

Cause and Effect Analysis of Stock Market Crash during 2010-11 and Investors' Impression: The Case of Dhaka Stock Exchange

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Abstract

The stock market is one of the most important sources for companies to raise capital. This study's main objective is to find out cause and effect of stock market crash in Bangladesh especially in the year of 2010-11 when a massive crash took place in Dhaka Stock Exchange and to find out impression of investors about the capital market as an effect of the market crash. While conducting this research, 180 investors were selected from DSE and out of those 150 investors' responses properly. The response rate is 83 percent. A questionnaire has been prepared for this study that consists of different questions on four dimensions of investors for investment in DSE. In this study, some statistical measures such as factor analysis using Principal Component Analysis (PCA) with Varimax Rotation and Regression Analysis, mean, z test and proportion analysis are used to examine cause & effect of stock market crash during 2010-11 and investors' impression. This paper will help both investors and policy makers to know the cause and effect after stock market crash and to make proper decisions in the future.

Keywords: Market Crash, Investors, Factor Analysis, KMO & Bartlett's Test, Regression Analysis.

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1.0 Introduction

Stock market is one of the most important financial institutions of any economy as well as Bangladesh. The background of this study is to find out the root causes of the stock market crash during the year 2010-11 and find the way to prevent the crash in the future. This section of the study describes about history, functions, mission and vision of Dhaka Stock Exchange Limited. Besides, in this part of the study represents current status of DSE and investors.

The Dhaka Stock Exchange (DSE) is registered as a public limited company under security and exchange commission act 1993 and company act 1994. Earlier Dhaka (East Pakistan) Stock Exchange was introduced in the early 1952. About 100 people was interested to form an exchange in the next year July 7, 1953. It was registered under company act 1913. At the time of incorporation its authorized capital was Rs. 3, 00,000 and divided into 150 shares. Currently DSE has 512 enlisted companies with a high volume of capital. Major functions of DSE are; i) Listing of companies, ii) Trading facilities, iii) Market Administration and Control, iv) Market Surveillance, v) Investors Investment Protections etc. The objectives of DSE are i) Achieve Sustainable Turnover, ii) Knowledge Development, iii) Human Resource Development. The vision of DSE is to be a leader exchange in the region and a key driver of the economy of Bangladesh. The mission of DSE are; i) Rapid Updated Technological Advancement and Increase High Standard of Investment Services, ii) Contribute Country's Economic Growth and Sustainable Development, iii) Ensure Superior Corporate Governance and iv) Investors' Confidence Enhancement.

1.1 Statement of the Problem

This paper shows the critical phenomena of stock market crash during the year 2010-11 and investors' impression toward DSE and investment decisions. It also shows investors' behavior is negative towards the market. As a result economic growth of the country decreases gradually, new industries are not establishing so unemployment rate increasing day by day.

1.2 Significance of the Study

This paper signifies to ensure integrity and efficiency of SEC members and staffs and also co-ordination between SEC and DSE. From this study commercial banks will be able to realize heavily on capital market by investing directly and indirectly (Margin Loans) that creates high risk on depositor's money. This study shows the importance on transparency in listing procedure. This study paper strongly focuses on the listing process as listing methods (Book Building methods and Direct Listing) played a vicious rule to damage the stability of the market; major change should be brought to make it acceptable and transparent. In this regard, SEC should promote only Fixed Price method as it lacks less opportunity to manipulate the offer price. SEC can also use due diligence to fix the offer price under this method.

1.3 Scope of the Study

The present study is conducted to find out the cause and effect of stock market crash massively during the year 2010-11 and to know present impression of investors' in DSE. It has wide impact of analysis of investors' satisfaction level and impression towards DSE currently. This paper focuses to set up rules and regulation for preventing such kind of crash in the future.

1.4 Objective of the Study

The overall objective of the study is to find out cause and effect of stock market crash in 2010-11 on the case of DSE. To some extent, the specific objectives (Malhotra, 2008) are; i) To provide an overview of cause and effect of stock market crash during 2010-11 in DSE, ii) To focus on dimensions of stock market crash in Bangladesh and impression of investors' of DSE, iii) To test and analyze the cause and effect of crash, iv) To provide some suggestions to concern agencies for stabilizing and increasing good impression among investors of DSE.

1.5 Limitation of the Study

A number of respondents were reluctant to convey their opinion for the sake of confidentiality which, if were conveyed, would have made the study exact and more factual. The respondents were chosen randomly from Dhaka Metropolitan area for the convenience sampling of the study. So, the opinion presented in this study might seem as the prejudiced one. The study could not afford a number of potential respondents opinion as they were in rush during the trading hours or severely depressed recalling bitter memory of the market crash during 2010-11.

2.0 Research Methodology

Object oriented research methods are used to find out cause & effect and investors impression stock market crash during the years 2010-11. Specific statistical tools like Factor Analysis, regression analysis, z test, mean calculation and proportion analysis have been used for examining and analyzing data. 5 Point Likert Scale has been used to collect responses of investors in DSE.

2.1 Research Design

Convenient sample technique has been used in this study. The target population of this research was investors in the Dhaka Stock Exchange in Dhaka city who were investing as investors since 2007. Among various brokerage houses, this study only considered 20 enlisted brokerage houses under Dhaka Stock Exchange in Dhaka city whose 500 investors were considered as population size. This research emphasizes on quantitative and qualitative data to analyze the cause and effect of stock market crash during the year 2010-11 in DSE.

2.2 Sampling Techniques

For conducting this research, 180 investors from the selected brokerage houses' were interviewed through a structured questionnaire and out of them 150 investors' response perfectly, the response rate is 83 percent. Stratified sampling technique has been applied for this study by which investors of DSE in Dhaka city partitioned into 4 strata or batches. Elements were selected from each spectrum or batch by a random sampling technique.

2.3 Sources and Data Collection

Both primary and secondary sources were used to collect data for this study. Primary data were collected through a structured questionnaire which was administered personally to the investors in the different enlisted brokerage houses under DSE in Dhaka city. A self-administrated questionnaire was developed by using a 5 point Likert Scale where: 1= Very Dissatisfied, 2= Dissatisfied, 3= Neutral, 4= Satisfied, 5= Very Satisfied), open-ended and non-forced, balanced and odd numbered non-comparative item's questions asked to the respondents. On the other hand, secondary data were collected from various research articles, journals, websites, newspapers, books and from authentic other available sources.

2.4 Method of Data Analysis

Analyzing data from questionnaire which consists of different questions on four dimensions such as; exposure of banks & financial institutions, availability of authentic information for the investment, knowledge of risk management, efficiency of Securities and Exchange Commission to control over the stock markets. In this study, popular statistical measures such as: factor analysis using Principal Component Analysis (PCA) with Varimax Rotation and Regression Analysis are used to examine the cause and effect of stock market crash during 2010-11 in DSE. Besides, others tools like mean, z test and proportion analysis have been used to carry out the necessary assessments with the help of SPSS 23 version software.

2.5 Hypothesis Development

On the basis of the various factors affecting on stock market crash, following hypotheses are developed for cause and effect study;

H₀:H₁: Investors' are impressed on exposure of banks & financial institutions

H₀:H₂: Investors' are impressed on availability of authentic information for the investment

H₀:H₃: Investors' are impressed on knowledge of risk management

H₀:H₄: Investors' are impressed on efficiency of Securities and Exchange Commission

3.0 Literature Review

Review of literature is an integral part of conducting a research. Review of past literature helps conceptualization, formulation and choice of tools of analysis. It also helps in arriving at meaningful conclusions. With this view a brief review of past studies and concepts relevant to the present study are highlighted as follows.

Frequent changes of different financial principles and policies of the government and central bank may cause vulnerable capital market in Bangladesh. **According to Sultana Israth (2016)**, "Frequent changes in margin loan ratio, excess liquidity, opening a wide range of brokerage house are the main factors responsible for the instability in capital market of Bangladesh. As regards crash of capital market in 2010, the main reasons are increased SLR and CRR, fluctuating directives of SEC, and withdrawal of reserved

money by banks, according to respondents. Lack of qualified and professional financial analyst in the capital market, knowledgeable manpower, administrative and other supportive activities, good scripts, better monitoring, and investor awareness program are some other major reasons causing the crisis.” As a result during the year 2010-11 it was experienced massive crash in the capital market.

As an institution capital market in Bangladesh especially DSE always seems to be manipulated by unidentified manipulators for the general investors. **Islam Azizul (2014)**, “Some policy makers have termed the market as ‘wicked’ and gambling casino”. Bangladesh Economist’s Forum, First BEF Conference, Radisson Blu Water Garden, Dhaka, 21-22 June, 2014. Therefore, DSE has limitation to protect its investors in the market crash frequently.

In the DSE very often it is seen initial stock prices very much high that also lead to fall the price while entering into secondary market. **Alam Shahjarul (2012)**, “Primary issue related problems was faulty listing methods, IPO overpricing. Secondly secondary market related problems stock split, manipulation etc.” The methods are used to evaluate the prices of stock still not satisfactory for the investors.

All agencies relating to the capital markets need to work together to build up a strong capital market for the interest of investors. **Ullah Hafij Md. (2012)**, “As an important part of the economy of the country, well-functioning of the capital market is a must for the industrialization process of a un-industrialized country like Bangladesh but un-stability in the same may negatively affect the total financial system. Therefore, all related corners including Government, Regulatory bodies, Listed Companies, Brokerage houses, institutional investors, and retail investors should act rationally to maintain the stability in the capital market for the greater interest of the country.” For sustainable and stable capital market it is mandatory to continue market activities smoothly.

Overall scenario of the capital market is not uncovered yet by the investors. **Sarker Moniruzzaman (2012)**, “Gap between the demand and supply of stock, extraordinary overpricing of the stock, market manipulation, lack of knowledge of stock and investment management” . This may cause again and again DSE massive crash.

Investors always seek to flawless and efficient capital market where they can invest without any hesitation. **Ethirajan, A. (2011, January 01)**, “To enhance the efficiency of resource allocation in the capital market, the government lifted the restrictions on listing access and improved the delisting system of listed companies. This drew fund flows into value stocks and growth stocks, and led them away from junk stocks. The implementation of IPO reform in 2012 helped to guide rational investment. SEC launched the stock index futures in 2010 to provide a hedging mechanism for systemic risk, and launched the securities margin trading business in the same year to implement long and short two-way trading”. Government and SEC try to rethink and reform guidelines for the stock market to minimize the systematic risks.

Every capital market in the world is based on a strong financial policy. **Ahmed, S. (2004)**, demonstrates that “Policy factors are the primary reason for market movements in a similar period with 16 huge market fluctuations, whose amplitudes exceeded 20%”. For the growth and stable market DSE’s policy comes to the mind of general investors to make an investment decision.

4.0 Data Analysis and Discussion

Four dimensions such as; exposure of banks & financial institutions, availability of authentic information for the investment, knowledge about risk management, efficiency of Securities and Exchange Commission to control over the DSE have been considered for analysis. Factor Analysis and Regression Analysis have been conducted and discussed in this part.

4.1 Factor Analysis

Besides, researchers conduct factor analysis of dimensions that are responsible for stock market crash. To find out appropriateness of factor analysis model researchers rely on Kaiser-Meyer-Olkin (KMO) of sampling adequacy and Bartlett’s Test of Sphericity.

4.1.1 KMO and Bartlett’s Test of Sphericity

The value KMO ought to fall within 0 and 1, Kaiser 1974, provides some guidelines which indicate as a 'Rule of Thumb' when interpreting KMO statistics. In the guidelines, below .50 as a KMO value is 'unacceptable'. Even a result of .60 is 'mediocre'. It is only considered as a good result when it is .70 as 'middling'. Certainty of KMO values are .80 and .90 'meritorious' and 'marvelous' respectively.

Table: 1, KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.830
Bartlett's Test of Sphericity	Approx. Chi-Square	1642.505
	df	171
	Sig.	.000

Source: SPSS Data Analysis Output

In the Table: 1, shows KMO measure of sampling adequacy in this study provides a value .830 which indicates 'middling' or 'marvelous' result. It also implies that the sample size and data well fit for factor analysis. Besides, Bartlett's Test of Sphericity reveals that the probable Chi-square statistics 1642.505 with 171 degree of freedom (df) which is significant at .05 level. So the null hypothesis, population correlation matrix is an identity matrix, is rejected by Bartlett's Test of Sphericity.

4.1.2 Total Variance Analysis

The Table: 2, suggests that total variance caused by 19 components are equal to the number of 4 components. Component 1 accounts for variance 5.298 which is (5.298/19) or 27.88% of total variance explained. Likewise, components 2, 3 and 4 respectively are 20.512%, 12.028% and 8.136% of total variance. These components explain 68.560% of all variance out of 19 components.

Table: 2, also shows that out of 19 initial factors, only the factor with Eigenvalues above 1 were retained for the this study. Thus, 1, 2, 3, and 4 components were used for further study. Table is shown below.

Table: 2, Total Variance Explained

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	5.298	27.884	27.884	3.907	20.564	20.564
2	3.897	20.512	48.396	3.209	16.888	37.452
3	2.285	12.028	60.424	3.011	15.849	53.301
4	1.546	8.136	68.560	2.899	15.259	68.560
5	.854	4.497	73.057			
6	.796	4.188	77.244			
7	.629	3.311	80.555			
8	.548	2.885	83.440			
9	.450	2.370	85.810			
10	.396	2.083	87.893			
11	.361	1.898	89.791			
12	.338	1.780	91.571			
13	.315	1.660	93.231			
14	.297	1.564	94.795			
15	.259	1.361	96.156			
16	.241	1.267	97.424			
17	.178	.937	98.361			
18	.163	.858	99.218			
19	.149	.782	100.000			

Source: SPSS Data Analysis Output

Extraction Method: Principal Component Analysis (PCA).

4.1.3 Rotated Component Matrix

It (Rotated Component Matrix^a) requires achieving for simplicity in the interpretation (Malhotra, 2018). This is why principal component analysis with varimax rotation was chosen in the study to the factors and as a cause of market crash in 2010-11 in DSE and as an effect of volatile market left most of the investors from the market. In this study, the suggestion was taken from Stevens (1992) for using a factor leading cut-off of 0.40, regardless of sample size, has been followed for easy interpretation. Hence, variables with factors loading below 0.40 were not taken into consideration, shown in the Table: 3, below.

Table: 3, Rotated Component Matrix^a

	Component			
	1	2	3	4
I_have_sufficient_knowledge_of_DSE		.780		
Confidence_on_Ability		.837		
Control_in_investment		.797		
I assume full responsibility of my investment		.686		
I Plan to increase investment in the next quarter because I reply upon my farsightness		.675		
Discussion with colleagues			.670	
Reliance_on_peers			.776	
Past_Investment_Success			.833	
Reliance_on_Market_Participants			.809	
Preference_of_buying_stocks_when_m any_buy_orders_are_placed			.577	
Selling_stocks_upon_Immediate_Price_falls				.804
Selling_stocks_upon_immediate_price_increase				.820

Less_dissappointment_when_others_also_experience_loss				.825
Higher_Losing_disappointment_if_friends_make_profit				.753
Holding_Stocks_Despite_their_Poor_Past_Performance	.845			
Holding_Stocks_Despite_Higher_Current_Price	.897			
Not_bothering_about_share_Price_Decline_Expecting_Quick_Recovery	.862			
Overtrusting_Market_Participants_During_Share_Purchase	.903			
Not_selling_Stocks_Despite_DSE_index_drop	.883			

Source: SPSS Data Analysis Output

Where, component: 1, Knowledge of risk management with high loading variable, it also explains most of 27.884% of other variables. Component: 2, on the other side, Availability of authentic information for the investment explains 20.512%. Likewise, component: 3, Efficiency of Securities and Exchange Commission with 12.028% and component: 4, Exposure of Banks & Financial Institutions with 8.136% plains among 19 independent variables.

4.2 Regression Analysis

This study uncovers the cause of market crash and shows the effect of the crash as a case of DSE in 2010-11. The Regression model in the Table:6, indicates positive correlation ($R=.869$) between independent variables i.e. four dimensions and dependent variable on investors impression towards investment in DSE. R square suggest that the strength of association between dependent and independent variables (Malhotra, 2018). So, R square $=.756$ in the model signifies that 75.60% variance in dependent variables is explained by the identified variables. Table is shown below.

Table: 4, Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.869 ^a	.756	.748	.22448

Source: SPSS Data Analysis Output

- a. Predictors: (Constant), Efficiency of Securities and Exchange Commission, Knowledge of Risk Management, Availability of Authentic Information for Investment, Exposure of Banks & Financial Institutions

4.3 ANOVA Test

“ANOVA technique in context of two-way design when repeated values are not there: as we do not have repeated values, we cannot directly compute the sum of squares within samples as we had done in the case of one-way ANOVA. Therefore, we have to calculate this residual or error variation by subtraction”, (Kothari 2011). Table 5, shows analysis of variance, it is evident that P value is less than .005 which is significance level in the Table: 5, ANOVA. So the null hypothesis ($H_0: R \text{ square pop} = 0$) is rejected. This ultimately means that independent variables affect the dependent variable (cause of market crash and negative impression of investors to make investment decision in current market condition).

Table: 5, ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.860	4	15.465	25.734	.000 ^b
	Residual	87.140	145	.601		
	Total	149.000	149			

Source: SPSS Data Analysis Output

- Dependent Variable: Effect of DSE Crash
- Predictors: (Independent Variables), Efficiency of Securities and Exchange Commission, Knowledge of Risk Management, Availability of Authentic Information for Investment, Exposure of Banks & Financial Institutions

4.4 Coefficients Analysis

The Table: 6, explains that all the chosen independent variables that represent the four identified components at 5% significance level. Among these components 1 plays the most devastating role of crashing market in 2010-11 as it has the highest beta coefficient value on Risk Management of Investors in DSE as follows:

Table: 6, Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

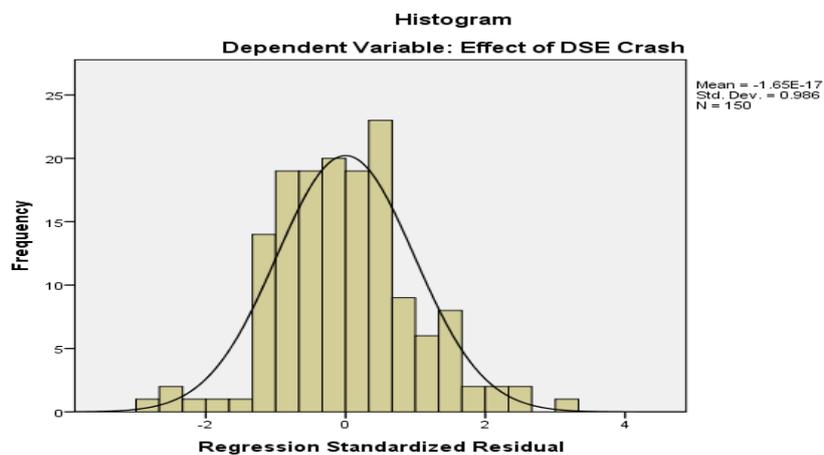
1	(Constant)	5.927E-17	.063		.000	1.000
	Knowledge of Risk Management	.367	.064	.367	5.772	.000
	Availability of Authentic Information for Investment	.332	.064	.332	5.227	.000
	Efficiency of Securities and Exchange Commission	.320	.064	.320	5.033	.000
	Exposure of Banks & Financial Institutions	.262	.064	.262	4.120	.000

Source: SPSS Data Analysis Output

4.5 Histogram Analysis

It is usually the statistical tool explained the frequency of occurrence of specific phenomena which lie within a specific range of values which are arranged in consecutive and fixed intervals. The frequency of data occurrence is represented by bar, hence it looks like a bar graph

Figure: 1, Histogram



Source: SPSS Data Analysis Output

In the above histogram (Figure: 1), it shows that mean = -1.65 and standard deviation = .986 and as the curve sloping down from a high in the observed dimensions that cause market crash and lead to negative impression among the investors in investment decision in DSE. As a result many investors left from the market after crash had taken place in DSE in the year 2010-11.

4.6 Other Analysis

In this part Mean, Standard Deviation, Standard Error, z Value and Mean Rank have been calculated to conduct further research.

Table: 7. Computation of z value

Investors Impression Dimension	N	Mean	Standard Deviation	Standard Error	z Value (Calculated value)	Mean Rank
Exposure of Banks & Financial Institutions	150	3.06	0.99	0.11	0.65	1
Availability of authentic information for the investment	150	3.01	1.17	0.17	7.34	7
Knowledge of risk management	150	2.13	1.03	0.13	8.70	9
Efficiency of securities and exchange commission	150	2.49	1.00	0.13	4.69	5

Source: SPSS Data Analysis Output

In the Table 7, the analysis sums up as $H_0:H_1$: Investors' are impressed on "Exposure of banks & financial institutions". It is assumed from the hypothesis that investors are impressed on the exposure of banks & financial institutions in the stock market i.e. overall exposure of the banks & financial institutions for the fund's investment are sufficient. Table: 7, shows that 0.05 level of significance (two tailed test), table value (1.96) is greater than calculated value ($z= 0.65$). So the null hypothesis is accepted and hence, it concludes that investors are impressed on exposure of banks & financial institutions for capital investment in the stock market.

$H_0:H_2$: Investors' are impressed on "Availability of authentic information for the investment". This hypothesis shows that investors are impressed on availability of authentic information on investment from the market i.e. markets always provides authentic information. Table: 7, shows that 0.05 level of significance (two tailed test), table value (1.96) is lesser than calculated value ($z= 7.34$). So the null hypothesis is rejected and hence, it concludes that investors' are depressed on availability of authentic information for investment in the market.

$H_0:H_3$: Investors' are impressed on "Knowledge of risk management". The hypothesis indicates that investors are impressed on having proper knowledge of risk management i.e. they feel that they have sufficient knowledge of how to manage investment risks. Table: 7, shows that 0.05 level of significance (two tailed test), table value (1.96) is lesser than calculated value ($z= 8.70$). So the null hypothesis is rejected and hence, it concludes that investors are not impressed on having proper knowledge of risk management.

$H_0:H_4$: Investors' are impressed on "Efficiency of securities and exchange commission". It is assumed from the hypothesis that investors are impressed on efficiency of securities and exchange commission i.e. securities and exchange commission has efficiency to control and monitor the operations of stock market. Table: 7, shows that 0.05 level of significance (two tailed test), table value (1.96) is lesser than calculated value ($z= 4.69$). So the null hypothesis is rejected and hence, it concludes that investors are depressed on efficiency of Securities and Exchange Commission.

Therefore, from the above hypothesis test shows that investors are impressed on only dimension of their investment decisions such as; exposure of banks & financial institutions (mean rank- 01). On the other hand, other hypothesis tests show that investors are fully dissatisfied on the other three dimensions. They think that these are the major reasons for DSE crash in 2010-11. These are: i) availability of authentic information on investment (mean rank- 07), ii) having proper knowledge of risk management (mean rank-09), iii) efficiency of Securities and Exchange Commission to control over the stock markets (mean rank-05). Therefore, it is significant that investors are not equally impressed in all dimensions.

5.0 Conclusion and Recommendation

The study uncovers the cause & effect and dimensions of investors' impression toward the stock market crash during 2010-11 in DSE. In this study there are considered four major factors which represent most of the causes of stock market crash. As an effect market was seemed to be mostly volatile for the investors as a result they were dissatisfied and left from the market. Security and Exchange Commission as well as government should properly guide and supervise all mechanisms of the stock market operations so that investors' can be impressed and feel safe in terms of investment decision making. The study finds major dissatisfactions of the investors after analyzing data such as; there is limited exposure of banks & financial institutions, lack of availability of authentic information for the investment, limited knowledge of risk management, and inefficiency of Securities and Exchange Commission which lead to stock market crash very often in Bangladesh. All the four dimensions of the study such as; exposure of banks & financial institutions, availability of authentic information for the investment, knowledge of risk management, efficiency of Securities and Exchange Commission indicate that majority of investors are not impressed on these dimensions. Through analysis and developed hypotheses show the calculated value is unacceptable to build a stable capital market which makes poor impression for the investors in investment decisions.

The study provides some recommendations for preventing stock market crash in the future such as; the regulators and government should have developed rules and regulations for the stock market protection. All other agencies relating to stock market need to introduce new tools, strategies, directives for market development and to prevent this kind of stock market crash frequently. It is also required to develop flawless accounting practices, recruiting honest officials, providing authentic information about stock market for the general investors. It is necessity to take strict actions against manipulators of the capital market. Training programs should be arranged for the investors and management officials so that they may have acquired knowledge on risk management for the investment in the stock market. Finally, this paper suggests that regulators of the stock market should review existing rules & regulations and increase investors' better impression toward investment opportunities to build up a strong and stable capital market in Bangladesh.

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Beggars Rehabilitation Initiatives: An Assessment of Narail District

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Abstract

The study attempts to assess the effectiveness of the beggars' rehabilitation initiatives which has been implemented by District Administration, Narail. Every citizen has constitutional right to work, duty and to have value and honour for his/her working (GoB 1972). But the beggars forgot that rights and engaged begging door to door. Consequently they lost their productive power, social dignity and confidence as well. Not only that begging tarnishes the image of the society as well as state. Begging itself is an unproductive job which diminishes potential productive power of the individuals. The beggars are being considered as social burden, hindrance to social norms, decencies and beauties. The study found rehabilitation initiatives enhances the productive power as well as the social dignity of the rehabilitated persons in the district. Most of them are engaged in various professions and they are earning about two US dollar per day which is being added in gross domestic product of Bangladesh. They have changed their social identity from beggars to entrepreneurs and they are no more social burden. A mixture of qualitative and quantitative approaches has been applied to fulfill the objective of this study. The study identified some challenges and some recommendations to overcome those challenges are illustrated in this paper.

Keywords: Income Generating Activities (IGA), Vulnerable Group Development (VGD), Employment Generation Program for the Poorest (EGPP), Sustainable Development Goals (SDG).

1. Introduction

1.1. Statement of the Problem

The Constitution guides to remove social and economic inequality and to attain a uniform level of economic development throughout the Republic (GOB, 1972). "No-one must be left behind. People who are hardest to reach should be given priority" (Jan Eliasson, 2016). Begging may lead livelihoods but not make sociable, society don't regard the beggars as human being EBK (2016). The begging makes their life-force disable (Younus 2008). Begging became a direct threat to the prominent social values (Sharmin 2015). Generally begging originates from poverty which is decreasing rapidly. MDG Bangladesh Progress Report-2015 shows that poverty has been dropped on an average 1.74 percentage points during the period of 2000-2010 while MDG target was 1.20 percentage points. The poverty and extreme poverty have been reduced to 24.3% and 12.9% respectively (budget speech, 2018). A total of taka 64,656 crore has been allocated in current fiscal year (2018-2019) for implementing 136 social safety net programs (SSNP) to address hardcore poor. Despite the initiatives by the government to alleviate poverty, a section of poor people seek help for their food, shelter, cloths. They beg door to door, in the streets, mosque, traffic signal, railway station, ferry-ghat, market places, educational institutions and other places. Some of them claim that they are left out from government's social safety net programs; some of them claim that the amount is

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not sufficient to lead their family. However, begging contradicts middle income country by 2021 and SGG goal 1 and goal 2 i.e end poverty and zero hunger by 2030. With the support of government and people of Narail, District Administration has rehabilitated all the beggars (798) of the district through alternative employment. The effectiveness of the rehabilitation initiatives depend on increasing productivity, enhancing social dignity, personality, self sufficiency, self satisfaction, happiness etc, of the rehabilitated persons. This paper tries to examine whether any change take place in case of productivity and social dignity of the rehabilitated persons.

1.2 Objective of the Study

- a) to assess the change that happened in terms of regaining productive power and
- b) Social dignity with their alternative employment other than beggary.

1.3 Scope

The study was conducted with persons who were identified beggars and given various kinds of materials for income generating activities, included government social safety net protections such as allowances, member of Ekti Bari Ekti Khamar Samiti in the Narail district. Their income generating activities, livelihoods, social identification i.e. how they are being treated, are analyzed in this study.

1.4 Significance of the Study

The study is aligned with middle income country by 2021, developed country by 2041. Bangladesh already achieved the eligibility criteria of developing country and committed to achieve sustainable development goals by 2030. Beggar-free Bangladesh is the demand of the time.

1.5 Limitations

Research activities on beggars rehabilitation is seen very rare. There is no set indicator to measure social dignity and productivity, its comparison between past and present situation. Moreover, the respondents are not aware and educated, so it is not easy to infer actual facts and findings.

2. Literature Review

This chapter illustrates conceptual framework, government and non government initiatives for beggar's rehabilitations. Kishoreganj Upazila Administration, Nilphamari and Narail District Administration have been declared beggar-free upazila and Zila respectively (Cabinet DO letter 2017). Directorate of Social Service, Grameen Bank, PKSF and some NGOs have done some work on beggar rehabilitation. The reports, returns, publications are being reviewed.

2.1 Conceptual Framework of the Study

Begging means asking people for money, food, shelter, gifts and other things when one is unable to manage those things. This happens in case of a real beggar who begs door to door to meet his or her hunger and other basic needs. Other than real beggars, there are seasonal, professional and circumstantial beggars in the street of Bangladesh. Accidents, river erosion, disaster and natural calamities may compel someone to beggary.. Whatever the reasons, they are begging. Government and non government organizations are working for mainstreaming them through various programs. Such as, the Ministry of Social Welfare through Directorate of Social Service (DSS) attempted to rehabilitate the beggars at their ancestral homes in village or town. They started piloting to make Dhaka City as beggar-free. Tk. 6.32 crore, tk. 7.00 crore and tk. 10.00 crore were allocated in the fiscal year 2010-2011, 2011-2012 and 2012-2013 respectively. Getting insignificant results budget allocation has been reduced significantly. After fiscal year 2012-2013,

taka 50 lacs are allocated each year to the Beggars Rehabilitation Project of Directorate of Social Service.. The website data of DSS shows that 10,000 beggars already surveyed, 2,000 have been targeted for their rehabilitation at their ancestral homes in villages or towns by the Directorate of Social Service with the help of NGOs. Kishoreganj Upazila Administration declared as Beggar-Free Upazila on 5th July 2014. They formed capital of taka 14800 for each rehabilitee in one house one farm samitee and Palli Sonchoy Bank. Homes have been built from ashrayan-2 project for homeless. All of them included in social safety net programs. Divisional Commissioner, Khulna started beggar rehabilitation activities in the whole Division including Khulna City Corporation. Divisional Commissioner raised the issue to honorable Prime Minister (HPM) on the occasion of Development Fair 2017. Honourable Prime Minister appreciated and congratulated for rehabilitating the beggars. Officials and staffs donated from their salary to expedite the rehabilitation activities. .Prime Minister’s Office has undertaken has an action plan to make beggar-free Bangladesh by 2020. Principal Coordinator, SDGs Mr. Abul Kalam Azad is playing leading role in this regard. One House One Farm Project has a target to rehabilitate one lacs beggars across the country by 2020.

2.3: Initiatives taken by NGO and Other Institutions

Grameen Bank took a special program called “Struggling Members Program” in 2002 exclusively for the beggars (Zamadar, 2015). The study states, 111,296 beggars joined in the program, 19678 left begging and 10,185 joined in GB mainstream borrowers. Beggar rehabilitation programme is a unique initiative of ENRICH. So far, 625 beggars from all 150 ENRICH Unions have been rehabilitated and they are now living with dignity. Global Giving Foundation states rehabilitated 100 women have acquired ability and confidence to earn. DAM Foundation for Economic Development (DFED, 2012) has undertaken beggar’s rehabilitation project and they treated begging as a national problem.

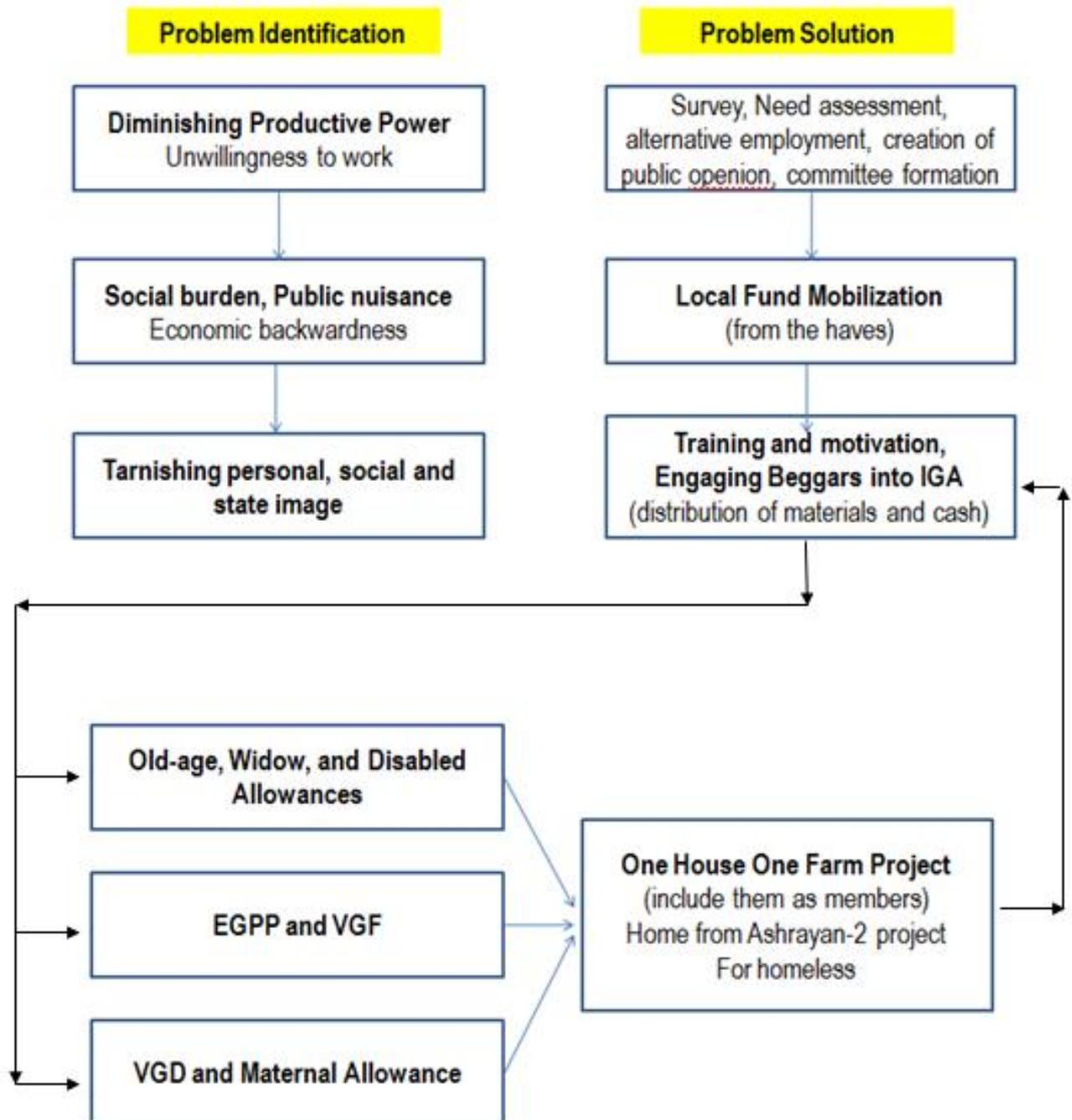
Research Gap

A few studies have been done on women, child and blind begging and their rehabilitation; Impact assessment in a particular district/ area is not found. Particularly no study is found on social dignity and productive power of the rehabilitated people from giving up beggary.

2.4. Narail District Administration:

Seeing beggars in the streets and their vulnerable conditions Narail District Administration undertook an action plan in the year 2016. They identified 798 beggars in the district through a number of surveys with the help of village police, UP Secretaries, field assistants, NGO activists and member of civil society. They arranged alternative employment after assessing their needs and desire. People’s supports were created and involved them for beggars’ rehabilitations. They mobilized fund locally and from Social Welfare Council and Directorate of Social Service. They distributed materials as per their capacity to work and desire for IGA. They were included under social safety net programs. Made them member of one house one farm project; formed capital of taka 12,000 to 14000 for each member; arranged home for homeless from Ashrayan-2 project; tagged office/ institution with each rehabilitated family for monitoring and guiding their activities. The activities are shown at a glance in the chart below:

Beggars Rehabilitation Model



3. Methodology

To achieve the objectives of the study, primary data was collected through survey, interview and FGD. Since the research is a mixture of qualitative and quantitative approaches. Detailed are described below:

3.1 Primary Data

In-depth interview with ten rehabilitated persons were taken to collect data about their socio-economic conditions especially about their present economic activities, productivity and social dignity. Two Focused Group Discussion were conducted for qualitative data where Union Parishad Chairman, Union Parishad Secretary, UCO, OHOF project, UP members, member from civil society, UDC entrepreneur and rehabilitated persons were present. Semi structured questionnaire were used to conduct interview and Focused Group Discussions. Coding, memoing were used to analyze to qualitative data. Survey was conducted with closed and open ended questionnaire for quantitative approach. The sample size was 102 where as total population was 798. Among them 53 are male and 47 are female rehabilitees. The data was collected from 33 unions and 2 municipalities which covered almost whole district. All of them are rehabilitated by district administration, Narail along with three upazila administration as well as union parishad. There were 17 questions to collect data through survey. The questions are about professions, IGA, daily average income, productivity, eating at other's home without invitation, social dignity, satisfaction level at present condition etc. Survey was conducted with the help of Field Assistants of Ekti Bari Ekti khamar project and Palli Sanchoy Bank. Table, chart have been used to analyze the data.

3.2 Secondary Data

Secondary data had collected from “Mainstreaming for Development: Beggar-Free Narail Zila”, published by Narail District Administration (2017), Solvency for Disadvantaged published by Ekti Bari Ekti Khamar Project, How to Quit Begging published by Grameen bank. Bangladesh Economic Review 2017, Budget Speech 2017-2018 and other reports have also been used to prepare this paper.

4. Data analysis/ Discussion

Both qualitative and quantitative data are analyzed together to examine the study objectives. Changes in productivity or exploitation of potential productive power and enhancement social dignities are major independent variables which enhance success of beggar rehabilitation initiatives. Again these two factors depend on some other independent variables. The detailed are discussed in the following sub-heads:

4.1. Productivity/ change in productive power

One of the objectives of the study is to assess potential productive power which is inherent to all human being. Due to beggary they did not use that latent productive power. After rehabilitation, are they productive? are they using the productive power? According to the publication of Narail District Administration- “Mainstreaming of Development: Beggar-Free Narail District” all the identified 798

beggars were given various types of materials. From March 2016 to February 2017 about 34 lacs taka was spent for buying materials and distributed among them. Detailed are shown in the following table:

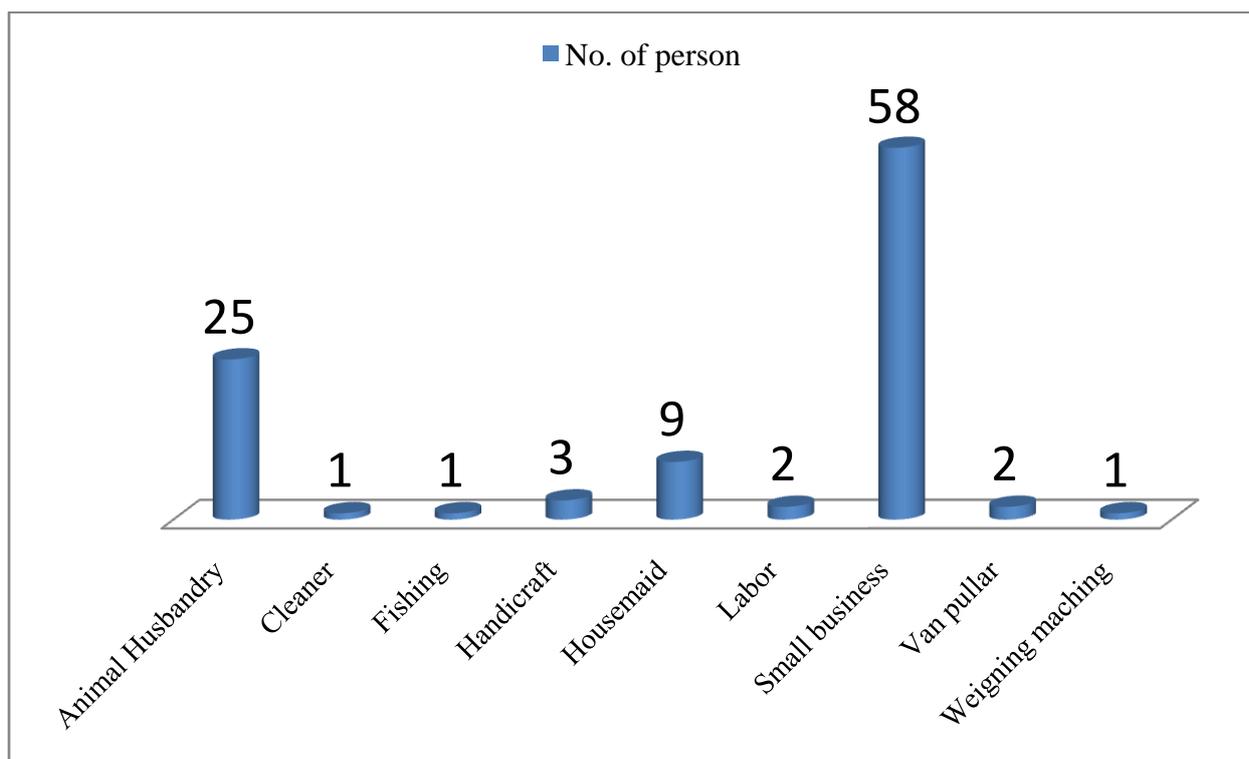
Name of Materials	Cows	Goat	Duck	Hen	Sewing Machine	Van Cart	Small Shops	Weighing Machine
Number of Materials	6	309	910	290	6	13	272	36
Number of Rehabilitates	6	269	135	80	6	13	272	36

Data source: Mainstreaming for Development: Beggar-free Narail District, 2017

The table shows that number of beneficiaries of small shops is highest and it's heterogeneous types. Some of them have fixed shop, most of them are vendors. Earlier they were moving with bags for taking something, now they are moving with bags/baskets but those are full of commodity like second hands cloths, boiled eggs, fruits, learning materials, pea nut, vegetables and such types of necessary items. Latest report states sheeps, and more items were given from rehabilitation fund as well as from Ekti Bari Ekti Khamar samitee. Some of them were given training to utilize the materials and most of them are not. Most of the rehabilitated persons are very caring about their inputs, they are busy with them. They are adding value by increasing the number of goats, ducks, and hens. Present Agriculture Minister Begum Motia Chowdhury said, "if you give 1 taka to the farmers, farmers will produce 10 taka by their production activities". Here are also multiplier effect, demonstrative effect, spillover effect, positive externalities etc. Nobel Laureates Dr. Muhammad Yunus has rightly said little support can help to come out from that neglected profession.

4.1.1 Present Profession

The following diagram shows the present profession of the rehabilitated persons in the district.

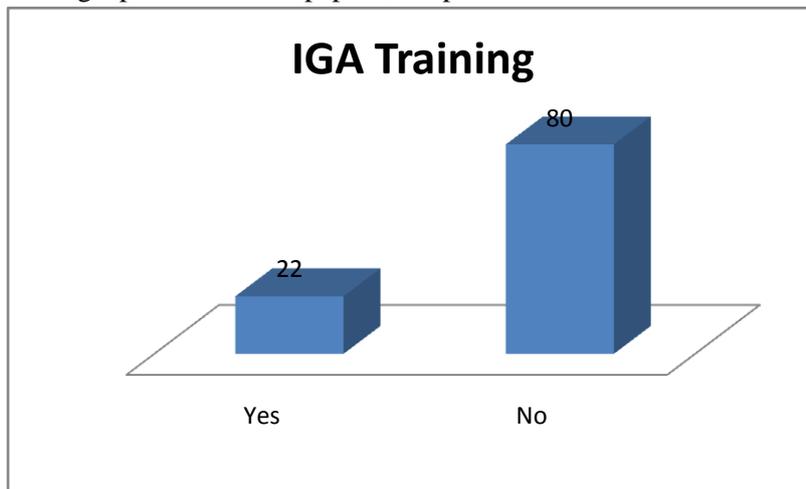


The collected data shows that all of them are somewhat engaged in profession for income generating activities. Earlier they were moving door to door for seeking help. 58 rehabilitated persons are engaged in small business which includes selling cloths, vegetables, fruits, nut, learning materials, stationary item and

small trading shops in the village. 25 persons are involved with animal husbandry that is hen, duck, goat, sheep, cow rearing. 9 persons are housemaid, Some of them work in other house and some work at their own house. There are also cross cutting profession, some of them are engaged in goat raring as well as small shop at his home. Some of their shop located near school, they sell food items, stationary and also provide service weighing machine.

4.1.2 Training for Income Generating Activities:

District Administration Narail imparted training to the rehabilitated persons in a small scale. The contents were awareness building, duck-hen raring, animal husbandry, small business, vegetable cultivation, making packet with papers, capital formation etc. and how to earn with small capital.



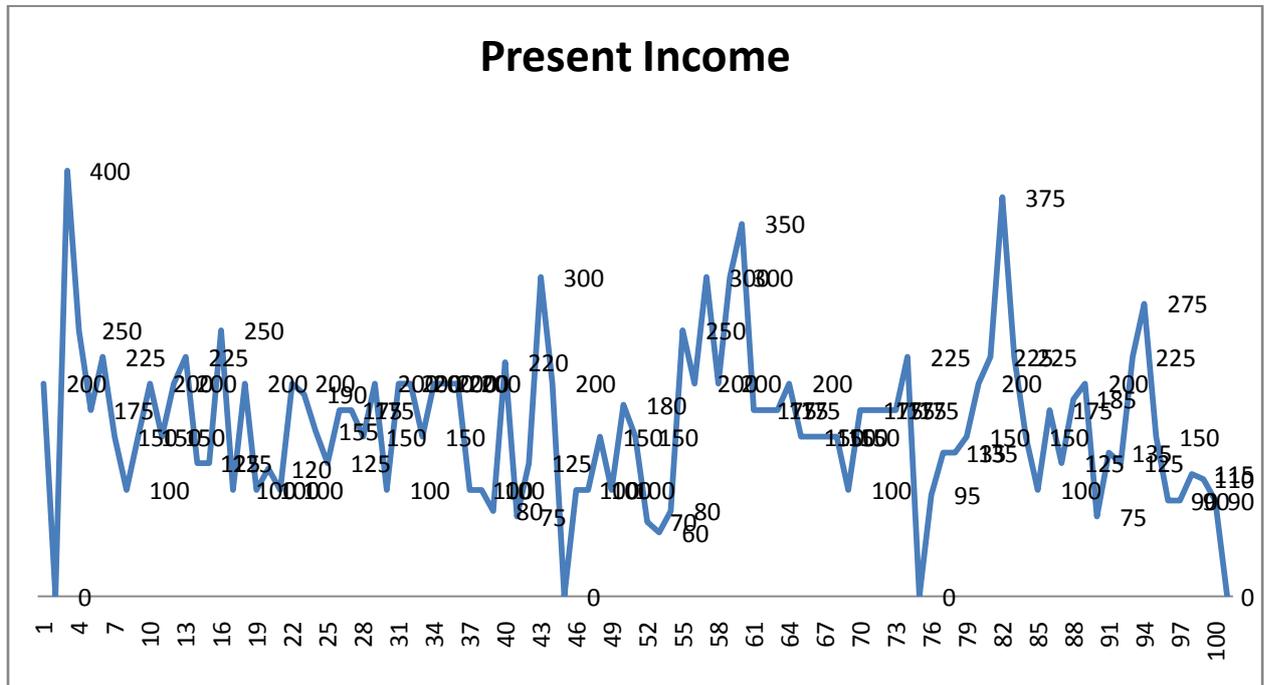
The collected data shows that out of 102 rehabilitated persons 80 did not get any training, only 22 got training. That means only 22 percent got training for income generating activities. But published report states that 275 rehabilitated persons out of 798 have got training. There is a little difference in between the two figures. One reason may be training was urban based. Those who live in municipal area they got priority but data was collected from almost every union field assistant of Ekti Bari Ekti Khamar. Data collected from municipal area is only. Because there is no field assistant working in urban area.

4.1.3 Income by Using Productive Power

Before rehabilitation, they were not working rather begging. They did not take part in any productive activities. Rather they were creating public nuisance in some extent. Their strength, productive power, intelligence, human qualities, working capacity etc. were unused. They didn't know how to be self employed, self reliant and self dependent. The beggar rehabilitation initiatives opened the eyes of the rehabilitated persons. As one of rehabilitees, Rabeya, Chacuri, stated that it opened her eyes to come out from defamatory profession as her children were growing up, their daughter has to be married. It would be difficult to manage bride for her daughter as her husband is beggar. They were known as beggars but now my husband's identity is self employed / activist or small businessman which are prestigious to our community, relatives as well as society. Success story of Saki Begum can be mentioned here. Saki was begging in Kalna ferryghat, she did not know that she had potentiality. After getting motivation and small capital she started selling of boiled eggs at the same place. Her present earning is no less than that of previous one. The difference is that now she is using her intelligence, potential productive power. Another self reliant activist Momta, Narail, lives on the bank of the Chitra river, she was given small support from Narail District Council, now her earning is sufficient to run her family with her disable husband. She said, "I spend profit only for my family's day to day expenditure, I don't touch my original capital". Laili

Begum from Pankbila explained that they are happy with the governments; they need no more help from government side. Their every day income is 200 to 300 taka which makes her children enthusiastic and courageous towards self sufficient.

The following chart shows their daily average income:



The above data chart shows that out of 102 rehabilitees only 3 persons cannot earn of their own. They depend on government social safety net protections as well as the income of other’s member of their family. Rest 99 persons are working and earning. The chart shows that minimum earning is taka 60 where as maximum is taka 400. Most of their earning is in between 150 to 200 taka. The average daily income is 164 taka which is equivalent to 2 US\$.

1.4 Health Supportive Income

One of the interviewee, Tarikul, weighing machine operator, Lahuria, Lohagora, now feels better. He said, “I feel better now, my health condition supports me, I sit in certain place with weighing machine using signboard, people see signboard and measure weight and give the price not mercy”. It should be mentioned here that contents of signboard is “Not begging, cooperate after measuring weight”. Tarikul also said, “My wife gets 30 kg rice per month and also I disable allowances 1800 every three months by which we can run our family smoothly”.

4.2 Changes in Social Dignity

The second objective of the study was to assess is there any change in social dignity by the rehabilitation initiatives? Self realization, people’s perception, attendance in government programs, access to public sector’s service, training for capacity development, satisfaction and happiness with present conditions, unwillingness to go back to the begging, etc. have been considered to measure the social dignity.

4.2:1 Rehabilitation works as tool to bring From Dark to Light

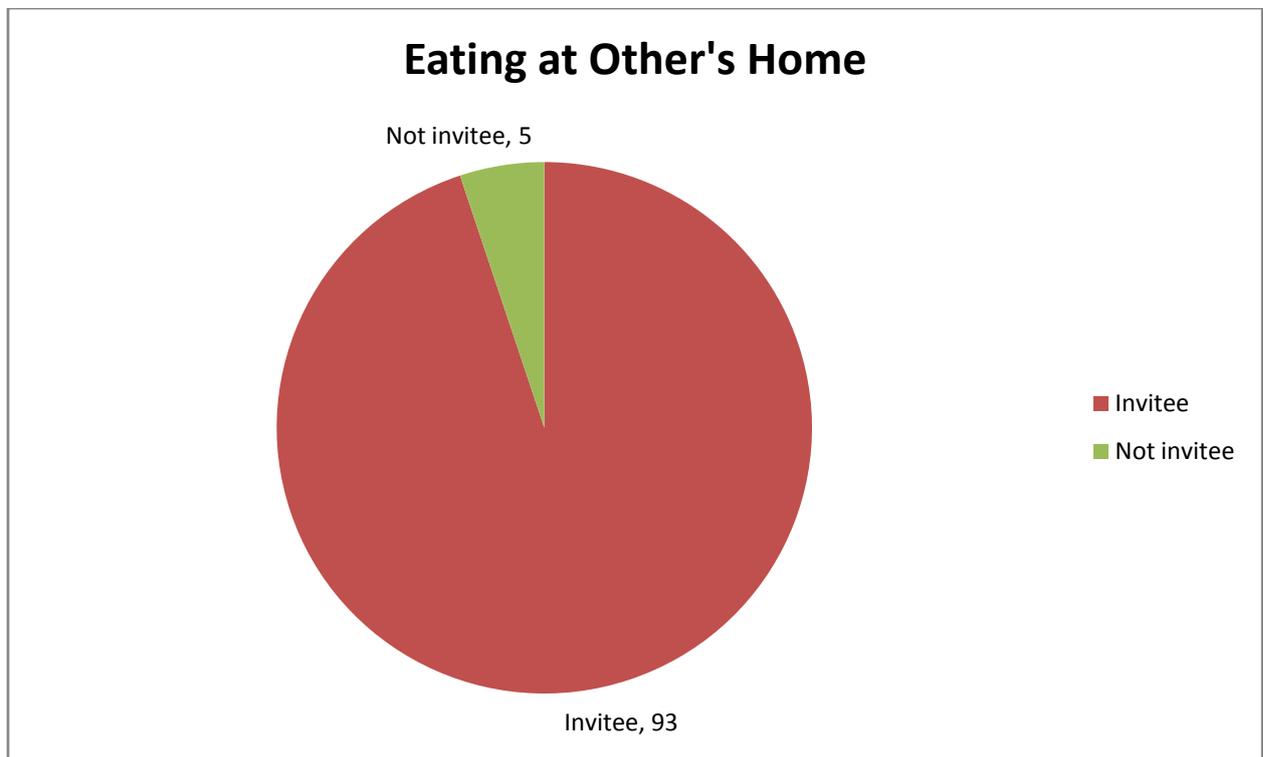
One of the interviewee, Liton sheikh, currently small business man, Maizpara, expressed his satisfaction and said “the rehabilitation has brought me from dark to light” and he asked, “Why this initiative has not implemented before to bring back from begging?”. He thinks that although begging has more income but

income from working has peace and happiness. He describes, currently people love him, Allah loves him because of working instead of begging. It is pertinent to mention here that, Liton Sheikh is a man with disability. He cannot see anybody or the world. He used to begging in the bus near Muchirpole bus station. Just after getting a little support and love from district administration, that liton is selling nut amounting taka 700 to 1000. His two sons are students. Now, he looks smiling.

4.2.2 Self Realization

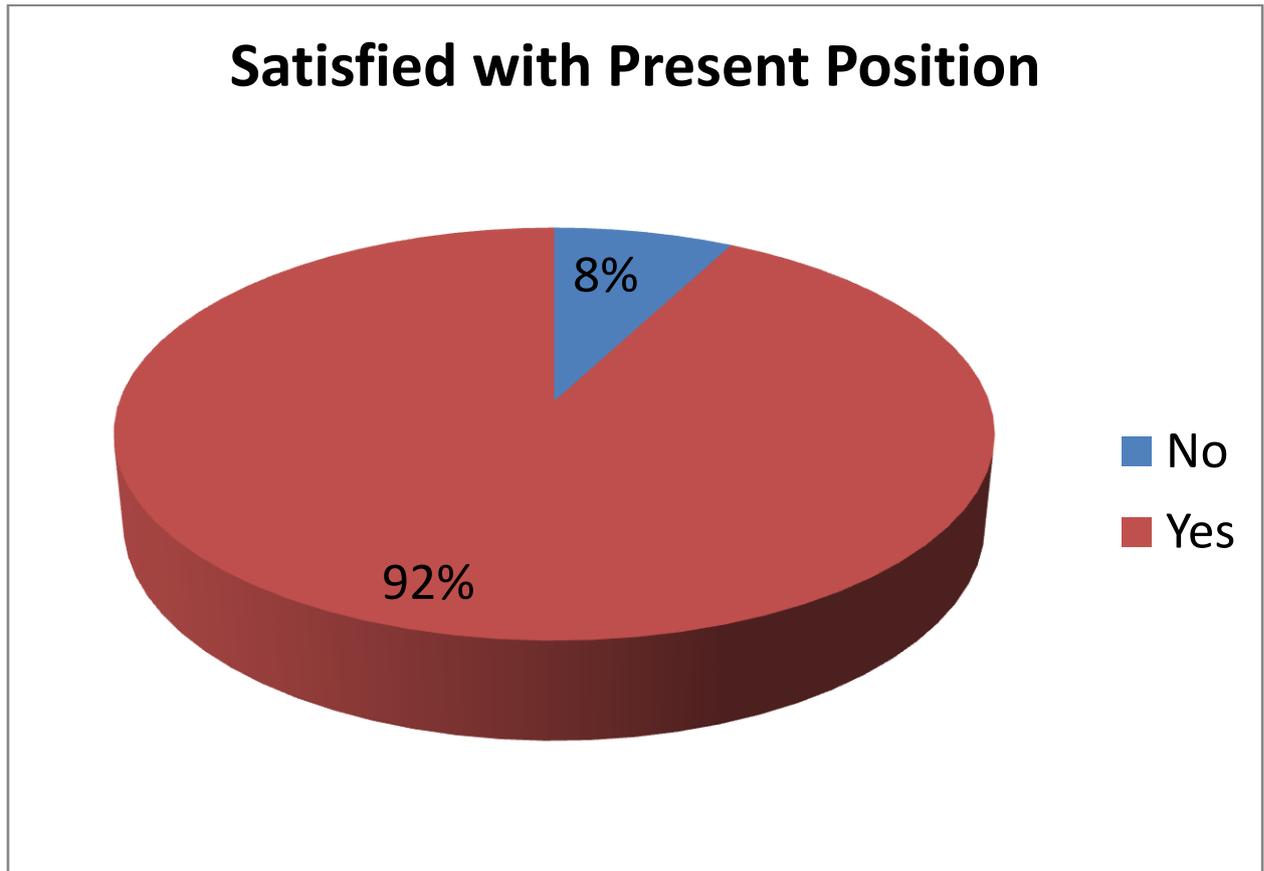
Another interviewee, Prokash Ghosh, Babra Hasla, said, “Now I am happy, for my previous beggary I feel hated, I never go back to begging, everybody looks me with the eyes of honor”. Prokash is also eye sighted disable who was begging in Baroipara ghat, now he is selling nut, chanachur, khata at the same place and living his happy life with his family members. Amodi Begum, 75 years old lady expressed her feelings in this way that she is no more beggar, she introduced herself as small trader. Her widow daughter works as housemaid in a student mess and her widow grant daughter is now entrepreneur of Narail District Council Digital Centre. They are living together with happiness.

4.2.3 Eating at Others Home



Eating at other's home is being considered as an indicator of social dignity. In autarky situation beggars need not any invitation, without invitation they attend at others home on the occasion, out of the occasion, wait there, sit in the floor, they were being treated as an unwelcome visitors. But after rehabilitation the situation has been changed a lot. Survey data shows that out of 102 rehabilitated persons 93 do not go to others home for eating without invitation. They attend to death anniversary, marriage ceremony, eid festival or any other party only when are being invited. Like other guests they sit in the chair not on floor, now they don't eat residual part. One of the interviewee said, “we don't get beggars to distribute meat on Eid-ul-Adha day since they don't come. We distributed qurbani meat by going their home with my car”. This is fact which indicates social dignity of the rehabilitated person has gone up.

4.2.4 Satisfaction level with their Present Conditions



One of the survey questions was is he or she is satisfied with present conditions? Out of 102 persons 92 rehabilitees answered positively meaning they are satisfied with their present position but 8 persons expressed about their dissatisfaction.

4.2.5 Arrangement of Special Programs to Honour them

District Administration Narail and all upazla administrations arranged ifter party to honour the rehabilitated persons during the month of holy Ramadan. Before rehabilitation initiatives they did not took such type of opportunity to have prestigious invitation by Deputy Commissioner and official of the district level. In the Upazila level, UNO organized the Ifter party and have ifter with them. They normally could not get the scope to sit in the chair-table before UNO, DC, political leaders and member of civil society. On EID day, the rehabilitated persons have been invited to have food with Deputy Commissioner and Upazila Nirbahi Officer. This is the way to share of enjoyment and happiness of eid with poor people.

4.2.7 Findings

From the analysis, it is crystal clear that they are using their latent productive power which was unutilized beforehand. Now they are exploiting their inherent capability to produce goods and services to lead their lives. The data shows that their average income is above 164 taka which is equivalent to US\$ 2. World

Bank defines US\$ 2 is above poverty line (hardcore). So, they are now above poverty line. With increased income their social identification has been changed, they are now called small businessmen, entrepreneurs, self dependant activists nor beggars. They have keys to enhance their status like productive power, farms, business, bank balance what not. Somebody has to invite cordially to feed them. They are getting equitable treatment in government and non government office, schools and hospital. There is no humiliation from any corner. Government good looks upon them. Finally the study shows:

- (a) Their productivity has been increased;
- (b) Their social dignity has been enhanced ;

4.2.8 Challenges

Although the rehabilitation initiatives have enhanced their productive capacity and social dignity, still there is few challenge to make the initiatives perfect and successful one. Few challenges are described below:

- To be included in social safety net protection and materials, new beggars are created;
- Few habitual beggars eat materials, sell, destroy and demand financial help repeatedly;
- Beggars have tendency to migrate from one district to another district;
- They change the style of begging for example they seek help for treatment, for daughter's marriage, children's educational expenses etc.;
- People who donate beggars normally, frequently and unplanned way, they are not interested to donate in bank account or in a certain places or accumulate at home and give it in planned way to promote at least one family;
- Shortage of people for monitoring exclusively;
- A lots of GO-NGO organization work for poverty alleviation but they don't work for beggars rehabilitation;
- There is no VGD, EGPP, activities of Ekti Bari Ekti Khamar to address the beggars who live in urban area;

5. Conclusion and Recommendations

5.1. Conclusion

From the above discussions it can be said that the study has found positive change. Although some of their income has been reduced but their present income is being earned by exploiting their potential productive power which was dormant. The satisfaction and happiness is more at their hard earned income than begging income. From collected data it is found that average income is 164 taka which is equivalent to 2 US\$ that is above hardcore poverty line determined by World Bank. In case of social dignity, the study found that they have grown self realization, self actualization, self prestige. Because before rehabilitation they would go to other's home, party to have meal without invitation. Sometimes they were humiliated, but after rehabilitation they don't go to other's home, now they sit in the chair-table like other invited guests. People do not call them beggar. Access to government office has been increased, they are getting quick and hassle free service.

5.2. Recommendations and ways to implement the recommendations

On the basis of findings and challenges a set of recommendations and ways to implement the recommendations are discussed in the following way:

SL	Recommendations	The Ways to Implement
1	SMART action plan to be undertaken by individuals or organization (IAP or Team action plan) to rehabilitate at least on beggar family	Including annual performance agreement of organizations as well as individuals can implement.
2	Rules, Regulations, Policies should be relaxed for beggars to include all and give more protections	Verifying the necessity/ground reality concerned Ministry, Division and Directorate can do it
3	Social Safety Net Protections like VGD, EGPP, EBK etc. to be incorporated in the municipal/urban area to achieve Vision20 21 and SDGs 2030	Preparing a database Municipalities or City Corporation can do it. Allocation by the government may be needed at the initial stage.
4	Allocate home and give khas land for homeless and landless beggars respectively	Giving settlement of khas land or setting up multi-storied building Ashrayan-2 project can
5	Give priority to the beggars in all poverty alleviation programs	Preparing database of beggars and poor categorically
6	Beggars rehabilitation can be an indicator for performance evaluation of elected representatives	A certificate is to be placed which contains no more beggar is in his constituency
7	Involve NGOs for rehabilitation of beggars	Making precondition to get permission
8	Ensure monitoring by GO-NGO combined efforts	Sending monthly report to the higher authority
9	Take legal action for professional beggars	Conducting mobile court
10	Integrate begging parents with their sons	Through motivation and legal action
11	Stop child marriage, dowry, violence against women and drug addiction	Creating awareness, motivation and legal action as situation demands

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The Socio-economic background of Bangladesh Civil Service (Administration) Cadre Officials

Dr. Rahima Khaton¹, Md. Mahmudul Hoque² and Paritosh Chandra Das³

Abstract

This study explores some of major developments and trends in the socioeconomic background of Bangladesh Civil Service (Administration) Cadre officials during 1990 to 2017. In this respect, the socio-economic background of the Bangladesh Civil Service (Administration) cadre officers who underwent the Law and Administration Course organized by Bangladesh Civil Service Administration Academy have been taken into consideration to understand their socio-economic background. This study found that BCS (Administration) cadre officials are highly educated and come from highly educated family as well. A positive trend is observed in the socio-economic background of BCS (Administration) cadre officials.

Keywords: Bangladesh Civil Service, Socio-economic background, BCS (Administration) cadre.

Introduction

Bangladesh Civil Service (BCS) is emerged from the former Civil Service of Pakistan (CSP) and Indian Civil Service (ICS). The Indian Civil Servants were from landlord class or privileged urban society with their educational system in western style (Alam 2009). The CSP officers were also educated and cultured in western style. Following the tradition of British-Indian Civil Servants, the CSP officers were isolated from the people and they were considered as elite group. Due to the elitism of CSP officers, people are deprived to avail their service properly. The socio-economic status of the ICS officers was also high (Jahan 2007). In the beginning of BCS, most of the officers were from CSP and EPCS officers and their socio-economic level were high as well. In this way, the bureaucratic elitism in Bangladesh inherited a transformed version of the British colonial administrative legacy (Zafarullah 2007).

Moreover, the ICS was mainly dominated by men. Women participation were totally absent in the ICS upto 1935 (Jahan 2007). In the Civil Service of Pakistan, women recruitment are considered only for four services, namely 1) Audit and Accounts Service, 2) Railway Accounts Service, 3) Military Accounts Service and 4) Income Tax and Postal Services. It was believed that females were not appropriate for field level or administrative cadres to perform field visit and inspection, maintain law and order situation and to collect revenue. It was also found that the women representation in the entry level of BCS (Administration) cadre were poor (Sultana 2017). In Bangladesh Civil Service Government has taken lots of initiatives to promote the female in the civil service. So, it is important to know what is the present situation of women involvement in the BCS.

At present, the BCS cadre officers are Bangladeshi and their socio-economic background was not studied too much. Only the socio-economic background of civil servants of Bangladesh has been studied up to the year of 1990 (Alam 2009). After that no attempts were taken to find out the socio-economic status of BCS officials so far. Bangladesh now has become a lower middle-income country due to its constant economic growth since 2000. It seems interesting looking into the socio-economic background of recent recruits (after 2000) in order to properly understand the developments and the trends.

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Among the all cadre services, BCS (Administration) cadre is one of the leading services. The history and traditions of BCS (Administration) cadre go back to the British colonial period as well. Furthermore, the BCS (Administration) Cadre Officers hold important positions in the Secretariate as well as in the field administration. So, it is very important to find out the socio-economic background of BCS (Administration) Cadre officials.

As the career is the intersection of the societal history and individual biography (Grandjean 1981), in this research we have studied the male-female ratio, the religion, rural-urban background, educational background, parents education and occupation, siblings education and profession, parents income, household income of BCS (Administration) cadre officials.

Objectives of the Study

The objective of this study is to understand the developments and trends of the socio-economic background of BCS (Administration) cadre officers.

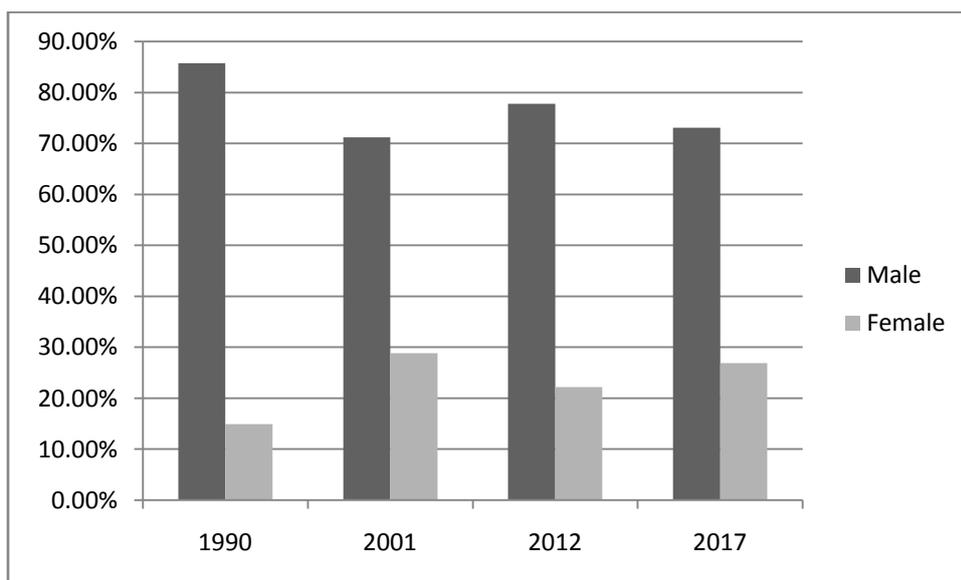
Methodology

This study takes the quantitative research approach within the context of socio-economic condition of BCS (Administration) cadre officers. Data was collected from the records of Bangladesh Civil Service Administration Academy as almost all of the BCS (Administration) cadre officials have received Law and Administration training from this Academy. The socio-economic information of the BCS (Administration) cadre officers was taken from the year of 2000 to 2017. Sex, area of living, family income status, length of study, area of study/faculty, type of institution s/he studied, religion etc were collected from the registration form of the Law and Administration Course conducted by the BCS Administration Academy. The Collected data was design in a time series to understand the trends. The data was also compared with the findings what Alam & Rahman (1993) found. The analysis helps us to understand the trends as well as to make comparisons. The data of 59 officers of 40-42nd Law and Administration Course held on 2000-2001 are treated as data of 2001. The data of 33 officers of 81-83rd Law and Administration Course held on 2012 are treated as the data of 2012. Moreover, the data of 108 officers of 98-101th Law and Administration course held on 2016-2017 are treated as the data of 2017. The socio-economic background of BCS (Administration) cadre officers studied by Alam and Rahman (1993) is considered as the data of 1990.

Results and Discussion

Male-Female ratio

Figure 1 indicates the male-female ratio of BCS (Administration) cadre officials in the year of 1990 to 2017. It is found that in the year of 1990 the male officers was 85.71% and the female officers are 14.92%. The scenario is changed in the year of 2001. After 10 years i.e in the year of 2001 female officers are significantly increased and it was achieved 28.8%. It is also observed that the percentage of female participants is approximately constant up to the year of 2017. Even though this trend is very positive for women empowerment and women participation in government decision making process, the ratio of female officers is not yet reasonable and satisfactory. Females are lagging behind in number in BCS (Administration) cadre service. Socio-economic development of Bangladesh cannot be achieved in the real sense without the strong participation of the female at the decision making activities. All types of conveniences and chances are needed to be delivered to ensure active participation of female in BCS (Administration) cadre service.



Sex	1990 (%)	2001(%)	2012(%)	2017(%)
Male	85.71	71.2	77.8	73.1
Female	14.92	28.8	22.2	26.9

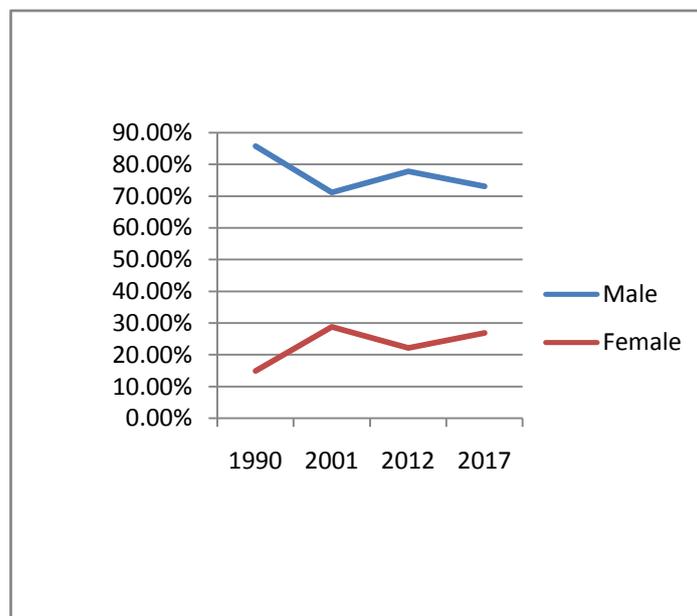


Figure 1: Male-female statistics of BCS (Administration) cadre officer

Religious background

Figure 2 shows the religion wise background of BCS (Administration) cadre officers. In 1990 the officers of 77.55% was Muslim and 22.45% was Hindu. In 2001 the officers of Muslim religion was 96.60% and Hindu religion was only 3.4% which is reduced drastically. In 2012 and 2017 the officer of Hindu religion is again increased. Except the Muslim and Hindu religion the participation of other religions are 0% in the year of 1990 to 2012. In 2017 the other religion officers are found as 2.8%. It is found that the Muslim religion officers are much more in number than that of Hindu religion in BCS (Administration) cadre service due to the majority of the Muslim population in Bangladesh.

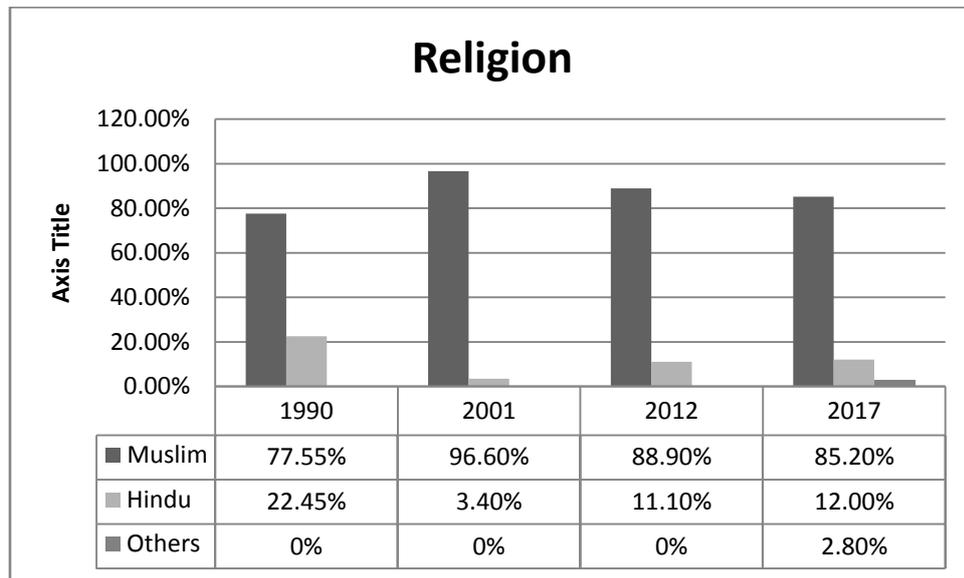


Figure 2: Religion wise statistics of BCS(Administration) cadre officers

Division-wise background

Bangladesh is divided into eight divisions and 64 districts (Government of the People's Republic of Bangladesh 2016). How many officers are coming from which division and which division's populations are prominent in BCS (Administration) cadre is studied. Table 1 shows the division wise background of BCS (Administration) Cadre officers. It is found that in 2001 the maximum 28.8%, in 2012 maximum 31.7% officers and in 2017 maximum 30.6% officers are from Dhaka division. In 2001 the second highest percent of officers

		Year					
		2001		2012		2017	
		Count	Total %	Count	Total %	Count	Total %
Division	Dhaka	17	28.8%	20	31.7%	33	30.6%
	Chittagong	10	16.9%	11	17.5%	23	21.3%
	Khulna	6	10.2%	14	22.2%	12	11.1%
	Rajshahi	3	5.1%	2	3.2%	17	15.7%
	Sylhet	3	5.1%	0	0.0%	4	3.7%
	Barishal	6	10.2%	1	1.6%	6	5.6%
	Rangpur	5	8.5%	9	14.3%	8	7.4%
	Mymensingh	9	15.3%	6	9.5%	5	4.6%

Table:1 Division –wise background of BCS (Administration) cadre officers

Officers are from Chittagong division. In 2012 the second highest percent of officers are from Khulna division which is 22.2% and in 2017 the second highest percent of officers are from Chittagong division which is 21.3%. In 2001-2017 the minimum percent of officers are from Sylhet division which is 5.1%, 0% and 3.7% in 2001, 2012 and 2017 respectively. Besides, in 2001 about 10.2% officers are from Khulna division, in 2012 about 17.5% and 14.3% officers are from Chittagong and Rangpur division, respectively. In 2017 about 15.7% officers are from Rajshahi division. It indicates that people from Dhaka division are comparatively most interested to the BCS (Administration) cadre service and people of Sylhet division are not interested to the BCS (Administration) cadre service.

Urban-rural background

The urban rural background of BCS (Administration) cadre officers has been studied. The officer from Upazilasadar, Pouroshova, City corporation and District sadar is considered as officer from urban area and

otherwise it is considered as rural area. Figure 3 shows the urban-rural statistics of BCS (Administration) cadre officers. It is found that 73.47% officers are from urban and 24.49% officers are from rural area in 1990. In 2001 urban officers are drastically reduced to 52.50% and the rural officers are significantly increased to 47.50%. After that upto 2017 the urban and rural ratio are approximately constant. From 2001 to 2017 the average urban and rural officers are 54.13% and 45.87% respectively. It is very significance because the officers from the rural area are very near to 50% means the rural development is expanding day by day. This is very significant and fundamental change of the officers compared to 1990.

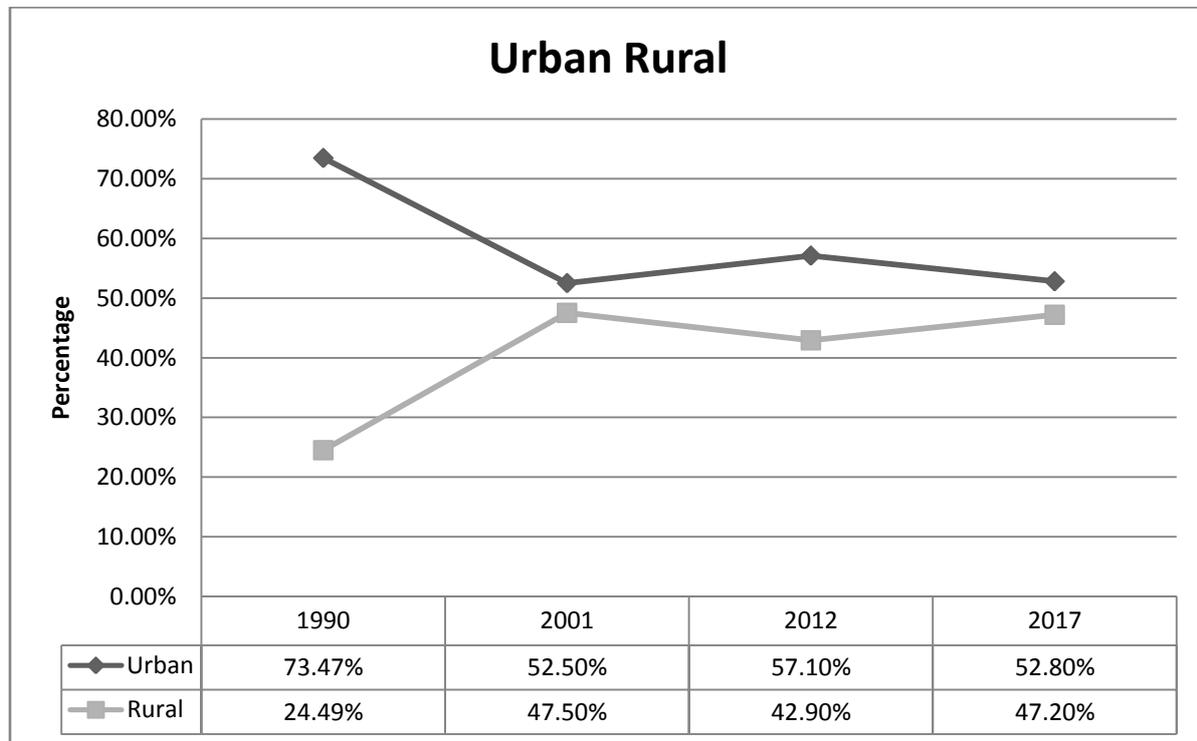


Figure 3: Urban-rural statistics of BCS(Administration) cadre officers

Educational background

The educational background of BCS (Administration) cadre officers has been studied. Figure 4&Figure 5 indicate the educational background of BCS (Administration) cadre officers. It is found that from the year of 1990 to 2017 highest educational levels of the officers is master and about 70-85 % officers are master degree holder. In 1990 only 8.16% officers are degree pass and in the year of 2012 and 2017 there is no degree pass officer. The percentage of masters pass officers is increased with the passes of time. Therefore, it is understood that officers of BCS (Administration) cadre are highly educated and the education level is maintained continuously.

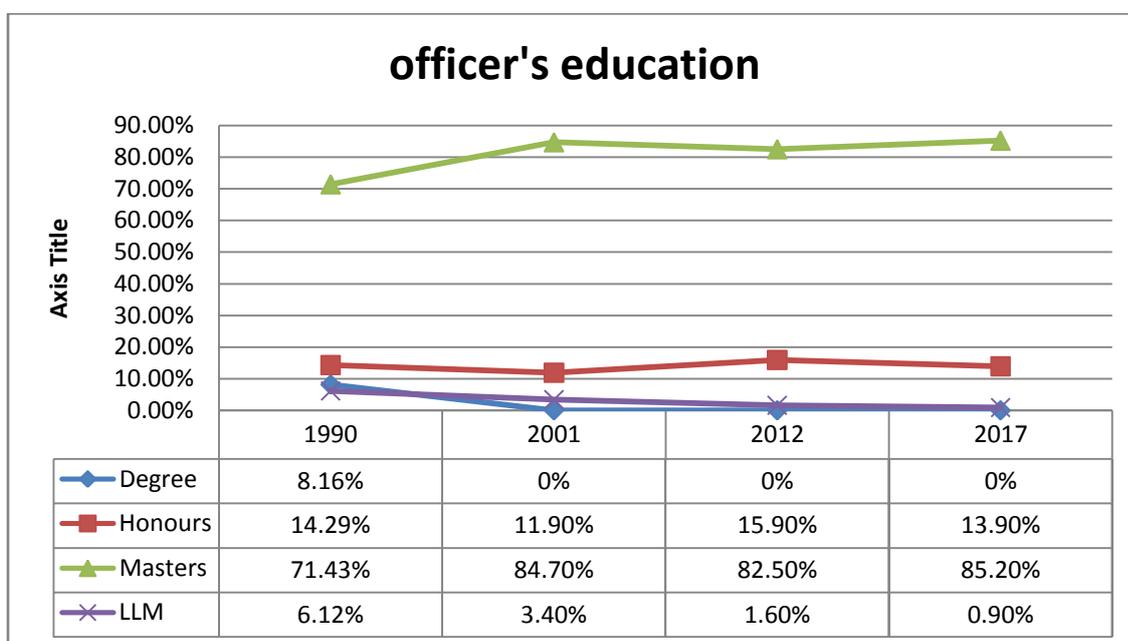
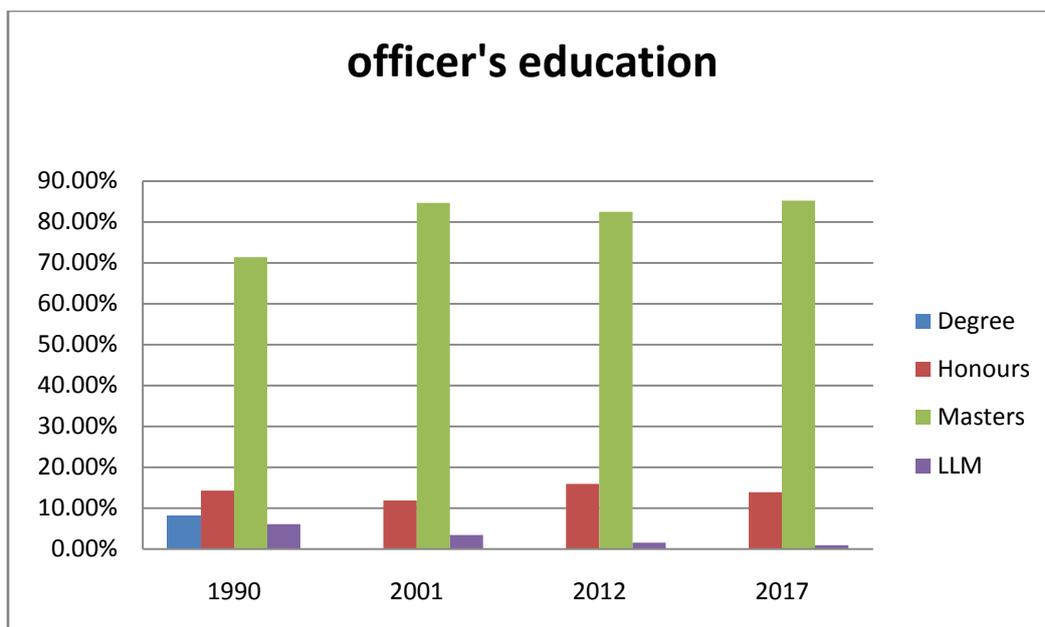


Figure 4: Educational statistic of BCS (Administration) cadre officers

Faculty-wise background

The faculty wise background of BCS (Administration) cadre officers has been studied. Here science faculty include the department of pure science, applied science, medical science, engineering and agriculture; art faculty means department of Bangla, English, General History, Islamic History, Sociology, Social Welfare and Commerce faculty means Department of Economics, Management, Accounting. Figure 5 indicates the faculty wise background of BCS (Administration) cadre officers. In 1990 officers from the art faculty was maximum with the percentage of 76.81% and from the science faculty it was only 13.4%. After 10 years this ratio becomes just opposite of 1990. That is, in the year of 2001 officers from the science faculty was 74.6% and officers from the art faculty was only 16.9%. Afterwards, in the year of 2012 and 2017 maximum officers are from the science faculty and the percentage of the officers is also significant. Over the sixteen years this trend is maintained. In the year of 2001 to 2017 the average percentage of the officers from the science faculty was 73.4% and that of from arts faculty was 19.75%.

Compare to year of 1990 it is just opposite indicating a significant change. Further research is needed to find out the reason. Therefore, the science faculty students are most interested to the BCS (Administration) cadre service.

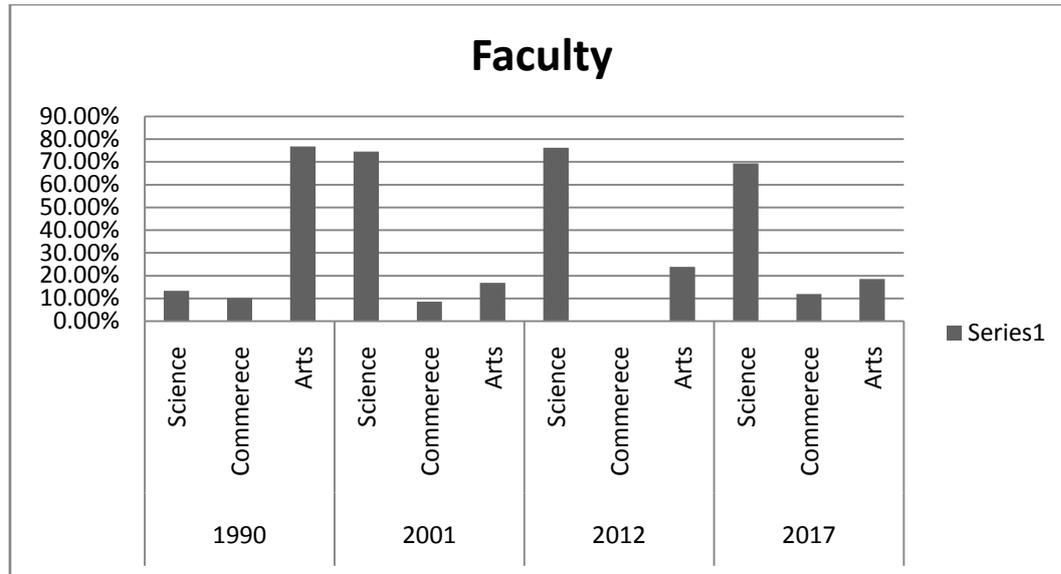


Figure 5: Faculty wise background of BCS (Administration) cadre officers

University –wise background

Due to the limitation of the availability of data the University wise background is studied only for the year of 2017. Figure 6 and 7 show the University wise background of the officers. It is observed that 88% officers are from Public University. Among the Public Universities, maximum officers are from Dhaka University.

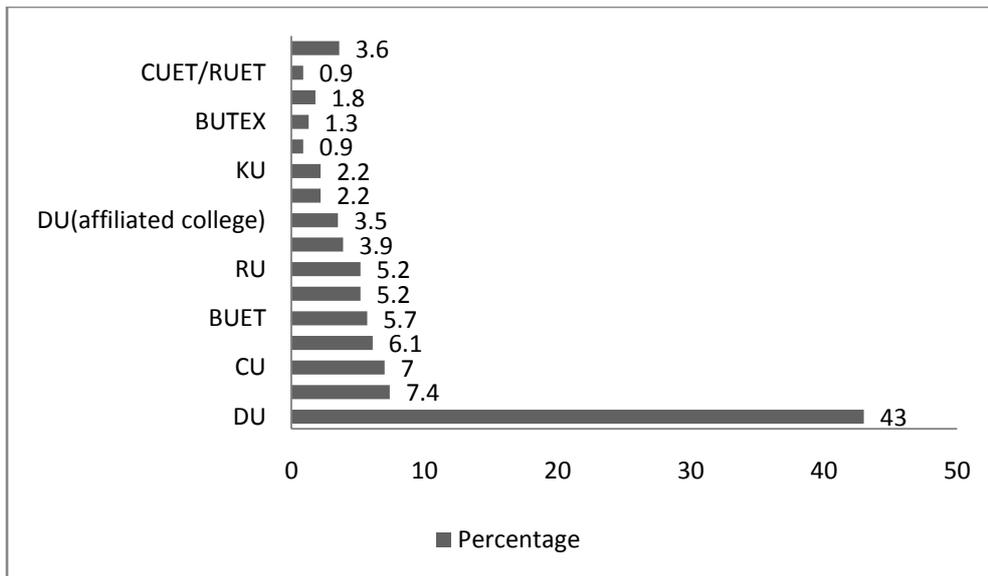


Figure6: University wise background of BCS (Administration) cadre officers

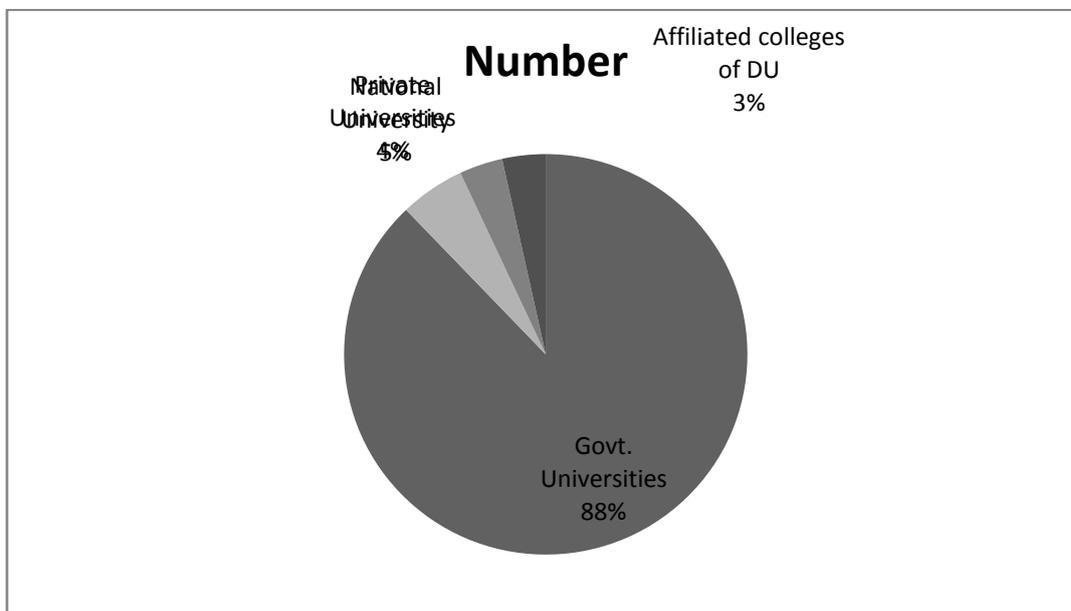


Figure 7: Pie chart of University wise background of BCS (Administration) cadre officers

Father's educational background

The BCS (Administration) cadre officer's father's educational background has been studied. Figure 8 shows the officer's father's educational qualification from the year of 1990 to 2017. In 1990 only 2.01% officers fathers are master pass whereas in 2017 about 21.3% officers father are master pass. In 2017 it is also found that 26.90% officer's fathers are degree pass, 18.50% are higher secondary pass, 18.50% are high school pass and only 2.8% are primary passed. In 1990 degree pass officer's father was 16.58%, higher secondary pass was 11.56%, high school pass was 37.19% and primary pass was 10.50%. It is found that from 1990 to 2017, the percentage of primary pass father is reduced and the percentage of

master pass father is increased significantly. So, it reflects that the educational qualification of officer's father is become higher with the passes of time. It means BCS (Administration) cadre officers are from educated family.

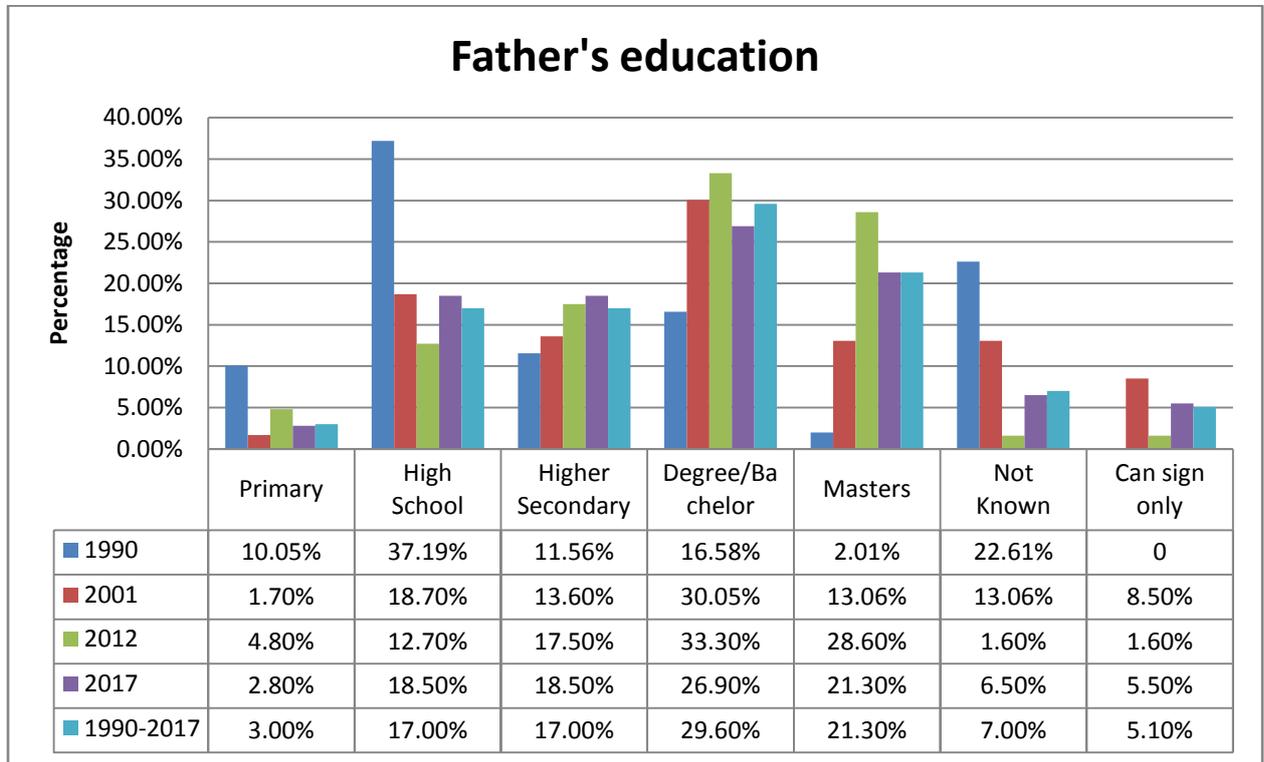


Figure 8: Father's educational background of BCS (Administration) cadre officers

Father's occupation

The BCS (Administration) cadre officer's father's occupation has been studied in the year of 1990 to 2017. Figure 9 shows the BCS (Administration) cadre officer's father occupational status. It is found that 40.00% officers father are government official, 8.00% are school, college and university teacher, 12.00% are businessman, 8.00% are Lawyer and 32.00% are Land owner or farmer in 1990. It indicates that in 1990 the BCS (Administration) cadre official's fathers are mostly government officials. On the other hand, after twenty seven years 23.90% officers fathers are government officials, 10.40% are school, college and university teacher, 15.60% are businessman, 9.40% are land owner and 3.1% are lawyer in 2017. Compare to the father's profession in 1990 with that of 2017 it is found that even though the percentage of officer's father's profession as a Government officials is maximum the percentage is reduced significantly. On the other hand, the percentage of farmer is reduced significantly as well.

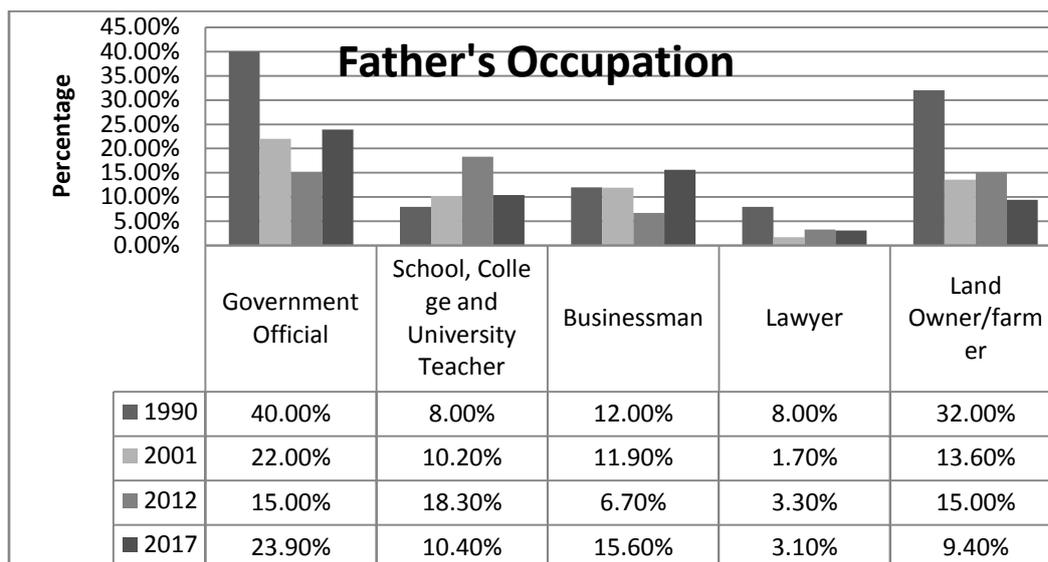


Figure 9: Statistic of BCS (Administration) cadre officials father's occupation

Mother's educational background

The BCS (Administration) cadre official's mother's educational background has been studied from the year 1990 to 2017. Figure 10 shows the mothers educational background of BCS (Administration) cadre officers. It is found that most of the mother is High School pass in 1990 & 2001. There is no master or degree pass mother in the year of 1990. After that the percentage of the master and degree pass mother is increased in the year of 2012 and 2017. It means officers mothers become more educated with the passes of time.

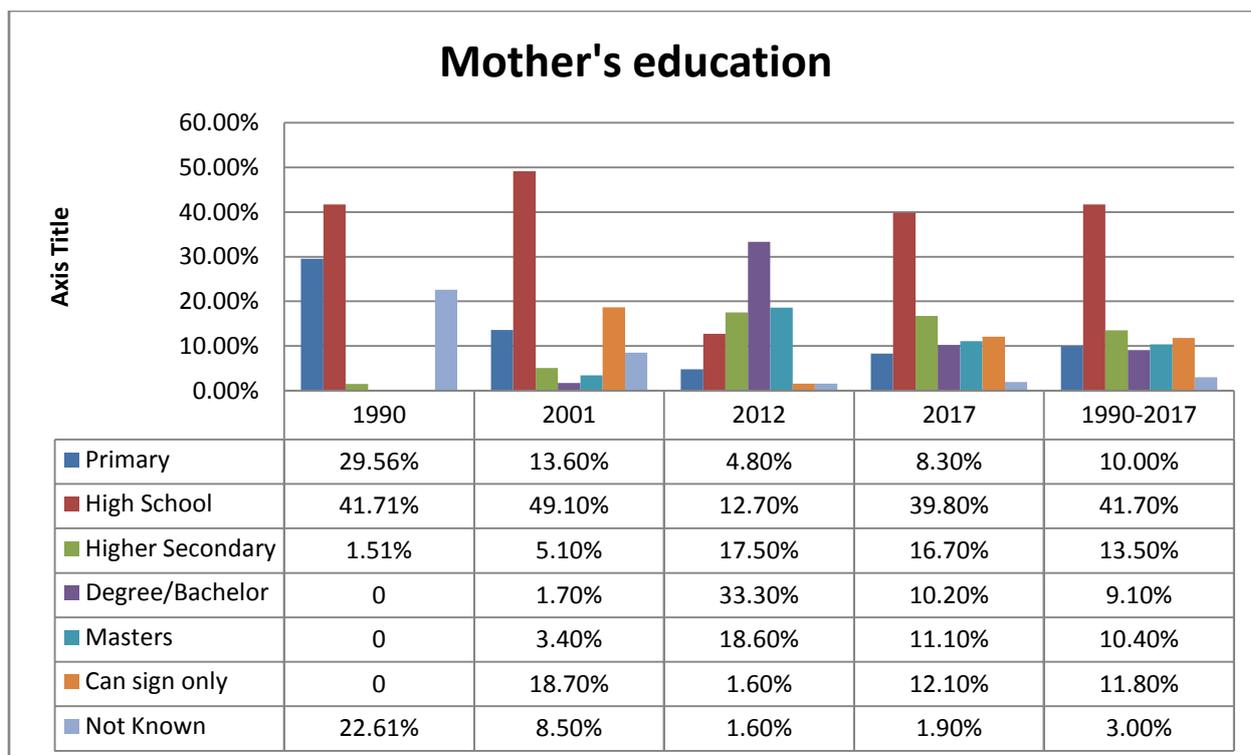


Figure 10: Statistics of BCS (Administration) cadre official's mother's educational background

Mother's occupation

Figure 11 and 12 show the BCS (Administration) cadre officials' mother's occupation. It is found that from 1990 to 2017 most of the mothers' profession is housewife. It is also found that the number of service holder mothers is increased gradually with the passes of time. From 2001 to 2017 the average 87.8% mother's profession is housewife, 4.3% school teacher, 2.2% government employee, 2.2% college teacher, 1.3% private service holder, 0.9% is BCS cadre, 0.4% is doctor and 0.4% is researcher.

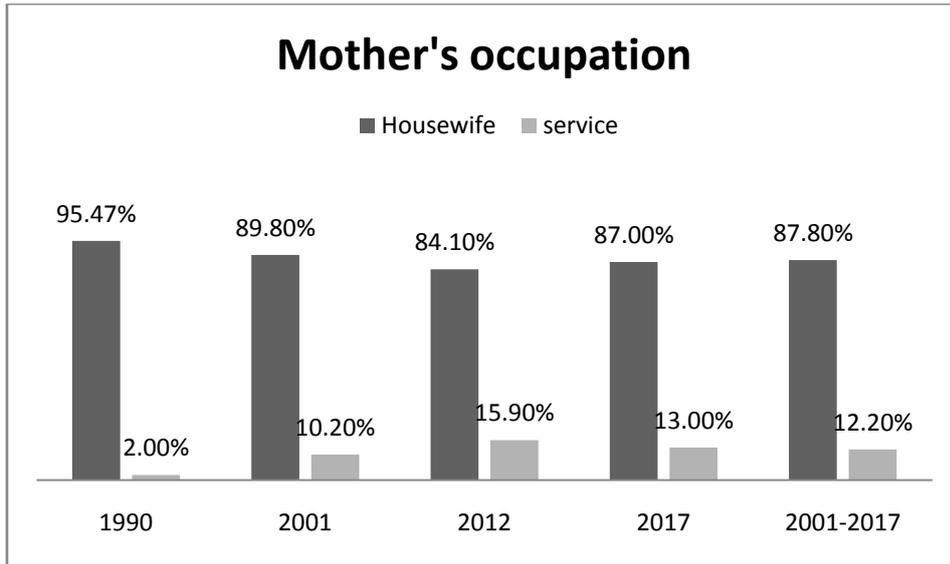


Figure 11: Statistics of BCS (Administration) cadre officials mother's occupation from the year of 1990 to 2017

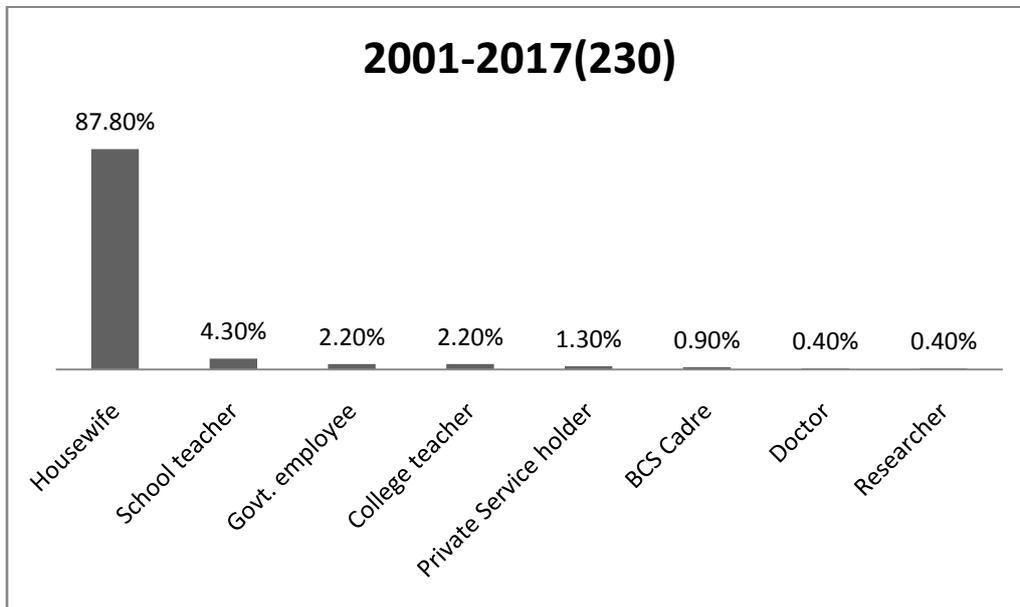


Figure 12: Statistics of BCS (Administration) cadre official's mother's occupation from the year of 2001 to 2017

Educational qualification of siblings

Figure 13 indicates the statistics of siblings educational background. In the year of 1990 maximum siblings educational background was secondary (28.8%) whereas in the year of 2017 maximum siblings were post graduated (43.60%). Compare to 1990 to that of 2017 the siblings are more educated in the year of 2017.

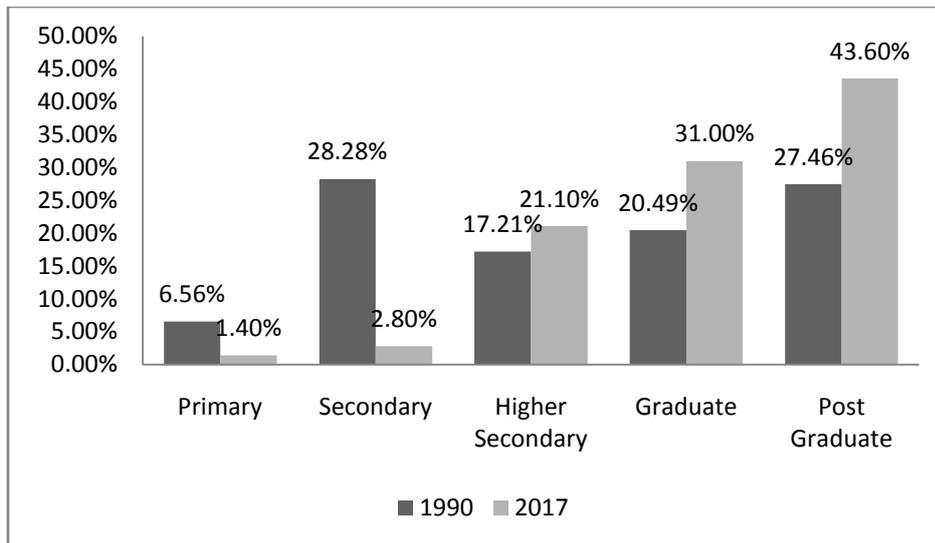
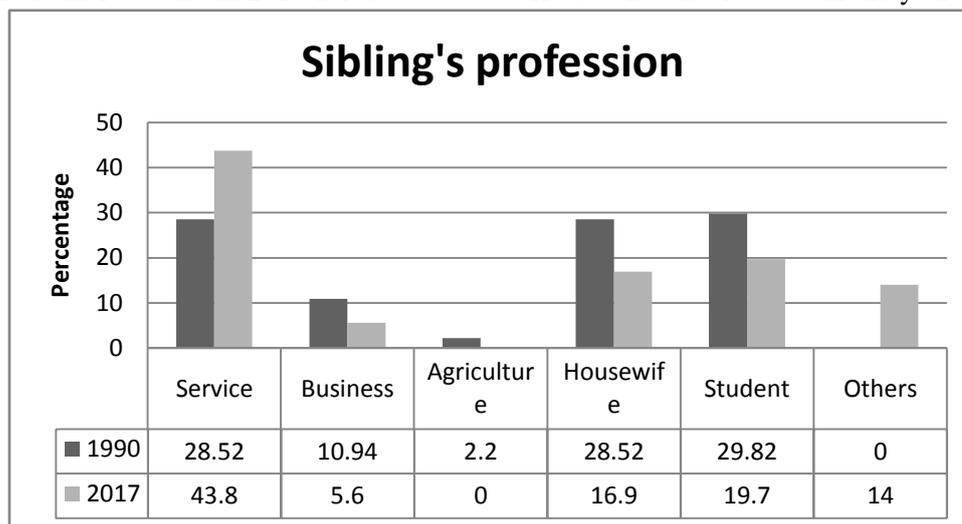


Figure 13: Statistics of sibling's educational background

Sibling's profession

Figure 14 shows the statistics of sibling's occupation. 28.52% siblings are service holder in 1990, whereas 43.8% siblings are service holder in 2017. Service holder siblings are increased significantly because in 1990 maximum percent (29.82%) of siblings were student and after twenty seven years these student become service holder. In the case of Agriculture profession only 2.2% sibling's occupation was agriculture in 1990 and in 2017 it reduces to 0%. Housewife also reduces in the year of 2017 compare to



1990.

Figure 14: Statistics of sibling's occupation

Father's income

Figure 15 and 16 show the statistics of father's income. In the year of 2017 only 46% officers father income was in the range of 10,000-30,000/- , 23% officers father income was up to 10,000/- and 8% officers father income was more than and/or equal to 50,000/- per month. In the year of 1990, 63.82% officer's father's income was 0 to 5000/- per month. If we compare the father's income in the year of 1990 with that of 2017 we find that father's income is drastically increased. It means the economic condition of our country is increased significantly.

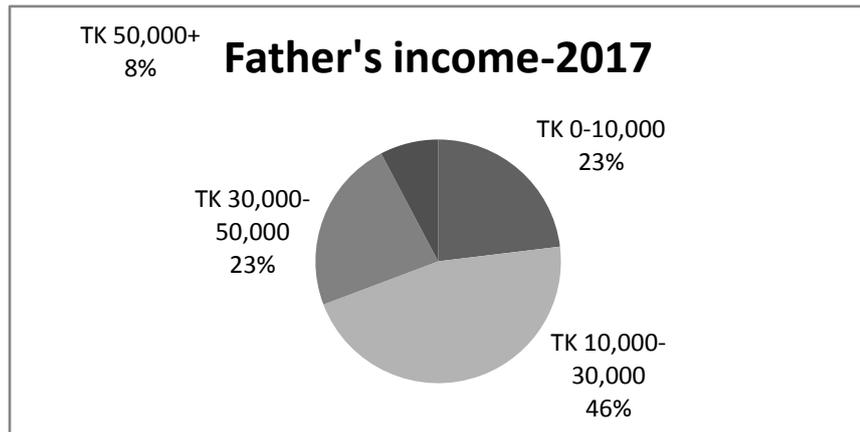


Figure 15: Statistics of father's income in the year of 2017

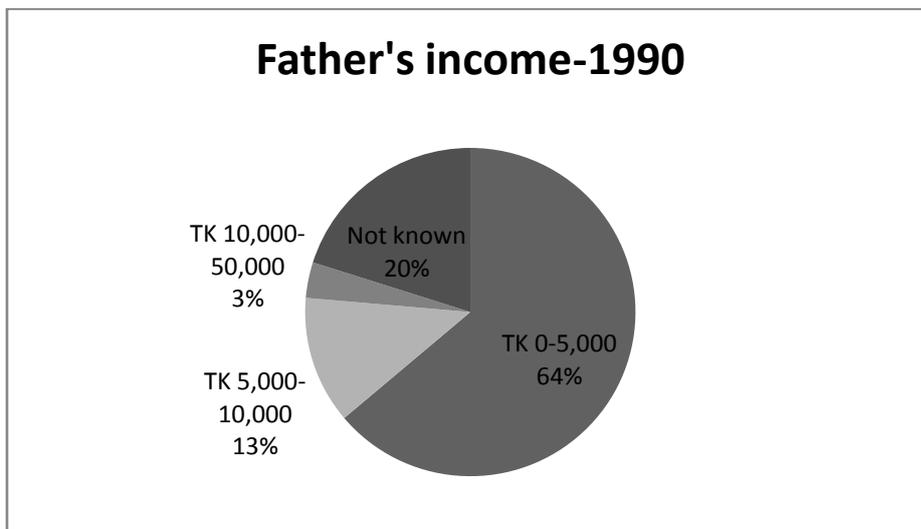


Figure 16: Statistics of father's income in the year of 1990

Household income

Figure 17 indicates the statistics of household income. If we consider the household income of the officers in the year of 2017 we found that 29.3% household income was 10,000-30,000/-taka, 25.1% household income was 30,000-50,000/-, 21% household income was 50,000-1,00,000/- per month and a significant percentage of 24.6% household income was equal to or more than Tk 1,00,000/-. It means the economic condition of the officers family is far better than that of the 1990.

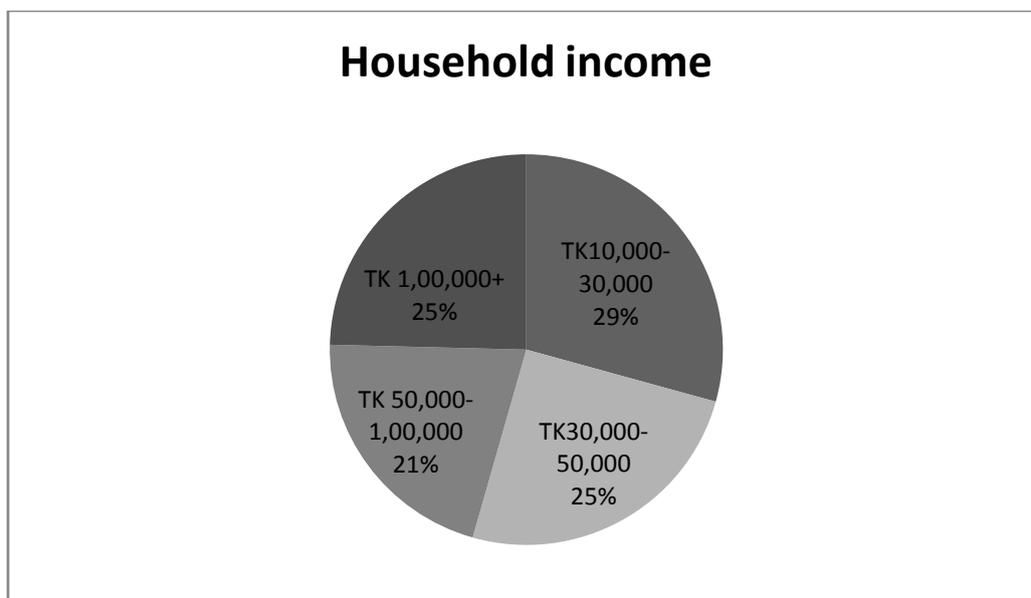


Figure 17: Statistics of household income of BCS (Administration) cadre officer in the year of 2017

Conclusions

BCS (Administration) cadre officers play the vital role to run the government smoothly. That's why the study of the socio-economic background of BCS (Administration) cadre officers is most important. This study explores the socio-economic background of BCS (Administration) cadre officers in the recent years and compares the socio-economic background with that of 1990 to find out changing trends. From this study, it is found that female participation in civil service is increased significantly. Most of the officers came from Dhaka division and the least from Sylhet division. Officers having rural background are increased significantly and the ratio of the participation of urban-rural area is almost 1:1. Officers are highly educated and many officers are master degree holders. From the year of 2001 to 2017 it is found that most of the officers are from science faculty which was just opposite in the year of 1990. It is also found that most of the officers are from University of Dhaka. The officer's father's educational level is also become higher in compare to that of the 1990 and master or degree pass father was also significant in number. The study also reflects that in 1990 most of the officers father's occupation was government service. In 2017 even though maximum percent of officers father is government service holder, the percentage is reduced and their occupation was diversify with different other occupation like business, teaching etc. But the farmer profession is significantly reduced in the year of 2017 in compare to 1990. Even though the educational level of officer's mother is increased, most of them are housewife. The sibling's educational level is also increased and most of the siblings are service holder. The sibling's educational level also increased. The officer's father's income as well as household income also increased significantly. Hence, a positive trend is observed in the socio-economic background of BCS (Administration) cadre officials.

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ICTs and Productivity for Socio-economic Growth

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Keywords: ICTs, e-service, productivity-function, socio-economic, growth, infrastructure.

List of Abbreviations

GDP	Gross Domestic Production
ICTs	Information Communication Technologies
LDC	Least Developed Country
OECD	Organization for Economic Cooperation and Development
UN	United Nations
WB	The World Bank

Abstract

Government of Bangladesh has set the mission of “Digital Bangladesh” with the philosophy of effective and constructive utilization of modern information communication technologies in policy formulation and in development programmes implementation activities with various dimensions. “Digital Bangladesh” significantly includes all classes of people and does not differentiate people in terms of technology. Moreover, the mission poses a vision of an efficient, transparent and accountable state by transforming the people into knowledge based society, to establish a pro-poor people driven effective government is also the dream of Bangladesh for ultimate socio-economic development of the people.

In this respect, all the world leaders and UN organization come to an end discussion that the ICTs sector such as ICT industries and ICTs orientated service sectors can be the most significant actor to reduce poverty from the world. These sectors have the potentiality to create a new field of the job market both direct and indirect income generation. This innovative job market will change the livelihood approach of the poor in the developing countries. Moreover, the use of ICTs as a tool for intervening e-services throughout the government and private sectors can change the scenario of total facts of the service delivery to the people and the innovative reforms in the policy formulation and implementation states. These acts of ICTs can enhance the socio-economic development of the poor.

ICTs and e-service² must be not the principal mechanism rather can be the catalyst or an enabler to the sustainable socio-economic development. The foremost concerns in this framework are policy reform, infrastructure development and capacity and capability enhancement of the government and the citizen as well for perfect openness, effective accessibility, steadiness, and affordability in the field of service delivery.

The direct co-relation of ICTs intervention in the economy is shown by a very simple equation. This is the very famous and mostly used Cobb-Douglas equation of productivity. Besides this, we may find some results of previous studies that showed the positive impact of ICTs in the firm level and in the whole macroeconomic situations.

1.1 Infrastructure development to use ICTs and e-service effectively

ICT is embedded in networks and services that networks can be gather and disseminate various public and private information in the national and international spaces for establishing knowledge based society to enhance economic growths and social development, as well. There is a significant discrepancy between e-governance in developed and developing countries in the accessibility of ICTs infrastructure. It is known that developing countries have a relatively poor ICT infrastructures use in the public sector. This infrastructural limitation makes the hindrance of the citizens` easy access to the network but also barred the effective dissemination of information from and to the government. Hudson discusses the potential ICTs can contribute to the poverty reduction of the state, but there must be other factors and also need to finance in other types of infrastructural development such as the roads, highways, waterways, railways, even the energy and water supply structure to enhance the development process along with the intervention of the

² The World Bank Report-2006 defined “e-service” as the service delivery to people by means of electronic medium. Basically the service by the use of ICTs devices(Radio, TV, Internet or Mobile devices) that poses the correlation of both way interaction of both the recipient and the provider. It intervened in the governance for efficient, effective and transparent public service delivery to people, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions. <http://web.worldbank.org/7>

ICTs, (Hudson, 2001). Policy maker in the governments and development organizations should focus on both conventional and current ICTs infrastructural development to overcome the social and economic disadvantages as well as poverty eradication, (Ssewanyana, 2007). Cecchini & Scott suggested that obligation of infrastructural improvement is not the only requirement for the easy and cost effective access to the ICTs but, the capabilities and the efficiency of institutes should execute ICTs based programs to give the potentiality of ICTs for the disadvantaged group of the society.

One of the significant prospects of the economic activities is defined by the term productivity. It is the edge of the wealth of a firm and for a country as well. Productivity may be positive or negative. When an economic project has taken ultimate result depends upon its productivity that indicates the future of the project. The ratio of the production means the ratio of the produced output of a mechanism or economic activities and the production input measures productivity. It shows the actual efficiency of the production procedures. In case of the national productivity of the economic activities, a positive productivity indicates the growth rising, more income that means the purchasing power of the people and spending money for up gradation of livelihood approaches. Moreover, it indicates that the people as well as the nation can afford more for their socio-economic development such as quality health, housing, food, and education and socio-economic measures.

Technology that effects positively the factors of production such as land, labour capital, materials and energy and reduces the risks of production are defined the productivity. Improving technologies and this case ICTs are one of the most potential productivity of the 21st century. ICTs have the potentiality to reduce different risks of production factors and can enhance the productivity and economic growth as well. Economic growth can be defined with the combination of productivity and augment of GDP³, (Kretschmer T., 2012).

Stiroh econometrically analyzed the impact of ICTs on productivity. He showed the addition of unchanging factors responsible for the estimation of the productivity by using ICTs, (Stiroh,2005). Moreover, some other researchers stated that the consequence of investment in ICT sector is mentionable but the total effectiveness depends upon other factors such as other resources for the production, market environment and also upon the economic circumstances such as macro and microeconomic situations, (Melville et al. 2004). Generation to generation the world is growing up with a significant economic growth. The productivity of the newer generation is the key secrets of the economic growth as the new generation is more productive than the old one. Likewise the developed country is much richer than the developing countries as the economy of the former is more productive than the latter.

³ OECD Digital Economy Papers No. 195 Information and Communication Technologies and Productivity Growth, 2012

1.2 ICTs` Potentiality accounting

The technique of growth accounting is the basis of the significant document by Robert Solow on technical change and the aggregate production function that stated in 1957. Some other studies analyze the paper, (Barro, 1999, Aghion and Howitt, 2007). In this respect the OECD in 2003 stated that the growth accounting exercises with the modern technologies can donate a significant result of the economic growths by the output with an input. The productivity factors in the field of industrial sectors are being distinguished properly to measure ICT and non-ICT capital based productivity (OECD, 2003). There are many other scholars who worked on the growth accounting into a well-tested approach to measure the ICTs involvement that indicates the correlation between economic growth and productivity (Jorgenson et al., 2005b; Inklaar et al., 2005; Inklaar et al., 2008; van Ark et al., 2003).

In order to show a resultant index for the impact of technologies especially ICTs this index indicates the function of inputs such as capital, labour, time and technologies that implied for production. These factors should be measured perfectly to get appropriate results. To get a practical growth accounting equation Cobb-Douglas⁴ gave an appropriate function. This function is based on the ICTs and non ICTs input factors and a residual.

1.3 Inputs and Outputs: The Production Function

The ultimate economic factors of any economy is the output of the production activities from some of the inputs mainly the capital or investments, labour and services and raw materials.

There is a general function to correlate the inputs and the output, which is known as the production function that stated by Cobb-Douglas with a simple equation as follows:

$$Y = A F (K, N) \dots \dots \dots (1)$$

Y- Stands for output which also called real GNP.

K- Goes for the physical capital such as investment, plant and equipment, etc. and

N- Showed the labour includes the number of the worker and the hour of working.

A- Indicated the term productivity.

Thus, the equation shows that the output is the function of capital and labour productivity. Here the productivity can be defined as the level of output from the input. Higher productivity means the output might be higher from the same inputs. This change of the production factors is which rise the productivity mainly defined as the technological advancement. These technologies enhance the capability of the labour

⁴ **Cobb–Douglas production function** is a particular functional form of the production function, widely used to represent the technological relationship between the amounts of two or more inputs, particularly physical capital and labour, and the amount of output that can be produced by those inputs. The Cobb-Douglas form was developed and tested against statistical evidence by Charles Cobb and Paul Douglas during 1927–1947.

or develop the capacity of the machineries or the service could be developed by use modern technologies. In this study the technology concerned the ICTs mainly.

However, other than the inputs there are some factors, which may influence productivity, such as:

- (i) Technological advancement and intervention of innovative technologies-ICTs, renewable energy and modern equipments, advance life support mechanism and medicine, and so on,
- (ii) Skilled and capable labour forces,
- (iii) Communication infrastructures: roads and railways, waterways and airways, and so on.
- (iv) Environment and weather, and
- (v) The economic and legal policies of a country are also considerable factors to overall productivity.

1.4 The Output Elasticity of ICT Investment

To find the output elasticity of ICTs investment the productivity function (Equation-1) can be stated as following on firm level find the impact of ICTs on productivity in most simple way:

$$Y_x = A \times \alpha \text{ICT}_x \times \beta \text{NICT}_x \times \gamma L_x \dots \dots \dots (2)$$

Here firm i have the value of output Y. This firm has the input factors of labor (L), ICT capital (ICT) and non-ICT capital NICT).

If this equation is presented as the simple Cobb-Douglas function and the constant α x's are differ from one to another firm, then one can re-write the equation (2) as

$$Y_x = A \times \alpha \text{ICT}_x \times \beta \text{NICT}_x \times \gamma L_x \dots \dots \dots (3)$$

By the natural logarithms, the equation can be derived as follows:

$$\text{Log} Y_x = \text{Log} A + \alpha \text{log ICT}_x + \beta \text{log NICT}_x + \gamma \text{log L}_x \dots \dots \dots (4)$$

If the value of Y, ICT, NICT and L at any given time is given then the value of productivity A and the constant α can be found. Here A stands for technology level and α are elasticities of Y with respect to x (x = ICT, NICT, L).

Now if the α_1 stands as the elasticity of production (value added) of the of ICT capital and if $\alpha_1 > \alpha$, then it might be found that one-percent raise in ICT capital would raise in output by more than one percent. This situation of an economy is significantly showed the positive impact of ICT investment for overall economic growth.

So for the value of $\alpha_1 > \alpha$ (x = 2, 3), that might be show the more effective productivity increase ICT capital to the non-ICT capital and labour for accelerating the improvement of growth.

1.5 The Impact of ICT on Labour Intensity and Labour Productivity

From the derivation and simple explanation of the Cobb-Douglas equation or productivity function, it is clear that the technological up gradation especially the ICTs intervention might enhance the capacity of the firm or the productivity in some direct or indirect ways. Direct ways of the capacity may be in terms of cost effectiveness, capacity improvement of labour capability, and also cut of labour prices. Cost of the input may be lower by the intervention of ICTs. Moreover, ICTs reduce the cost of communication and service side of the firm. It also has an impact on the service and investment provision. ICTs also have some changeover effect on employment corresponding to the investment on it. It is thought that investment and thus advancement in the ICTs sectors enhance efficiency and capacity of the labour and on the other hand reduces the intensity of the labour, but consequently ICTs spread other types of direct and indirect job in the market. In both cases productivity increases significantly. In all respect the potentiality of ICTs investment can bring much better productivity than other capitals

1.6 ICTs Investment and Economic Growth

In developed and developing countries ICT is today's most potential mechanism for economic growth and a mother source of employment growth. But it's also enriching communities, society, and contributing to improved quality of life. These stated the evidences of the impact of ICTs in the economic and social livelihood of the people all over the world, especially in the OECD countries as they contributes larger investment in ICTs sectors for overall growth (Schreyer, et al., 2003). The large number of existing studies and findings has triggered a number of reviews as summarized in Table 1.1

Table-1.1: Findings of some previous studies of ICT capital and productivity.

Study	Method	Results
Brynjolfsson and Yang, (1996)	Written survey based on over 150 studies from 1980s to 1990s.	Describe and showed some of the controversial outcome of the studies on the impact of ICTs on productivity. Further they showed that such outcomes are because of inappropriate information and analytical methods.
Brynjolfsson and Hitt, (2000)	Literature survey.	The impact of the ICTs is dependent on the corresponding institutional investment.
Baily, (2012)	It's a research base on case study calculate average growth accounting and also the structural change.	This study found that the productivity growth in the 1990s is not only due to IT is potential, and other causes were free trade and globalization.
Dedrick <i>et al.</i> (2003)	Written survey on 19 firm level and 15 country level studies from 1987 to 2002.	The productivity through ICTs investment at firm level showed a significant growth as the investment is a complementary.
Melville <i>et al.</i> (2004)	Develop a model of IT business value added on resource based view to review the literature.	Investment in the ICTs has potential impact on the growth but it depends upon the level of complementary resources, competitive climate and general macroeconomic environment. On the other hand, better result may found where there is a harmonization between the technical and human ICT resources.
Stiroh, (2005)	Meta-analysis (20 studies from 1994-2002).	Study characteristics explain about 35% of the saturation in the ICT elasticities. Median elasticity at 0.046.
Draca <i>et al.</i> (2006)	Survey micro and macro literature.	Macro studies meanwhile show evidence of ICT impact. In micro studies the effect is larger than the neo-classical contribution would expect with an organisational harmonization.
Holt and Jamison, (2009)	Literature survey on broadband studies.	Broadband has positive impact, but cannot be measured with any precision.

On the other hand, the contribution of ICT investment and labour productivity can be found by reviewing some studies on the United States and the European Union. The outcomes are showed in Table 1.2. The contribution of ICT was the lowest in Europe before 1995 at only 17% of productivity growth. There was a peak contribution over 70% in the United States in between 1995-2000.

Table-1.2: ICT contribution to labour productivity form growth accounting.

Year	EU in %	Source	USA in %	Source
1990-1995	17%	van Ark <i>et al.</i> (2002)	36%	Jorgenson (2001)
1995-2000	42%	van Ark <i>et al.</i> (2002)	73%	Jorgenson <i>et al.</i> (2008), Oliner <i>et al.</i> (2007)
2000-2005	45%	van Ark and Inklaar, (2005)	43%	Jorgenson <i>et al.</i> (2008), Oliner <i>et al.</i> (2007)
2003-2007	31%	European Commission, (2010)		

From the table it can be stated that the US`s productivity slowdown in pre-1995 and the productivity growth was behind European levels. On the other hand, in period from 1995-2000, the US`s showed high productivity growth due to large investment in ICT. IT capital represents 1.1 percentage points of the 4.8% output growth during 1996-1999 and the TFP growth was 40% in IT producing sectors, (Oliner *et al.*, 1994).

Although Jorgenson (2005) recognized the role of ICT with an assumptions that ICT was accounted for 60% of the labour productivity growth rate. In addition, after 2000 ICT investment and productivity slowed, but remained strong compared to the pre-1995 period. Reduced TFP growth in ICT producing industries was partly offset by a rise of TFP in IT using service sectors, (Jorgenson, 2007). Some other studies summarized that due to continuous investment in ICT there was sustainable growth in the US (Gordon, 2003; Oliner *et al.*, 2007). On the other hand, since 1995 in the EU invested small level in ICTs and that caused a low level of productivity. This caused a differential with the US and that increased through the 2000s (van Ark and Inklaar, 2005). In this respect The World Bank publication stated that the impact of ICT investment for growth is profound because it creates opportunities across all segments of the economy and society. Private investors transferred approximately USD 100 billion to governments in developing countries from 1997 to 2008. The ICT sector generates annual revenues equivalent to around four per cent of gross domestic product. When indirect and downstream benefits are included, the impact on GDP growth could exceed 5% in some countries. For every 10% increase in high-speed Internet connections, the increase in economic growth developing countries is even higher, at 1.4%⁵.³⁸ The World Bank. (2010). However, Kretschmer, T. (2012) stated that the effect of ICTs on productivity is not only significant and positive, but also continuously show an upward trend over time; however, low performers cannot increase productivity through only ICT investment rather there is a need of harmonization in complementary organizational investments.

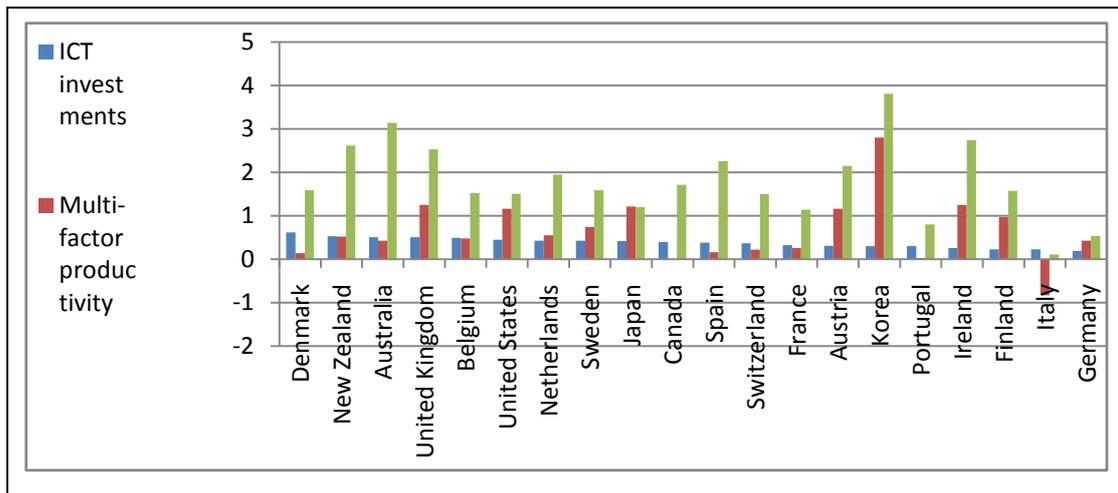
⁵ The World Bank. (2010). Information and Communication Technologies for Development. *Issue Brief*. Washington D.C.

It should be noted that investment in ICTs are not straight meaning of productivity. There should be something more to change and convert investment in some other manner. In this respect following table and graph stated by the OECD⁶ as key indicator of the scenario and ultimate impact of investment in ICTs sector upon the total productivity and GDP as well.

Table-1.3: Contributions of ICT investment to GDP growth, 2000-09. Annual average growth (%).

Investment Country wise	ICT investments	Multi-factor productivity	GDP growth
Denmark	0.62	0.14	1.59
New Zealand	0.53	0.52	2.62
Australia	0.51	0.43	3.14
United Kingdom	0.51	1.25	2.53
Belgium	0.49	0.48	1.52
United States	0.45	1.16	1.51
Netherlands	0.43	0.55	1.95
Sweden	0.43	0.74	1.59
Japan	0.42	1.21	1.2
Canada	0.4	0.01	1.71
Spain	0.38	0.16	2.26
Switzerland	0.37	0.22	1.5
France	0.32	0.26	1.14
Austria	0.31	1.16	2.15
Korea	0.3	2.8	3.81
Portugal	0.3	0.03	0.8
Ireland	0.26	1.25	2.74
Finland	0.23	0.97	1.57
Italy	0.23	-0.83	0.11
Germany	0.19	0.43	0.54

⁶ OECD (2011), *The Future of the Internet economy. A statistical profile. June 2011 update*, OECD, Paris. [<http://www.oecd.org/>]



Notes: Estimates are based on cost shares and hedonic prices.

Sources: OECD Productivity Database, June 2011.

These data table and graph stated as total productivity table of some of developed countries of different regions of the world. Here in most of the countries (except Italy), total productivity factor is increased with an increase in investment in ICT sector. So in that course, in most of the countries have a positive growth of GDP. This is notable that all the data of ICTs investment and its positive impacts are found from developed countries. This is because of the ICTs investments in the developing countries are very recent and the impact study are not very available yet.

1.7 Remarks

From the above discussion it can be assume that there is significant impact on productivity and growth of ICTs investment. The impact of ICTs in developed and developing countries are not at the same level. The impact in developed countries are very high than in developing countries. The potentiality of ICTs in both developed and developing countries and estimated the productivity and GDP growth by the input factors of ICT and non-ICT capital on the basis of the Cobb-Douglas productivity function.

One scholar Pohjola stated by the result of the study, who studied 39 different countries both developed and developing countries to find the correlation of ICTs in the field of GDP growth and productivity function. The study also suggested that an earlier period in 1980-1995, the impact of ICTs on human capital are not strong in both developed and developing countries, but another analysis of 23 OECD countries there found a strong evidence of positive impact of ICTs on growth, (Pohjola, 2000). The cause of the projection of lagging behind of the impact of ICTs in developing countries may explain by the matter that in developing countries investment in ICTs intervention is not enough and the capability of the

human capital are not sufficiently advanced as those are in developed countries. This may be due to the “digital divide” consequences in the developing countries⁷.

In addition, there are some good examples in some OECD countries about the impact of ICTs in the service sectors. It is found that the contribution of ICTs in the service sector is much greater than other sectors such as firm level manufacturing and trade. The major aspects of the ICTs are the communication and service delivery, which become easy and enhance the capacity of the organization to those activities. But there are still some difficulties in the developing countries for establishing the actual and effective ICTs intervention, though the governments are investing more and more to build the ICTs infrastructure.

⁷ Information Technology and Economic Growth: A Cross-Country Analysis; UNU/WIDER Working paper No 173.

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Public Policy Analysis: A Critical Overview

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Abstract

This paper investigates the concept of public policy analysis that has been developed and refined over the past 50 years. Its purpose is to examine the concept of public policy analysis by clarifying its definition, conceptual models of public policy analysis, steps of policy analysis and six analytical dimensions for analyzing public policy. In most real-world policy situations there are many possible alternatives, many uncertainties, many stakeholders and many consequences of interest. Also, there is usually no single decision maker and little chance of obtaining agreement on a single set of preferences among the consequences. As a result, there is no way to identify an optimal solution. Instead, policy analysis uses a variety of tools to develop relevant information and present it to the parties involved in the policymaking process in a manner that helps them come to a decision. The paper discusses a brief definition of public policy, analytical exploration into the conceptual models of public policy analysis, steps of policy analysis and dimensions and relationships among the dimensions for analysing public policy.

Key words: public policy analysis, policymaker, decision making, government.

1. Introduction

The world is rapidly changing, thereby, future is uncertain. Policymakers are faced with policy alternatives that are often numerous, diverse and produce multiple consequences that are far-reaching yet difficult to anticipate. Different groups perceive and value different consequences differently. Nevertheless, public policymakers have a responsibility to develop and implement policies that have the best chance of contributing to the health, safety and well-being of the citizens. Along with full of uncertainties and limited data simply identifying the key policy issues is a difficult task. In this vein, without analysis, important policy choices are based on hunches and guesses; sometimes with regrettable results. Over the past 50 years, policy analysts in the developed countries have developed a systems-based approach and a set of tools for examining public policy issues that illuminate the uncertainties and their implications for policymaking, that identify tradeoffs among the alternative policies and that support the policymaking process.

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The present study critically investigates the concept of public policy analysis by discussing the definitions, conceptual models and steps of policy analysis. It also explores into the six analytical dimensions for analyzing public policy to assess the concept of public policy analysis.

1.1 Setting the Context

Public policy analysis is a rational, systematic approach to making policy choices in the public sector. It is a process that generates information on the consequences that would follow the adoption of various policies. It uses a variety of tools to develop this information and to present it to the parties involved in the policymaking process in a manner that helps them come to a decision. As long as human dignity and meaning exist as important values, social science cannot achieve the rigor of the physical sciences because it is impossible to separate human beliefs from the context and process of analysis (Heineman *et al.* 1990). Nevertheless, policy analysis uses the scientific method. This means that the work is open and explicit, objective and empirically based, consistent with existing knowledge and the results are verifiable and reproducible.

The main purpose of public policy analysis is to assist policymakers in choosing a course of action from among complex alternatives under uncertain conditions. Most importantly, it is a process, each step of which is critical to the success of a policy and must be linked to the policymakers, to other stakeholders and to the policymaking process. Unfortunately, although a policy action may be designed with a single goal in mind, it will seldom have an effect on only one outcome of interest. Policy choices, therefore, depend not only on measuring the outcomes of interest relative to the policy goals and objectives, but identifying the preferences of the various stakeholders and identifying tradeoffs among the outcomes of interest given these various sets of preferences. Therefore, the exploration of the effects of alternative policies on the full range of the outcomes of interest under a variety of scenarios and the examination of tradeoffs among the policies requires a structured analytical process that supports the policymaking process.

1.2 Significance of the Study

Public policy is the heart, soul, and identity of governments everywhere (Cochran and Malone 2014). Policy analysis describes the investigations that produce accurate and useful information for decision

makers. The importance of sound public policy analysis in achieving various goals related to the growth and development of a nation and its citizens cannot be overemphasized. For example, the adoption and implementation of public policies helped the nation recover from the higher inflation and mobilized the country to respond to economic crisis. Conversely, without sound public policy planning, a nation languishes and cannot keep up with an ever-changing world. For all of these reasons, public policy analysis studies are of the utmost importance, as they help scholars, politicians, political scientists, and a better-informed public to analyze every policy in depth, identifying its strengths and weaknesses, in order to improve policy choices, formulations, and implementation. Much like an 'art' or 'craft', significant parts of the policy analysis discipline can be taught to and learned by professionals working in, for, or with the public sector (Wildavsky 1979).

1.3 Objective of the study

The main purpose of this study is to critically investigate the concept of public policy analysis. To fulfill the purpose, this study aims to explore definitions of public policy analysis, analyse various conceptual models of public policy analysis, discuss steps of policy analysis, and examine six analytical dimensions for public policy analysis and the relationship among them.

2. Methodology

This study is mainly descriptive and analytical in nature. All the relevant data and information are collected from secondary sources. This study was carried out on the basis of secondary data such as published books, journals articles and authentic reports of various organisations. Some figures are used for better analysis and representation of data collected and modified from available secondary sources.

3. Public Policy Analysis

In a broad sense, the analysis of public policy dates back to the beginning of civilization. The academic study of public policy emerged as a major subfield within the discipline of political science in 1960s. This section discusses definitions of public policy analysis, investigates different conceptual models, explores into steps and analyse six dimensions for public policy analysis.

3.1 What is Public Policy Analysis?

Policy analysis is "an applied social science discipline which employs multiple methods of inquiry, in the contexts of argumentation and public debate, to create, critically assess, and communicate policy relevant information" (Dunn 1994) [with the intent of] "finding solutions to practical problems" (Dunn, 2011). In addition, public policy analysis refers to the activities, methodology, and tools that are used to give aid and advice in a context of public policymaking (Radin 2002; Mayer et al. 2004; Fischer, Miller and Sidney 2007). This type of policy analysis can be seen as the 'interventionist' or 'prescriptive' branch that stems from the policy sciences tree (Enserink, Koppenjan and Mayer 2013).

3.2 Conceptual Models for Public Policy Analysis

Models are widely used in the social sciences to investigate and illuminate causal mechanisms and understand the conditions in which certain outcomes are expected to occur. Some conceptual models are simply used to clarify our thinking about politics and public policy. Different models can identify important aspects of policy problems and provide explanations for public policy and even predict consequences. The following is a selection of some of the models frequently used by policy analysts to highlight certain aspects of policy behaviors.

3.2.1 Institutional Model

The institutional model focuses on policy as the output of government as the ultimate Decision making authority (Clarke and Primo 2007). The model emphasizes constitutional provisions, judicial decisions, and common law obligations. A policy process does not become a public policy until it is adopted, implemented, and enforced by some government institution. This model is followed by some of the developing countries like Bangladesh. The major stakeholders in Bangladesh's policy formulation process includes, the cabinet, the ministries, parliament, political parties, bureaucracy, non-governmental organizations, civil society organizations, the private sector, mass media and the international donor community (Aminuzzaman 2015). However, government institutions are crucial in that once a policy is officially adopted; the government provides legitimacy to that policy by enforcing it through government institutions. Government policies provide reciprocal legal rights and duties that must be recognized by involved citizens. Finally, governments alone have a monopoly on the legitimate use of coercive force in society and on sanction violators. One of the drawbacks of this model is that some very successful interest

groups focus their efforts on influencing critical institutions of government rather than winning popular support.

3.2.2 Incremental Model

This model focuses on how public policy decisions are made. Those who support this model suggest that public policy is primarily a continuation of past government activities with only incremental changes. Incrementalism, a conservative ideal, holds that current policy and programs possess certain legitimacy as they already exist. Groups who are beneficiaries support the continuation of the status quo, and politicians generally accept the legitimacy of established programs and are inclined to continue them because the consequences of adopting and implementing completely new or different programs are not easy to predict. In short, concentrating on increases, decreases, or modifications of current programs is simpler and less risky for policymakers than embarking on totally new programs (Cochran and Malone 2014).

The model is often criticized because it does not require the establishment of clear goals. It tinkers with current programs with the hope that goals and alternatives will become clearer over time. Again, some argue that breaking down the implementation of major changes into smaller steps is necessary to make the changes more acceptable. For example, an administration proposal to raise the minimum wage by a significant amount is broken down into smaller increments over several years. Political conflict and stress is increased when decision making focuses on major policy changes that raise fears of significant gains or losses if the change does not have bipartisan support. The search for consensus can be expected to begin with choices close to current programs and policies or positions previously endorsed by the political party now out of power. The high costs and risks of significant changes in policy, without bipartisan support, illustrates why many policymakers are more likely to push for incremental changes.

3.2.3 Group Theory

This model, also called pluralism, holds that politics represents the struggle among groups to influence public policy. Public policy at any given time actually represents the equilibrium reached in the group struggles. The role of government is primarily to establish the legal and regulatory rules in the group struggle. Politicians engage in bargaining and negotiating with groups in an effort to form a majority coalition of groups. The political parties are viewed as coalitions of interest groups (Walker 2000). The model holds that individuals and groups have overlapping memberships, which prevents any one group

from moving too far from moderate values and any single interest from consistently dominating other groups. Pluralists claim that the power of each group is checked by the power of competing groups, resulting in a marketplace of policymaking in almost perfect competition.

Critics of pluralism claim that in fact different groups have vastly different resources. Some interests, such as those representing businesses or affluent professions, are very well organized and financed, while others, such as those representing poor or immigrant groups, have fewer financial resources and are poorly organized, undermining any claim of group equilibrium. Some critics of the theory claim that the model ignores the role public officials' play in public policy making.

3.2.4 Elite Model

The elite model views public policy as reflecting the preferences and values of the power elite. The theory claims that society is divided between the elites who have power and the non-elites who do not. Every society has more non-elites than elites. Democracy is often thought to be good for the poor, since the poor greatly outnumber elites. Conventional wisdom suggests that democracy will lead to the choice of policies that reflect the preferences of the poor. In democratic societies the elites are concerned about the danger posed by the non-elites who could unite and overwhelm them at the ballot box and redistribute wealth downward. The elites shape mass opinion while mass opinion has little influence on elites. Generally, government officials tend to adopt and implement policies decided on by the elite, which flow in a downward direction to the masses. According to the model, elites permit the assimilation of some non-elites into the elite category, but only after they accept elite values, in the process encouraging system stability and reducing the threat of revolution. This model also supports the notion that changes in public policy should be small and incremental and reflect changes in elite values (not demands from the masses).

The implication of the model is that the state of policymaking rests primarily with the elites. The masses are generally apathetic and poorly informed. Mass opinions are manipulated by elites through control of much of the "mass media." Thus, the mass has only an indirect influence on policy decisions.

3.2.5 Conflict Model

This model developed by E. E. Schattschneider focuses on the essential elements of public participation in the decision making process. He criticized the classical definition of democracy as government "by the

people” as being far from the reality. His working definition of democracy took into account the people’s limitations as well as their powers. Instead, he defined democracy as “a competitive political system in which competing leaders and organizations define the alternatives of public policy in such a way that the public can participate in the decision-making process” (Schattschneider 1960).

In fact, the ability to control the scope of a conflict is absolutely crucial to achieving a favorable outcome in a political battle of wills. Special interest groups influence the scope of the conflict by lobbying for specific legislation (Ibid). Group theory claims that people’s interests are represented to the government by various organizations in almost perfect market equilibrium. The model holds that competition between special interest groups, such as those representing the food industry or health care groups that argue for legislation, results in compromise and moderation. In contrast, conflict model argues that most pressure groups are pro-business and have an upper-class bias. Even most non-business groups have an upper-class bias. These pressure groups work to improve the well-being of their relatively small group against the public interest. Business groups, for example, desire deregulation, fight for lower taxes, and want government to take their side against labor in conflict. The mobilized business groups increase their influence by contributing to the political candidates most supportive of their goals. Thus, according to conflict model, pressure politics represents the whole community is a myth. Pressure politics is very selective and represents upper-income interests very well but is not well designed or successful in mobilizing support for the “public interest.” The scope of the conflict model, along with the group model, reinforces the elite model but focuses on how citizen involvement is related to the size of the conflict in public policy decision making.

3.3 The Steps of Policy Analysis

The policy analysis process generally involves performing a set of logical steps (Findeisen and Quade 1985). The steps are not always performed in the same order and there is usually feedback among the steps. The steps are summarized in Figure 1 and briefly described below.

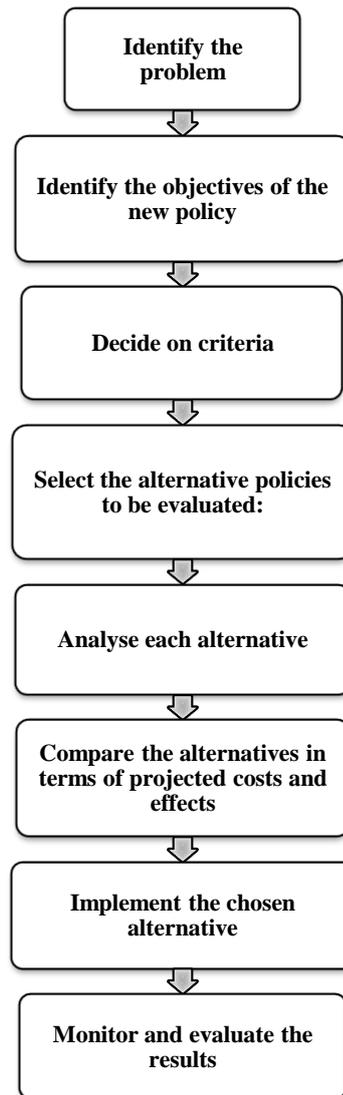


Figure 1: Eight steps of public policy analysis

i. Identify the problem: This step sets the boundaries for what follows. It involves identifying the questions or issues involved, fixing the context within which the issues are to be analysed and the policies will have to function, clarifying constraints on possible courses of action, identifying the people who will be affected by the policy decision, discovering the major operative factors and deciding on the initial approach.

ii. Identify the objectives of the new policy: The policymaker has certain objectives that, if met, would ‘solve’ the problem. In this step, the policy objectives are determined. Most public policy problems involve multiple objectives, some of which conflict with others.

iii. **Decide on criteria:** measures of performance and cost with which to evaluate alternative policies.

Determining the degree to which a policy meets an objective involves measurement. This step involves identifying consequences of a policy that can be estimated (quantitatively or qualitatively) and that are directly related to the objectives. It also involves identifying the costs (negative benefits) that would be produced by a policy and how they are to be estimated.

iv. **Select the alternative policies to be evaluated:** This step specifies the policies whose consequences are to be estimated. It is important to include as many as stand any chance of being worthwhile. If a policy is not included in this step, it will never be examined, so there is no way of knowing how good it may be. The current policy should be included as the 'base case' in order to determine how much of an improvement can be expected from the other alternatives.

v. **Analyse each alternative:** This means determining the consequences that are likely to follow if the alternative is actually implemented, where the consequences are measured in terms of the criteria chosen in Step 3. This step usually involves using a model or models of the system. This step is usually performed for each of several possible future worlds.

vi. **Compare the alternatives in terms of projected costs and effects:** This step involves examining the estimated costs and effects for each of the scenarios, making tradeoffs among them and choosing a preferred alternative (which is robust against the possible futures). If none of the alternatives examined so far is good enough to be implemented (or if new aspects of the problem have been found, or the analysis has led to new alternatives), return to Step 4.

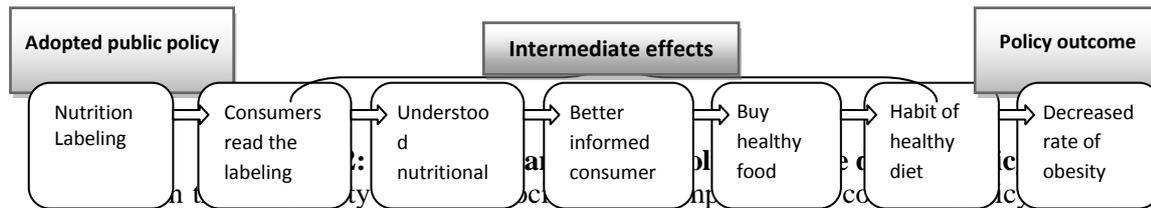
vii. **Implement the chosen alternative:** This step involves obtaining acceptance of the new procedures (both within and outside the government), training people to use them and performing other tasks to put the policy into effect.

viii. **Monitor and evaluate the results:** This step is necessary to make sure that the policy is actually accomplishing its intended objectives. If it is not, the policy may have to be modified or a new study performed.

3.4 Dimensions for Analysing Public Policy

There are six analytical dimensions that influence decision-making about public policies: effectiveness, unintended effects, equity, cost, feasibility and acceptability. The first element, effectiveness used to assess

the success of a public policy is its effectiveness at achieving its objective (Salamon 2002). For example, a policy of nutrition labeling is taken to decrease obesity among the people. If the rate of obesity is reduced than the previous record, then it can be said that particular policy is effective (figure 2).



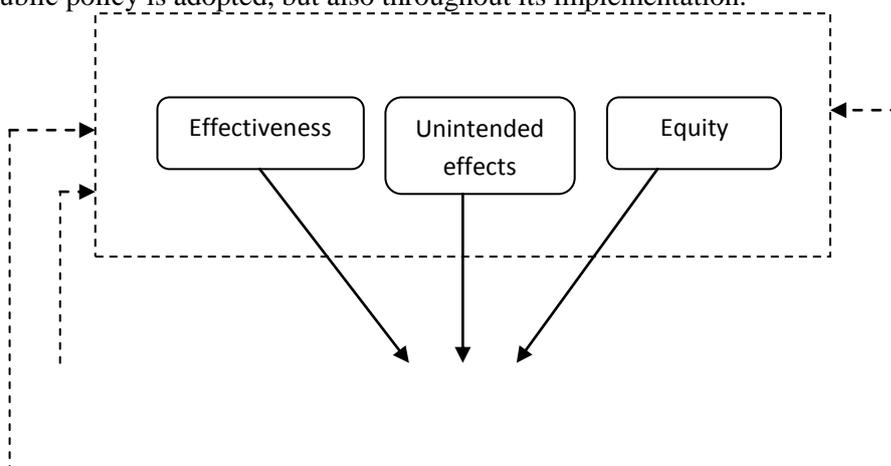
to ensure that it produces only the desired effect, and no other. Unintended effects can be positive or negative (Rychetnik, Frommer, Hawe and Shiell 2002) and can be produced in all kinds of areas: effects on health that are unrelated to the problem targeted, economic, political, or environmental effects, effects on social relations, etc. Nutrition labeling tends to raise awareness and lead consumers to demand healthier food. The food industry is then prompted to modify its products (for example, by reducing their salt content). Such reformulation automatically improves food, even for consumers who do not make use of nutritional information. In contrast, if nutrition labeling leads consumers to reject certain rather unhealthy foods, it can result in revenue losses for their producers and eventually in job losses, if they scale back their activities.

It is very important to take into account equity and not only general effectiveness because, often, for example, public policies improve population health in terms of the overall average, but at the same time deepen social inequalities in health. The aim of this aspect is to determine whether the policy being analyzed produces different effects on various groups (categorized by age, gender, socioeconomic status, ethnicity, religion, residence in certain zones, sexual orientation, disabilities, etc.), or whether it could potentially create, increase or correct inequalities in the distribution of the targeted problem (Tugwell et al. 2010; Oxman, Lavis, Lewin and Fretheim 2009).

When considering financial costs, the cost incurred by government in implementing the policy under study is thought of. Although a policy can generate gains, it can incur costs for other actors (Salamon 2002). For example, for the government, a new tax involves implementation costs, but mainly entails revenues; and for the actors to which it applies (consumers, businesses, etc.), it entails costs. It is important to analyze the distribution over time of costs (one-time or recurring, immediate or deferred costs, short- or long-term investments), as well as their visibility, that is, the degree to which costs are apparent or hidden (Salamon 2002 and Peters 2002). These two factors strongly influence the way stakeholders react to a given policy.

One of the dimensions, feasibility depends on the availability of the required resources, including personnel, material resources and technology (Sabatier and Mazmanian 1995, and Swinburn, Gill and Kumanyika 2005). The quality of the cooperation between the actors involved in implementation has a concrete impact on a policy's feasibility (Salamon 2002 and Swinburn, Gill and Kumanyika 2005).

However, acceptability refers to how the proposed public policy is judged by stakeholders (Swinburn, Gill and Kumanyika 2005). Thus, it focuses on subjective elements (the judgments of actors). In addition, it partly depends on factors that are external to the policy under analysis, because the position of each actor is determined by his or her knowledge, beliefs, values and interests. A policy that does not garner enough support (including the support of public opinion, of those with economic and financial power, etc.) is likely to have difficulty being adopted and implemented, and may thus have difficulty producing the desired effects (Salamon 2002). However, weak acceptability does not necessarily mean the policy should be shelved; socioeconomic, political, and technological changes can bring about changes in acceptability (Sabatier & Mazmanian 1995). Thus, it is important to document its level not only at the time a public policy is adopted, but also throughout its implementation.



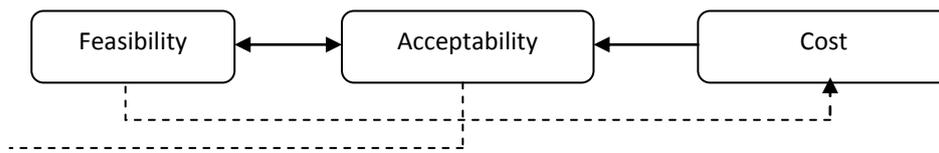


Figure 3: Relationship between six dimensions for analyzing public policy

Figure 3 illustrates that all of the analytical dimensions influence acceptability, because on their assessment of the other dimensions. Inversely, a public policy's degree of acceptability can have a bearing on its feasibility: if certain actors view a policy unfavourably ("Acceptability" dimension), they may decide to take action to impede its implementation ("Feasibility" dimension). Moreover, the more compromised a policy's feasibility, the greater the risk that its implementation will entail additional costs. Finally, feasibility, acceptability and costs collectively influence a public policy's ability to produce results (Morestin 2012).

4. Concluding Remarks

Public policy analysis is the study of government decisions and actions to deal with matters of public concern. Wise analysis is essential for deciding which policies to adopt and then implementing those policies to move the nation toward the public interest. Several conceptual models are often used for policy analysis which is useful in highlighting certain aspects of public policy. For the successful implementation of a public policy the steps are crucial to follow. To examine whether the public policy will be beneficent for all or not it is important to investigate the analytical dimensions of policy analysis. For this reason, the study of public policy analysis is so important, not only for scholars and politicians but also for individuals themselves, so that an informed, educated public can advocate and hold politicians accountable. However, many research opportunities remain within the various steps in the process and in tool development for future.

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