocational Training (TVET) to your skill develop?
_____ Yes=1 or No=2. If yes, who offer to training? *(Please tick)*
a.   Government
b.   Non Government Organisation (NGO)
c.   Association
d.   International Development Agency (IDA)

6. For how many years have you been working in this firm as a worker or owner? *(Please tick)*
a.   1-5 years   b. 6-10 years   c. 11-15 years   d. 16 years and above

7. In which profession is the working? *(Please tick)*
a.   Furniture making
b.   Construction (mason, plumbers, and tiles fitting)
c.   Electronics (mobile phone servicing, electricians)
d.   Light engineering (welding, lathe machine operator) or Others (please specify: _____)

8. How much do you work hours per week? *(Please tick)*
a.   no work but looking for job   b. less than 15 hours   c. 15 to 35 hours   d. more than 35 hours

9. If there was a skill development financial scheme available, would it encourage your friends and relations to undertake skill development training? _____ Yes=1 or No=2 or don't know = 3

10. When you had gone to training and/or business, is getting any financial help? _____ Yes=1 or No=2. If yes, what was source of borrowing? (*Please tick*)
a. Relative/ Neighbour/ Friends   b. Mahajan   c. NGO   d. Schedule Banks

11. How difficult was it, to find a bank willing to finance your training project/ equipment/ infrastructure? (*Please tick*)
a. Very Easy   b. Easy   c. very difficult   d. difficult   e. did not provide any loan

12. How difficult is it, to find NGOs/INGOs/Donor funded project willing to finance your training equipment/infrastructure? (*Please tick*)
a. Very Easy   b. Easy   c. very difficult   d. difficult   e. did not provide any loan

13. How much money gets from these sources of borrowing? (*Please tick*)
a.   TK. 100,000 and below
b.   TK. 100,001-300,000
c.   TK. 300,001-500,000
d.   TK. 500,000 and above

14. How much interest rate to pay _____ %   annually? (*Please tick*)
a. 10% and below   b. 10% - 15%   c. 16% - 20%   d. 20% and above

15. Did the loan require collateral? _____ Yes=1 or No=2.
If yes, which of the following were used as collateral? (*Please tick*)
a.   Land and building
b.   Machinery and equipment (including vehicles)
c.   Tangible assets (e.g inventory)
d.   Personal assets of owner (e.g house) or Others (specify:_____)

16. What was the value of the collateral required as a percentage of the loan value?_____ % of loan value

17. What is the total duration of the loan (from the moment you received the money until the moment it must be fully repaid)? _____ years

18. Are you a member of any association (e.g. Labour Union) _____ Yes=1 or No=2.
If yes, how much do you pay annually in subscription fees to your association? Taka _____

19. Have you any insurance of you/family members? _____ Yes=1 or No=2.
If yes, which types of insurances?
a.   Life insurances   b.   Health insurance   c.   Asset insurances   d. Others (Specify:_____)

20. If you give your valuable opinion about skill development for labour :

_____
THANK YOU VERY MUCH FOR YOUR COOPERTION IN ANSWERING THIS QUESTIONNAIRE