

Analysis of Regional Economic Seminar Papers :
The Nature and Extent of Usage of Statistics

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Abstract

The title of the paper itself indicates that regional economic issues got the top most priority. Regional variations in some aspects are found diverse in nature . But the cornerstone of development, the productivity raising in all the sectors became the prime issue. Since agriculture till to-date remains the single major sector in terms of contribution to GDP and employment (regular, seasonal etc). The author tries to review the conclusions drawn in the regional economic papers related directly with agriculture in the light of a national economy. One should not be worried about the accuracy of the estimate of 5% to 55% usages of statistics rather these may be treated as guesstimate to strengthen the base of conclusions made in regional economic papers rationally. Small sample size, methods of data collection and its level of confidence, techniques of model fittings, analysis and conclusions especially of agriculture, may be better suited at the local level(area specific) rather than at the national level. Since regional level variations are statistically significant in most of the socio-economic and cultural aspects the symptoms or trend of variables can be used effectively at the national level for achieving better results in productivity , the central issue of socio-economic development. Since it is a complex process, among others, the author emphasised and suggested for effective connectivity between the officials of the Bangladesh Statistical Association (BSA) and Bangladesh Economic Association (BEA) for strengthening the professional relationship. It would help refinement of their research works and new thinkings. Besides;

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it would show the pathway for effective connectivity between the students and teachers of the statistics department and economics department and so on and so forth. The process would help in extending collaborating and co-operating approaches among the nation building departments for achieving their expectations and common goals of sustainable development.

- i) One of the vital factors for agricultural production the land topped the list. Changing land use pattern, land tenure system, yield disparity, boro production, hybrid rice production, mushroom cultivation are the major components for enhancement of productivity, production and food security. Economics of tobacco, irrigation, credit and their various socio-economic impact and sustainability have also been discussed.*
- ii) Beel fisheries, shrimp cultivation etc under climatic changes have been discussed.*
- iii) Availability of meat has also been discussed.*
- iv) Industrial sector, the key to employment generation have been discussed with special reference to BRB group of industries limited, rice mills and jute mills.*
- v) Primary health care services have been discussed in depth.*
- vi) Transformation mechanism of education city to special education zone pave the way to human resource development.*
- vii) Last but not the least, Mongla sea port as an infrastructure got the prominent importance for economic development.*

Key Words: *Cropping Intensity, Cropping Pattern, Diversification of Crops, Livestock, Fishery, Forestry, Mixed Farming, Beels, Parameters, Precisions, Confidence levels, Climate Change, Melt down, Globalisation, sustainable.*

1. Introduction

Recently I have had the opportunity to attend the Regional Economic Seminar Jointly organised by the Faculty of Agricultural Economics and Rural Sociology/ Department of Economics and Bangladesh Economic Association (BEA) as a member of the executive committee of BEA. Faculty of Agricultural Economics and Rural Sociology of Bangladesh Agricultural University Mymensingh, Department of Economics, Islamic University, Kushtia and Department of Economics, Rajshahi University organised the seminar jointly with BEA and held respectively on 13th June, 11th July and 1st August, 2009. The papers were prepared and presented in the seminars are a_i to a_{viii}, b_i to b_v and c_i to c_{viii} have been listed in the annex-1. It is observed that a large varieties of papers have been prepared and presented in the seminars highlighting the regional problems and

prospects of economic development. By and large, these papers are conveniently grouped into the following sub- sectors, for further discussions:

2. Economic Development with Special Reference to Agriculture

Seven (7) sub-sectors directly and indirectly contribute to the enhancement of gross domestic products (GDP), more or less consistent with our constitutional issues. Balanced development of these sub-sectors remain unresolved till to date due to their potentialities of growth and overall resource scarcities and allocation pattern. Bangladesh economy is predominantly agricultural, characterised by unfavourable per capita land, low per capita income, low productivity accentuating income disparity and high level of unemployment. Agriculture alone contributes about 20.60% of the gross domestic products. But it contributes more than 48.10% in employment generation of the economy. Crops (major and minor), fishery, livestock and forestry are the sub-sectors of agricultural sector. Food, clothing, shelter, health and education are the basic necessities of life and agriculture alone provides food, clothing and shelter. It also enhances industrial development through supply of agricultural products in the form of raw materials, capital investment and entrepreneurship advancement.

Due to subsistence nature, agriculture is characterised by diversified farming to meet especially the requirements of farm households and thus minimise the risks and uncertainties. These farm households are risk averter due to their subsistence nature of agricultural product. As a result these households always prefer to produce cereals for fulfilling basic consumption needs of the farm households at first rather than producing any other crops. Among the three seasons in Rabi season alone the combination of production of crops, cereals, vegetables, oilseeds etc is found to be the best risk reducing strategy and thereby leading to some degrees of reduction in income fluctuations. Besides fishery, livestock, and forestry are being developed through intensification of the production process in meeting the demands of the households of the country and the export potentialities of raw agricultural products, processed industrial products and others.

Affordable credit is generally used to combine all the inputs by the farm households to maximise output. Long outstanding problems have been resolved by the notification issued recently allowing the commercial banks to reschedule (after taking required down payment) their agricultural credit as long-term loans in enhancing the financial ability to use the balanced inputs to maximise output of the farm households across the country. It will strengthen the overall disbursement

of farm loans ahead of the Boro season and bring more productivity, transparency and accountability. According to the existing provisions, to reschedule the term loans for the first time, borrowers have to pay minimum 15% of expired installments or 10% of total dues, whichever is lower.

Various information have been collected mostly from the farm households, which may be subjected to errors and omissions. The accuracy and reliability of the data usually remains more or less with the survey procedures. The accuracy may be improved upon to some extent by checking internal consistency and other errors and omissions.

The production function parameters used are averages for the sample households. Regional deviations from this average are likely to be large in the sense that in certain areas the marginal productivity of some inputs are much higher than others. It thus clearly shows that sample statistics alone may fail to provide national estimate with sufficient accuracy.

Among all the regional economic seminar papers prepared and presented, usages of statistics are found much more in most of the papers prepared and presented by the authors of Bangladesh Agricultural University, Mymensingh probably because of their much more awareness, practices and availabilities (at the door steps) of software packages developed in the country and abroad.

One should not be worried about the econometrical model fittings to high lightened the mathematical relationship among various variables. These relationships helps researcher to find out the ways and means to achieve the goal to a certain extent. It should always be in the mind of the authors that these types of models are used more in the pure science than that of social science mainly because of the accuracy of the data available with less precision (and with high degrees of confidence). If accurate data are available, the task of model fittings could be easily done with the sophisticated SPSS package and the like software designed and developed within the country or abroad. It is not even impossible to complete these tasks manually with hard labour, huge time and costs.

3. Usages of Statistical Tools and Techniques in the Regional Economic Seminar Papers

It is always assumed by many intellectuals that statistics plays a pivotal role in assessing and estimating among others, the key economic variables in the process of analysing with certain degrees of confidence and precision. Statistics and Economics are found interrelated in the sense that one is not completed without

the other. Statistics deals with information of various aspects on numerical inferences of data which are parts and parcels of major economic analysis. Modern economics is a welfare oriented economics that deserves good attention of all classes of people living in the society. In order to assess the usages of statistics in the modern economics, recent regional economic seminar papers prepared and presented at the conferences organised jointly by the Department of Economics and Bangladesh Economic Association (BEA) have been used. A total of 21 papers prepared for presentation at the three regional seminars varying from 8 (each at Mymensingh and Rajshahi) to 5(Kushtia) in numbers and on various issues for sustainable economic especially agricultural development. Such a diversity in preparation and presentation of papers are highly encouraged in regional economic seminars.

Careful analysis of all these papers showed a significant variations in usage of statistics in different regional economic papers prepared and presented at the seminars. In assessment the extent of usages of statistics varies from 5% at the minimum (cviii) to 55% at the maximum (aii) and the nature also varies from simple percentage to production functions and logit model. Although this model is more sound conceptually than the informed guess, it still remains deficient in a number of ways, however more so in an operative arena for smooth implementation at the real field situation.

In communicating statistical averages rather than the uncertainty range and reliability estimates, policy makers are not usually provided with complete information about the situation they likely to face. From a development policy making perspective, instead of estimates of future conditions, it is more useful to have reliable estimations of the uncertainty that surrounds future conditions. Population normally evenly split between those who trust official figures and those who do not. Problem of interpretation is usually compounded by politicians or the media spinning the published results.

The papers have been developed mostly by using the secondary data in other cases, primary data (mostly from the purposively selected sample through structured questionnaires) have been used for the assessment and estimation purposes. If we look and assess at the authors and the purposes of the papers we may easily conclude that the efforts, time and cost involved are limited. These are as follows:

- Efforts : The efforts of developing the papers in most cases are based on individual efforts, in some cases supported by others.
- Time : The time given varies mostly from one month to 2 years in preparing the papers.

Cost : The cost involved varies from 10,000/- to 1,00,000/- mostly from the author's own resources or available resources from the university concerned. Besides, the university grant commission (UGC), international agencies and other donor funds provide financial assistances for completing the project effectively.

In such constraints, we acknowledge and recognise the activities of the authors that are involved in preparing and presenting papers in the seminars. In the national context, these papers are providing some views and insights of the authors and different stakeholders involved in the process of economic development. In such a process they shun their own views and efforts, exchange their views and efforts with other stakeholders, awareness creation and motivation to others in quicken the process of updating information and methodologies for estimating, formulating and implementing development activities in their own level.

Certain degrees of statistical and econometrical methods, tools and analytical techniques have been used here and there by some authors in economic analysis, and in drawing some logical estimates and ultimate conclusions. It is undoubtedly a good steps forward as a multi-disciplinary approach. But the question remains unresolved on various aspects of the papers, however the paper helps in providing subjective assessment on the core problems of the paper. Most of the papers are based on various statistical tables, average, proportionate ratio etc. In some of the papers, normal and more scientific statistical tools and techniques have been used. In some cases, econometrical models also been used to find out the inter and intra components relationships. Tabular techniques such as arithmetic mean, percentage benefit cost ratio etc. and statistical technique such as Cobb-Douglas production function, logit regression model, coefficient of variation (cv) analysis, etc. developed with a very small sample size (which is not a representative national sample with certain degrees of confidence and precision) but more or less consistent with the national trend. In various papers, size of the sample varies from 40 households in Basil Upazila, Tangail District to 90 households in Sahpur and Godariya of Mymensingh District. Besides these are based on one shot survey with in a specified time frame varying from one month to three months. The conclusion drawn in such cases may be erroneous in some cases. But yet the efforts are praiseworthy contributing much (highly innovative) to the human resource development.

4. **Major Finding of the Regional Economic Seminar Papers with Special Reference to Agriculture**

Due to continuous population pressure and rapid urbanisation the cultivable land is decreasing rapidly. Consequently, both the total cropped area and net cropped area have been slowing down. But cropping intensity that was increased substantially remains stagnant at present. Area under hybrid rice cultivation increased substantially because of the yield performance that was much better than inbred high yielding varieties (HYV) at the farm level. The production of both hybrid and inbred HYV are profitable but investment in hybrid rice production is comparatively more profitable. Total cost of production for hybrid rice was about 10.86% higher than that of inbred HYV but the unit cost of which was relatively lower than that of inbred HYV. It is also found that the MV Boro rice is profitable from the view point of marginal farmers. Price hike of food grains has had some positive impacts on producers of food grains. But there was a negative impact on household food consumption particularly female members were inevitably victims.

Rice is usually consumed sufficiently more in quantity in rural areas (454.7 gms per meal) than urban areas accounting for about 71 percent of total calorie intake. Calorie intake had shown a gradual decreasing trend which might happen due to growing awareness of people to take less calorie food items for health reasons. In urban area, the average calorie and protein intakes were relatively higher compared to rural area.

Significant proportion (94%) of farm households stated their nutritional status and irrigated area have increased. Their farm income and quality/ choice of taking different food items increased under changing land use pattern. Besides safe drinking water, sanitation, housing facilities, healthcare including ability to pay for doctors and medicines have also been increased along with the uses of tangible goods.

Irrigation covers about 44% of total cropped area. Irrigated land under shallow tube well (STW) has increased 14% during the last 5 years. It alone used for watering 60% of the irrigated land. Deep tube well (DTW) and others are used to cover the rest of the irrigated land. Profitability of using water saving technology is more in cash payment system rather than crop share system. Credit helps in accommodating quickly all the available physical inputs that are used in enhancing the production and thereby productivity to a great extent.

Tax payment to the tune of 9% of the total tax cannot be the only justification for arguing in favour of tobacco cultivation given many other justifications including

its negative consequences on health and environment. It is estimated that about 8.00 lakhs premature deaths in the next 40 years may be averted by appropriate policy intervention.

The beel is gradually affected by the changes of climatic elements. Impacts are evident in the form of faster siltations on the one hand and loss of aquatic biodiversity on the other hand. As the beel can not provide expected benefits, peoples perceptions have also been changing along with the climatic changes. Those situations are not even encouraging rather disappointing in regards to production, productivity and deployment of poor fisherman. In contrast, shrimp culture plays an important role not only in enhancing production and productivity but also in enhancing export potentialities. Its export alone contributes 10% to 12% of the total export earnings. Its importance has increased more for generating employment opportunities to 18.30 millions people.

5. Suggestions Provided by Authors of Regional Economic Seminar

Suggestions given by the authors of regional economic seminars on various aspects of agricultural development are summerised below:

- i) Since the land is a scarce factors of agricultural production every inch of available land should be utilised for more productive purposes for enhancing production and equitable distribution

Present land use patterns ensured greater farm income, food security, housing facilities, healthcare, sanitation, uses of more tangible goods and services for future development. Considering the existing land tenure arrangement, owner operators were found more profitable than owner-cum-tenant and exclusively tenant operators.

- ii) Adoption of hybrid rice should be increased to a greater extent to enhance the food grain production. Necessary support such as training and inputs should be provided for farm households. Research of hybrid rice at public sector and co-ordination between public and private sector should be strengthened . The output of MV Boro rice could further be increased if financial capital could easily be made available to the marginal farmers. A huge subsidy should be given to triple super phosphate (TSP) and Murate of Patash (MP) rather than huge subsidy on paddy.
- iii) Measures should be taken to provide microcredit so that even very small farm households can get credit. The cost sharing between land owner and tenant should be 50 : 50 in the case of all inputs except land and labour.

- iv) The government should consider that tobacco is a “merit bad ‘ and should take appropriate initiatives to ensure agricultural diversification away from tobacco cultivation. Mass media, among others, should play an important roles in creating public awareness against the use of tobacco.
- v) In the context of land scarcity, mushroom cultivation is found a profitable agro-business entity. The country now produces about 15 tones of mushroom per day but it is possible to yield 30 million tones per year.
- vi) The fact that per capita availability of meat has gone down instead of increasing is a matter of great concern from the nutritional point of view. The rising price of meat has greatly reduces the affordability of this source of protein. Another important finding is that per head availability of meat in the Rajshahi division is nearly twice than that of Dhaka and Chittagong divisions. Great need for a meat policy to increase its production and distribution is emphasised .
- vii The re-excavation could be the major step forward in beels restoration in the flood plains. An appropriate policy is needed to conserve the wetlands in the climate change situation. Importance of fisheries sector depends mostly on the various demands of the importing countries especially of scientific shrimp (baghda and golda as well) culture in environment friendly situation. Technical know-how, technology and ensured quality input supplies could be flourished at a rapid pace for sustaining economic growth potentials.

6. Concluding Remarks

Bangladesh, among other countries of the world, is placed at the low level of economic development. Its problems of development are many although potentialities of various sectors are enormous. It is very difficult but not impossible to assess various problems and finding out solutions overnight for economic development. Researchers, here are mostly students and in some cases, teachers. Senior teachers of the economics department usually supervise their research work. Since economic development now-a-days depends mostly on a multi-disciplinary approach, the major

Findings and solution of these papers are drawn ignoring the views of others of the related discipline. However, these studies are completed in some cases, with small number of sample (statistically not representing the nation), short time and funding mostly small or nil. In such constraints the students completing the study

mostly for partial fulfillment of the Masters/MS/Phd degrees. But their efforts are highly praise-worthy not only in preparing the research papers but also in presenting the papers for discussions and advocating purposes. But in most cases, the paper is left for further research scientifically to other researchers, professionals, research institutes as such their weakness could be presumed. The authenticity of the query made and met by the primary samples remains questionable till now-a-days since the process is highly technical and sensitive.

Statistical and or Econometrical models related software packages are used in most of the studies those are available in the market. Therefore, it becomes more easier to fit the statistical and econometrical models. It is thus treated as more mathematical issues rather than economical, sociological and anthropological issues. There should have more clarity about the subject matter but the readers should however, not be disturbed with the use of complicated models, tables, facts and figures too much. The papers should however, be developed so that the readers get interests for smooth reading, analysing, deciding and implementing the findings perfectly. It should be always in our mind that the life and livelihood issues of the farm households become the cornerstone of all development activities.

Last but not the least, the usage of statistical and or econometrical devices should be more scientific and adaptive in the development aspects. A panel of experts from the executive committee of both the Bangladesh economic association (BEA) and Bangladesh statistical association (BSA) could examine the nature and extent of usage of statistics in field of modern economical reaches more logically. Here professional group efforts would be found more comfortable than the individual efforts and refinement in the process of development of usage of statistics in the field of modern economics. In such a way, fraternity, professionalism, co-ordination etc. will be promoted to a great extent.

Productivity increase is a vital issue that may be enhanced by combining all the factors of production proportionately. Results of the field trial could however, be made available at the doorsteps of farm households along with the required inputs without harassment. Availability of appropriate technologies and technical know-how is more essential to the farmer's community. Along side, the population growth rate should be taken care of into consideration for reduction.

Strategy devices. Research activities should continue along with the climatic changes to cope with the dynamic environment of sustainable development, even in the economic melt-down of industrial developed economies affecting the developing economies.

Socio economic impact could be assessed properly so that results of the increased productivity and production go to all sections of people rationally, never distorting the distributive justice. In the existing system, the number of poors are increasing absolutely (but reduces relatively at the rate of 1.00 percent per year). The disparity among people are increasing both by absolute and relative terms. The increasing trend in both the cases, should be reduced to great extent by adopting proper policy interventions. Otherwise, socio-economic ills would call for social unrest hampering the productivity, production and distribution to a great extent.

The economy is growing at the rate of 6.00 per cent per annum in the last 5 years. Even this year intellectuals are predicting a 6.00 percent growth rate on the basis of bumper harvest of crops. The planning document however, set a target of 5.50 percent growth per annum this year(2009-2010). The depth and coverage of the social safety net programmes have been enlarged to cope with the need and availability of resources to implement these vital programmes.

Annex -1

- a. Regional Seminar Entitled ‘Agricultural Reforms and Food Security’ Jointly Organised by the Faculty of Agricultural Economics and Rural Sociology of Bangladesh Agricultural University, Mymensing and Bangladesh Economic Association; Held on June 13,2009 at the Conference Hall of Faculty of Agricultural Economics and Rural Sociology, BAU, Mymensingh.
- i. **M Serajul Islam and M Mojammel Haque:** Socioeconomic Impact of Changing Land Use Pattern on Food Security for Farm Households in Bangladesh..
 - ii. **Mahbub Hossain and M Harun-Ar Rashid :** Yield Disparity and Food Security of Marginal Farmers in Basail Upazila on Tangail District.
 - iii. **Sadika Sharmin, Katsumi Araata and M Serajul Islam :** Present Status and Sustainability of Food Security in Bangladesh.
 - iv. **M A Bashar and Md. Zhorul Haque :** Land Tenure and Credit: A Study in Selected Areas of Mymensingh District
 - v. **Md Saidur Rahman and Arild Angelsen :** Comparison between Irrigation Payment Methods and Profitability of Using Water Saving Technology .
 - vi. **Tanvina Khan, Hasneen Jahan and Tofazzal H Miah:** Impact of Land Tenure System on Boro Paddy Production in a Selected Area of Mymensingh District; An Economic Analysis.
 - vii. **M.A Salam , M Shahe Alam and M Serajul Islam:** Hybrid Rice Production under Changing Land Use Policy: A Way to Improve Food Security in Bangladesh.
 - viii **Taznoore Samina Khanam, Md. Habibur Rahman and Mahbub Hossain:** Income Generation Through Edible Mushroom Cultivation: A Potential Source of Food Security for Small Households in Bangladesh.
- b. Regional Seminar Entitled “ Economic Issues Related to South -Western Region” Organised Jointly by Bangladesh Economic Association and Department of Economics. Islamic University, Kushtia Held on July 11,2009 at Shah Azizur Rahman Auditorium, Islamic University, Kushtia
- i. **Abul Barkat and Md. Shahnewaz Khan :** Economics of Tobacco in Bangladesh : Lessons Learned and Actionable.
 - ii **Md. Aynul Islam and Abdul Mueyed :** Impacts of Climate Changes on Beel Fisheries of Bangladesh : A Case Study of Chapaigachhi Beel in Kushtia.
 - iii. **প্রফেসর রহমত ছিদ্দিকী :** $LvRbbM\ddot{t}i Aew\text{Z} P\ddot{t}Zvj \text{ I } ivBm\ddot{t}gj \text{ t } Kg\ddot{t}\times\ddot{t}Z, m\ddot{t}m\ddot{t}v \text{ Ges } m\ddot{t}g\ddot{t}v\ddot{t}b;$
 - iv. **Md. Alamgir Hossain Bhuiya :** Utilisation of the Government Primary Health Care Services : A Micro Level Study on Married Women and Children.

- v. **Umme Habiba Rahman and Md. Mizber Rahman** : Role of BRB Group of Industries Limited in Employment Generation in Southern Regions of Bangladesh.
- c. Regional Seminar Entitled, 'Problems and Prospects of Economic Development of the Western Region of Bangladesh " Jointly Organised by the Department of Economics, Rajshahi University and Bangladesh Economic Association, Held on August 1, 2009 at the Senate Bhaban, Rajshahi University.
- i নিবেদিতা মল্লিক এবং মোঃ মোয়াজ্জেম হোসেন খানঃ বাংলাদেশের পশ্চিমাঞ্চলের অর্থনৈতিক উন্নয়নে চিড়িং চাষের ভূমিকা : প্রেক্ষিত সাতক্ষীরা জেলার আশাতনি উপজেলার আশাতনি ইউনিয়নের চারটি গ্রাম।
 - ii. **Tariq Saiful Islam, Qamarullah Bin Tariq Islam, Nazmullah Bin Tariq**: A Study of Availability of Meat in Western Bangladesh
 - iii **Md. Abdul Wadud** : Performance of Industrial Establishments in Northwest Bangladesh :
 - iv. জেসমিন আরা এবং মোঃ মোয়াজ্জেম হোসেন খান : বাংলাদেশ পটশিল্পের সমস্যা ও সম্ভাবনা; প্রেক্ষিত রাজশাহী পটকল।
 - v. **Md. Elias Hossain and Mohammad Mosaddequr Rahman**: Impact of Microcredit on Economic Indicator of the Borrowers : An empirical Analysis
 - vi. শামিমা সুলতানা এবং মোহাম্মদ আলী : রাজশাহী কৃষি উন্নয়ন ব্যাংকের দারিদ্র্য বিমোচন কর্মসূচী।
 - vii. সৈয়দ ফার আবীর এবং মোঃ মোয়াজ্জেম হোসেন খান : বাংলাদেশের পশ্চিমাঞ্চলের অর্থনৈতিক উন্নয়নে মংলা সমুদ্র বন্দরের ভূমিকা।
 - viii. **A.N.K. Noman** : Rajshahi: From Education City to Special Education Zone