BARISAL UNIVERSITY JOURNAL (PART-3)

A JOURNAL OF BUSINESS STUDIES

FACULTY OF BUSINESS STUDIES, UNIVERSITY OF BARISHAL

BARISHAL UNIVERSITY JOURNAL (PART-3)
ISSN2411-247X

Volume 5   Issue 1   June 2018

Massage from the Editor-in-Chief

The Barishal University Journal of Business Studies (ISSN 2411-247X) is an academic journal that examines the synthesis of business, society, and economics. BUJBS is published semiannually and is available in electronic versions. Our expedited review process allows for a thorough analysis by expert peer-reviewers within a time line that is much more favorable than many other academic publications.

The Barishal University Journal of Business Studies welcomes submissions that explore the social, educational and business aspects of human behavior as related to Bangladesh. Because The Barisal University Journal of Business Studies takes a broad and inclusive view of the study of both business and economics, this publication outlet is suitable for a wide variety of interests. Appropriate submissions could include general survey research, attitudinal measures, research in business academia practitioners are participants, investigations into broad business and economic issues, or any number of empirical approaches that fit within the general umbrella provided by the journal.

Authors are invited to submit their work at any time throughout the year and should carefully review the submission criteria and requirements.

The Barishal University Journal of Business Studies maintains rigorous peer-reviewed standards. If you have a submission that you believe meets our criteria, we encourage you to consider BUJBS as an outlet for your academic research.

If you have questions regarding this journal or submission requirements, please feel free to review the author information sections of the web site or contact the editor directly at imamhuq**@hotmail.com**

With thanks,

Dr. S M Imamul Huq
Editor in chief
Barishal University Journal of Business Studies

CONTENTS

Empirical Analysis of Random Walk Hypothesis in Chittagong Stock Exchange

Shahadat Hussain*

Abstract:

Most of the investment analysis in stock market is largely influenced by market efficiency. This study is an attempt to look at the market efficiency in Chittagong Stock Exchange. The daily closing points of CSE 30 Index, CSCX Index, CASPI Index, CSE50 Index and CSI Index for period of 1stJanuary, 2004 to 31stDecember, 2017 have been processed through statistical tools like ADF test, PP test and DF-GLS test with the help of software STATA12 in the study. The tests result concluded that Chittagong Stock Exchange was not showing any signal of weak form efficiency which signifies technical analysis is applicable to earn abnormal profit.

Keywords: Random Walk, Efficient Market Hypothesis, Unit Root Test, Chittagong Stock Exchange.

1. Introduction:

Efficiency in the Market was first in print by Louis Bachelier (1900), a French mathematician, in his PhD dissertation "The Theory of Speculation" which was ignored until the 1950s. It has been treated as an excellent theoretical position in the mid-1960s from the PhD Dissertation of Eugene Fama (1965).Securities price will reflect all available information in an active and well informed market (Investor Home, 2008). Thus, no technical and fundamental analysis could be applied (Malkiel, 2003). Market participants also adjust securities prices quickly with new information (Maku and Atanda, 2009). So, market prices will be best estimates for the risk and expected returns for the assets as at the time of reference (Gupta and Basu, 2007).An efficient market follows random walk theory (Rapuluchukwu, 2010). This signifies that no individual can make supernormal profit from trading in securities because the share prices are not mis-priced (Mishra, 2009). Samuels and Wilkes (1981) added all publicly available information is also reflected in the securities price. So all publicly available information adjusted price of today is the best estimate of tomorrow's price. Reily (1989) told a fair share price is

*Assistant Professor, Department of Finance and Banking, University of Barishal

reflected in efficient stock market which is dependent on the how cheaply and widely available information to the investors. Random Walk Hypothesis signifies that there is no value of studying historical sequence of prices (Fisher and Jordan, 2005). Therefore, there is a zero-competitive equilibrium condition zero-economic profit by trading on the available set of information (Jensen, 1978).

The remainder of this paper is structured as follows. In addition to the introduction, section 2presentedtheempirical literature. Section 3 presented objectives of the study while section 4discussedthe methodology. Section 5 presented the analysis of empirical results whilesection6 contains concluding remarks and recommendations.

2.   Empirical Literature:

Market efficiency, as highly influenced by the diffusion of information, is one of the most important and widely debatable issues in finance and economic literature (Pesaran, 1994).Random walk theory suggests quick adjustment of current available information in the stock price which is a prior condition of the Efficient Market Hypothesis.

Many researchers have been analyzed on random walk behavior focusing the individual stock markets i.e., Portugal (Manuel et al., 2002), China (Lee et al., 2001), Czech Republic (Hajek, 2002) Slovenia (Dezlan, 2000), Korea (Ayadi and Pyun, 1994, Ryoo and Smith, 2002), Hong Kong (Cheung and Coutts, 2001), Spain (Regúlez and Zarraga, 2002), United Kingdom (Poon, 1996) and Turkey (Zychowicz et al., 1995, Buguk and Brorsen, 2003).

Some studies have been focused on emerging markets especially on regional basis i.e., Asia (Huang, 1995.Groenewold and Ariff, 1998), Latin America (Urrutia 1995, Ojah and Karemera, 1999.Grieb and Reyes, 1999, Karemera et al., 1999), Africa (Smith et al., 2002.Appiah-Kusi and Menyah, 2003) and the Middle East (Abraham et al., 2002).

Empirical Analysis of Random Walk Hypothesis in Chittagong Stock Exchange

Several statistical techniques have been applied to detect whether the stock market is efficient in weak form or not. It has been applied both run test and unit root test by Moorkerjee and Yu (1999), only run test by Shamma and Kennedy (1977), serial correlation test by Dickinson and Muragu, (1994), and Groenwold et al. (2003), spectral analysis by Fawson et al. (1996), autoregressive conditional heteroscedasticity (ARCH) test by Seddighi and Nian (2004) in their studies.

Though some empirical evidence confirmed the existence of the weak-form efficiency in the study of Cootner (1962), Williamson (1972), Nicolaas (1997), and Sungs and Johnson (2006), Dahel and Laabas (1999), but contradictory results was also found by Wheeler et al. (2002), Abeysekera (2001) and Abraham (2002),

However, the past studies cannot give us a concrete support for the weak form efficiency in stock markets of developed and developing countries. Above all, to the best of my knowledge, no recent formal attempt has been taken to verify weak form of efficiency in Chittagong Stock Exchange by considering all market indices. The research has been conducted to fill this research gap.

3. **Objectives of the Study:**

The objective of this study is to examine whether Chittagong Stock Exchange is efficient in weak form or not. .

4. **Methodology:**

To test the applicability of random walk hypothesis, all the indices of Chittagong Stock Exchange (CSE) have been chosen. Data was collected from the website of CSE for the period of 1st January, 2004 to 31st December, 2017 and analyzed by using statistical package STATA12.

Augmented Dickey-Fuller (ADF) test: To analyze the unit root of time series returns, it has been applied an Augmented Dickey-Fuller (ADF) (1979, 1981) test. If time series data contains unit root that

dictates they arenon-stationary, where mean, variance and covariance are not constant over time or series follows a random walk theory. If the series are stationary that means they don't follow random walk theory and the stock exchange is not efficient in weak form. The general structure of the equation of conducting ADF test is as follows:

$$\Delta x_t = \alpha_0 + b_0 x_{t-1} + \sum_{t=1}^{m} c_0 \Delta x_{t-1} + w_t \ldots\ldots\ldots\ldots\ldots(1)$$

Where,Δ is the first difference operator, α_0, b_0 & c_0 are coefficients to be estimated, x is the variable whose time series properties are examined and $w_t$is the white-noise error term.

In equation (1), if (i)Ho: $b_0 = 0$ then the series are non-stationary: (ii) ifH_1: $b_0 \ne 0$ then the series are stationary. Null hypothesis is rejected when ADF value is less (or greater in absolute value) than the critical value. Therefore, Chittagong Stock Exchange (CSE)is not efficient in weak form.

Phillips-Perron (PP) test: Peter. C. B. Phillips and Pierre Perron (1988) have formulated a non parametric test of controlling higher order serial correlation (autocorrelation) in a series. Actually autocorrelation measures the similarity of returns between day1 with the previous days. A significant positive autocorrelation means the series do not follow random walk. The equation of conducting PP test is as follows:

$$\Delta y_t = \alpha + \beta y_{t-1} + \varepsilon_t \qquad \ldots\ldots\ldots\ldots (2)$$

Where, $\Delta$is the first difference operator, $\alpha$is the constant, β is the slope, y_{t-1} is the first lag of the variable y and ε_t is the white-noise error term.In equation (2), if (i)Ho: $\beta = 0$then the series are non-stationary: (ii) ifH_1: $\beta \ne 0$then the series are stationary. Null hypothesis is rejected if values of PP values are less than critical values. Therefore, the stock exchange is not efficient in weak form.

DF-GLS test: The Dickey-Fuller test statistic has been modified by Elliott, Rothenberg and Stock (1996) using a generalized least squares (GLS) rationale to detect near non-stationarity. At the 5% significance level that the DF-GLS rejects the unit-root null-hypothesis 75% of the time, whereas the ADF test rejects it only 31% of the time proved by Stock and Watson (2011). The DF-GLS formula is as follows:

Empirical Analysis of Random Walk Hypothesis in Chittagong Stock Exchange

$$\Delta y_t = \alpha + \beta y_{t-1} + \delta t + C_1 \Delta y_{t-1} + C_2 \Delta y_{t-2} + \cdots + C_k \Delta y_{t-k} + \varepsilon_t \quad \ldots\ldots\ldots(3)$$

This test is similar with ADF but on GLS-detrended data. Here, null hypothesis is that y_t is a random walk, possibly with drift. If the calculated value of test statistics is less than the critical value then the null hypothesis is rejected and series are not non-stationary in level. The rejection of null hypothesis provides significant evidence against weak form of efficiency.

5.   Empirical Results:

Table 1 reports a summary of descriptive statistics of the all indices of Chittagong Stock Exchange (CSE). One of the prior condition of random walk model is that series are normally distributed. Non-normal distribution of stock returns indicates that there is no weak form of efficiency in the stock market.

Table 1: Descriptive Statistics

	CSE 30 Index	CSCX Index	CASPI Index	CSE50 Index	CSI Index
Number of obs	3396	3364	3396	772	772
Mean	.08	6.84	.08	.02	.01
Range	34.03	23049.7	21.43	6.76	7.21
Min	-14.38	-99.56	-7.47	-3.19	-3.85
Max	19.64	22950.14	13.96	3.57	3.36
SD	1.43	394.99	1.28	.69	.68
Skewness	.86	58.07	.30	.18	.05
Kurtosis	23.87	3373.79	11.79	5.22	6.25

Sample means, maximums, minimums, standard deviations, skewness and kurtosis are summarized in the table. The mean returns of CSE 30 Index, CSCX Index, CASPI Index, CSE50 Index and CSI Index are Tk. .08, Tk. 6.84, Tk. .08, Tk. .02 and Tk. .01 respectively. The highest and lowest average return is found in CSCX Index (22950.14) and (-99.56) respectively. The coefficients of skewness are positively skewed and kurtosis exhibits leptourtic distribution for every index. The results for skewness and kurtosis conclude that stock prices in Chittagong Stock Exchange (CSE) are not normally distributed which is inconsistent with the random walk model.

Table 2: Results of Unit Root Tests (ADF and PP)

Variable	Model Specification	ADF	PP	ADF(Firs Difference)	PP (First Difference)	Order of Integration
		Test Statistics	Test Statistics	Test Statistics	Test Statistics	
CSE 30 Index	Intercept	-5.036*	-58.651*	-10.233*	-190.498*	1
	Intercept and Trend	-5.258*	-58.697*	-10.230*	-190.463*	1
CSCX Index	Intercept	-5.837*	-58.349*	-9.972*	-187.113*	1
	Intercept and Trend	-6.083*	-58.386*	-9.970*	-187.079*	1
CASPI Index	Intercept	-5.053*	-55.897*	-9.818*	-181.089*	1
	Intercept and Trend	-5.295*	-55.946*	-9.816*	-181.055*	1
CSE50 Index	Intercept	-3.845*	-24.016*	-3.920*	-67.060*	1
	Intercept and Trend	-3.845*	-24.144*	-3.929*	-67.013*	1
CSI Index	Intercept	-3.193*	-24.383*	-4.029*	-67.722*	1
	Intercept and Trend	-4.082*	-24.438*	-4.045*	-67.666*	1

Source: author's compilation and values obtained from STATA12.

Note: * indicates the rejection of the null hypothesis at 5% level of significance.

Table 2reports the results of both ADF and PP test for every index. Both of the tests are performed first in level form and then in first differences. The level of significance is 5% and all the indices are integrated of order one I(1) in Chittagong Stock Exchange (CSE). Interestingly all the values of test statistics are less than critical value. So, the null hypothesis is rejected and series are inconsistent with stationary. Therefore, the series are non-stationary both in levels as well as in first difference form. Since, there are zero mean, constant variance and uncorrelated residuals over the time, so it gives an investor the opportunity to devise any statistical technique to predict the share price at day 1 by analyzing that of previous days. It is clearly evident that Chittagong Stock Exchange (CSE) is inefficient in weak form.

Table 3: DF-GLS Test

	CSE 30 Index	CSCX Index	CASPI Index	CSE50 Index	CSI Index	Critical Value		
N	3396	3364	3396	772	772			
lags	DF-GLS mu Test Statistic					1%	5%	10%
11	-7.393	-16.713	-10.588	-4.854	-5.471	-2.580	-1.950	-1.620
10	-8.167	-17.460	-11.485	-5.093	-5.527	-2.580	1.950	-1.620
9	-8.559	-18.317	-12.080	-5.578	-6.129	-2.580	-1.950	-1.620
8	-9.282	-19.313	-12.794	-6.079	-6.428	-2.580	-1.950	-1.620
7	-10.566	-20.489	-14.436	-6.103	-7.108	-2.580	-1.950	-1.620
6	-11.676	-21.909	-15.860	-6.467	-7.187	-2.580	-1.950	-1.620
5	-12.952	-23.671	-17.559	-6.984	-8.256	-2.580	-1.950	-1.620
4	-14.662	-25.938	-19.590	-7.578	-9.149	-2.580	-1.950	-1.620
3	-17.620	-29.010	-22.529	-8.880	-10.635	-2.580	-1.950	-1.620
2	-22.592	-33.518	-27.745	-11.207	-12.698	-2.580	-1.950	-1.620
1	-30.415	-41.089	-35.527	-14.287	-16.605	-2.580	-1.950	-1.620

CSE 30 Index	Opt Lag (Ng-Perronseq t) = 11 with RMSE 1.474307
	Min SC = .8051053 at lag 11 with RMSE 1.474307
	Min MAIC = .8906708 at lag 11 with RMSE 1.474307
CSCX Index	Opt Lag (Ng-Perronseq t) = 0 [use maxlag(0)]
	Min SC = 11.96613 at lag 1 with RMSE 395.6985
	Min MAIC = 13.9793 at lag 1 with RMSE 395.6985
CASPI Index	Opt Lag (Ng-Perronseq t) = 11 with RMSE 1.305689
	Min SC = .5608614 at lag 8 with RMSE 1.309516
	Min MAIC = .8955762 at lag 11 with RMSE 1.305689
CSE50 Index	Opt Lag (Ng-Perronseq t) = 10 with RMSE .696153
	Min SC = -.6671561 at lag 4 with RMSE .7010965
	Min MAIC = -.4766342 at lag 11 with RMSE .6958257
CSI Index	Opt Lag (Ng-Perronseq t) = 10 with RMSE .6930915
	Min SC = -.6710149 at lag 2 with RMSE .7057978
	Min MAIC = -.3298157 at lag 10 with RMSE .6930915

Table 3 is reported the results of DF-GLS test. This test is done by using maximum lag 11 following the Schwert criterion. The results of table suggest that 11 is optimal lag via the Ng-Perron criterion, SC chooses 11 &8 but MAIC is only 11 respectively for CSE 30 Index and CASPI Index. The optimal lag is same i.e, 10 for the Ng-Perron criterion but SC and MAIC criteria are different i.e, 4 & 2 and 11 & 10

respectively for CSE50 Index and CSI Index. The results of CSCX Index suggests that 0 is optimal lag for the Ng-Perron criterion whereas. SC and MAIC criteria choose same i.e, 1. The results also show that test statistics is less than critical value at the 1%, 5% and 10% level in each indices for lags 1-11. So the null of a unit root is rejected for each index in CSE. Thus it is evident that the CSE in Bangladesh is inefficient in weak form.

6. Concluding Remarks and Recommendations:

The research results concluded that share price movements in Chittagong Stock Exchange do not follow the random walk pattern. This result analogous to the findings of Hasan (2017) and also indicate the existence of market inefficiencies in capital market of Bangladesh. The price of equities in CSE follows a definite path which could be determined by using information like previous year dividends value per share, equity capitalization rate and growth rate of dividends etc. The market inefficiencies also refers information of securities is poorly available, non-imputation in stock market decision, high cost of accessing and hoarding for privileged few which ultimately effect the investors decision and smooth flow of operation in CSE. So capital market authority should ensure that the information that is provided by issuers are correct. Effective steps should be taken against the manipulation of information in the stock market. Investor friendly laws and insider punishment for trading offences should be strictly enforced. However, this analysis couldn't be used to construct profitable investment strategy rather only an idea of capital market condition for the study period. These above results undoubtedly a key concern for the researcher to carry on further research work on weak form efficiency based on individual securities listed in Chittagong Stock Exchange.

References:

Abeysekera, S. P. (2001). Efficient markets hypothesis and the emerging capital market in Sri Lanka, evidence from the Colombo stock exchange-A note. Journal of Business Finance and Accounting, 28(1), 249-261.

Abraham, S., & Alsakran, S, A. (2002). Testing the random behavior and efficiency of the Gulf stock markets. The Financial Review, 37(3), 469-480.

Abraham, A., Seyyed, F.J., & Alsakran, S.A. (2002).Testing the random behaviour and efficiency of the Gulf stock markets. The Financial Review 37(3), 469-480.

Appiah-Kusi, J., & Menyah, K. (2003). Return predictability in African stock markets. Review of Financial Economics 12(3), 247-271.

Ayadi, O.F., & Pyun, C.S. (1994). An application of variance ratio test to the Korean securities market. Journal of Banking and Finance 18(4), 643-658.

Bachelier, L. (1900), "Théorie de la spéculation" , Annales Scientifiques de l' École Normale Supérieure, 3 (17), 21–86

Buguk, C., & Brorsen, B.W. (2003). Testing weak-form market efficiency: Evidence from the Istanbul stock exchange. International Review of Financial Analysis, 12, 579-590.

Cheung, K.C., & Coutts, J.A. (2001). A note on weak form market efficiency in security prices: Evidence from the Hong Kong stock exchange. Applied Economics Letters 8(6), 407-410.

Cootner, P. (1962). Stock prices: Random vs. systematic changes. Industrial Management Review, 3, 24-45.

Dahel, R., &. Laabas, B. (1999). The behavior of stock prices in the GCC markets. Journal of Development & Economic   Policies, 1, 89-105.

Dezelan, S. (2000). Efficiency of the Slovenian equity market. Economic and Business Review 2(1), 61-83.

Dickinson, J. P., & Muragu, K. (1994). Market efficiency in developing countries, a case study of the Nairobi stock exchange. Journal of Business Finance and Accounting, 21(1), 133-150.

Fama, E. F. (1965). Random Walks In Stock Market Prices. Financial Analysts Journal. 21 (5).55-59.

Fawson, C., Glover, T., Fang, W., & Chang T. (1996).The weak-form efficiency of the Taiwan share market. Applied Economics Letters, 3, 663-667.

Fisher, D.E. & Jordan, R.J. (2005). Security Analysis and Portfolio Management, Partparganji, Delhi: Pearson Education.

Grieb, T., & Reyes, M.G. (1999), Random walk tests for Latin American equity indexes and individual firms. Journal of Financial Research 22(4), 371-383.

Groenewold, N., & Ariff, M. (1998). The effects of de-regulation on share market efficiency in the Asia-Pacific. International Economic Journal 12(4), 23-47.

Groenewold, N., Sam, T., & Wu, Y. (2003). The efficiency of the Chinese stock market and the role of the banks. Journal of Asian Economics, 14, 593-609. .

Gupta, R, &Basu, P. (2007). Weak Form Efficiency in Indian stock Markets, International Business and Economics Research Journal, 6. 57-64.

Hajek, J. (2002). Weak-form efficiency in the Czech equity market .Politicka Ekonomie 50(3), 377-389.

Hasan, M. A., (2017). Efficiency and Volatility of the Stock Market in Bangladesh: A Macro econometric Analysis. Turkish Economic Review, 4(2). 239-249,

 Huang, B.N. (1995). Do Asian stock markets follow random walks? Evidence from the variance ratio test. Applied Financial Economics, 5(4), 251-256.

Investor Home. (2008). "The Efficient Market Hypothesis and the Random Walk Theory," Retrieved November 6, 2008 from file//f/investor-home-The Efficient Market Hypothesis.

Jensen, M. (1978). Some Anomalies Evidence Regarding Market Efficiency,   Journal of Financial Economics, 6: 95-101.

Karemera, D., Ojah, K., & Cole, J.A. (1999). Random walks and market efficiency tests: Evidence from emerging equity markets. Review of Quantitative Finance and Accounting 13(2), 171-188.

Lee, C.F., Chen, G.M., &Rui, O.M. (2001). Stock returns and volatility on China's stock markets. Journal of Financial Research 24(4), 523-543.

Maku, O.E. & Atanda, A.A. (2009). Do Macroeconomic Indicators Exert Shock on the Nigerian Capital Market? retrieved May 9, 2009 from http://mpra.ub.unimuenehen.de/17917.

Malkiel, B, (2003). The Efficient Market Hypothesis and its Critics, Journal of Economic Perspective, 17: 59-82.

Manuel, N., Areal, P.B.C., & Rocha Armada, M.J. (2002). The long-horizon returns behaviour of the Portuguese stock market. European Journal of Finance 8(1), 93-122.

Mishra, K. (2009). Indian Capital Market-Revisiting Market Efficiency, Indian Journal of Capital Markets, 2,30-34.

Mookerjee, R., & Yu, O. (1999). An empirical analysis of the equity markets in China. Review of Financial Economics, 8, 41-60.

Nicolaas, G. (1997). Share market efficiency: Tests using daily data for Australia and New Zealand. Applied Financial Economics, 7, 645-657.

Ojah, K., & Karemera, D. (1999). Random walks and market efficiency tests of Latin American emerging equity markets. The Financial Review 34(1), 57-72.

Pesaran, M. H. & Timmermann, A., (1994) Forecasting Stock Returns: An Examination of Stock Market Trading in the Presence of Transaction Costs. Journal of Forecasting ,13, 335-367.

Poon, S.H. (1996). Persistence and mean reversion in UK stock returns. European Financial Management 2(2), 169-196.

Rapuluchukwu, E.U. (2010). The Efficient market Hypothesis: Realities from the Nigerian Stock Market. Global Journal of Finance and Management 2(2). 321-331.

Regúlez, M., & Zarraga, A. (2002). Common features between stock returns and trading volume. Applied Financial Economics 12(12), 885-893.

Reilly,F.K. (1989). Investment Analysis and Portfolio Management, Hinsdale, Illinois: Dryden Press.

Ryoo, H.J., & Smith, G. (2002). Korean stock prices under price limits: Variance ratio tests of random walks. Applied Financial Economics 12(8), 545-553.

Samuels, J.M & Wilkes, R. (1981). Management of Company Finance, Lagos: Thomas Nelson Smith, G. (1990). Investments, London: Glenview.

Seddighi, H. R., &Nian, W. (2004). The Chinese stock exchange market: Operations and efficiency. Applied Financial Economics, 14, 785-797.

Sharma, J. L., & Kennedy, R. E. (1977). A comparative analysis of stock price behaviour on the Bombay, London, and New York stock exchanges. Journal of Financial and Quantitative Analysis, 391-413.

Smith, G., Jefferis, K., &Ryoo, H.J. (2002). African stock markets: Multiple variance ratio tests of random walks. Applied Financial Economics 12(4), 475-484.

Sung, M. C., & Johnson, J. (2006). A new perspective on weak form efficiency: Empirical evidence from the UK bookmaker based betting market. In The 13th International Conference on Gambling & Risk Taking, Nevada, USA, 22-26.

Urrutia, J.L. (1995). Tests of random walk and market efficiency for Latin American emerging markets. Journal of Financial Research 18(3), 299-309.

Wheeler, F. P., Bill, N., Tadeusz, K., & Steve R. L. (2002).The   efficiency of the Warsaw stock exchange: the first few years 1991-1996. The Poznan University of Economics Review, 2(2), 37-56.

Williamson, J. (1972). Measuring mutual fund performance. Financial Analysts Journal, (November/December).

Zychowicz, E.J., Binbasioglu, M., & Kazancioglu, N. (1995). The behavior of prices on the Istanbul stock exchange. Journal of International Financial Markets, Institutions and Money 5(4), 61-71.

The Effectiveness of Customer Loyalty Strategies in the Banking Sector of Bangladesh

Md. Mahiuddin Sabbir*

Nusrat Sharmin Lipy**

Abstract:

In rapid increasing competitive banking environment customer loyalty is potentially an effective tool that banks can use to gain competitive advantage and maintain customers for longer periods. This study was conducted to analyze the implementation and effectiveness of customer loyalty strategies in the banking industry of Bangladesh. A questionnaire, consisting of 18 separate questions was adopted from previous literature to conduct the survey. A sample 30 private commercial banks was chosen out of 39 private commercial banks based on purposive sampling method. The results show that the implementation of customer loyalty strategy is not pervasive with the exception of 'client segmentation'. Use of other loyalty development strategy is quite good but not widespread. Also the result indicates precisely 'scientific marketing' and 'CRM' have a greater positive effect on customer loyalty.

Key words: Customer loyalty, Loyalty effectiveness, Banking industry, Loyalty strategies.

Introduction:

Positive changes in globalization forces, information availability and intellectual capital have made customers more literate, responsive and variety seeker. On the other hand, these changes have made the service provider's job more competitive. As 'switching cost' has reduced significantly in last few decades in service sectors, customers find it's more easy to switch one service provider to another (Peces, Idoeta & Román, 2012). In ever-changing nature of market and customer, loyalty is not simply an 'easy to get' thing.

Customers always prompt profit for organizations (Paidari & Namamian, 2015). As there is intense competition of attaining a good customer, it is usual to lose a good profit generating customer to competitors (Garry, 2001). In this circumstance to achieve a decent position in the competitive market, organizations need to focus exclusively on fulfillment of clients' needs and demands which results in high level of satisfaction that causes rise in loyalty of customers (Lovelock & Wright, 2002).

*Assistant Professor, Department of Marketing, University of Barishal.
** Assistant Professor, Department of Management Studies, University of Barishal.

Customer loyalty can be a safeguard for the company's suffering from the fear of losing customer. According to Fainé and Tornabell (2001) endurance in the financial sector depends on identifying client's need and providing better service, therefore creating customer loyalty. As a financial service sector, banking sector of Bangladesh is facing with the same phenomenon. Customer loyalty has proven an urging need for this sector. To avail the competitive advantage banks are applying different loyalty strategies. Identifying the effectiveness of different loyalty strategies' applied by Bangladeshi banks is the main concern of this paper.

Literature review:

Previous marketing practitioners focused more on making sales to new customers rather than retaining them and building relationships (Kotler, 2000; Schneider, 1980). But this no longer ensures long-term success of the firm. According to Husnain & Akhter (2015), now marketers are agreeing on the fact that not only acquiring new customers but also maintaining existing customers ensure long-term success. Kandampully & Duddy (1999) posits that creating and maintaining loyal customer base is of dominant focus of firms. Customer loyalty is like the backbone for firms (Husnain & Akhter, 2015).

Dufffy (2003) identified customer loyalty as a feeling of involvement with a particular brand. Oliver (1999) defined customer loyalty as a commitment to re-patronize a particular product or service continuously for a long time which results in repetitive purchase of same brand. Bigné and Andreu (2004) sum up above two definitions. According to them customer loyalty concept not only includes repeat purchase but also contentment and a sense of commitment with the brand. Further, this type of commitment serves as a brand-switching barrier. According to previous researchers (Day 1969; Jacoby and Kyner 1973; Yi 1991) customer loyalty has two important dimensions. In the beginning, research conceptualized customer loyalty as a behavior (Dick and Basu 1994; Jacoby and Chestnut 1978). However, recent research tried to measure loyalty attitudinally which includes cognitive and/or affective components. According to this perspective customer loyalty is perceived as future intention to re-purchase (Bae, 2012).

Srinivasan, Anderson & Ponnavolu (2007) categorized customer loyalty into two major categories- one is loyal customer and another one is customer with false loyalty. According to him, loyal customers may be satisfied and unsatisfied. Though satisfaction is not an obvious requirement for loyalty but research shows (Siddiqi, 2011; Khan & Fasih, 2014; Paulík, Kombo & Ključnikov, 2015; Lau, Cheung, Lam & Chu, 2013; Rizan, Warokka & Listyawati, 2014) there is a positive association between satisfaction and customer loyalty. According to Srinivasan, Anderson & Ponnavolu (2007), unsatisfied customer can be loyal because of their affection and promise with the provider. On the other hand, customers with false

loyalty will switch to another supplier with superior quality even they were satisfied with their present supplier.

For many service companies loyal customers are like key success factor (Pullman and Gross, 2004; Bagherzad, Chavosh and Hosseinikhah, 2011). Increasing the number of loyal customers result in substantial increase in company's profitability. According to Fainé and Tornabell (2001) a study on US banks shows that a 20 year old customer can contributes 85% more income than 10 year old client. Also Daemon Quest (2005) reckons that operating profits can be increased by 15% because of retaining 25% of high-value clients. Reichheld and Sasser (1990) established the association between customer relationship, customer loyalty and profitability. According to them loyal customers contribute to reduced marketing and operational cost as well as increased sales which result in increased profitability. Loyal customers are less price sensitive, provide more word-of-mouth, create more business referrals. Loyal customers also provide suggestions and recommendations to their service providers when something goes wrong with the services rather just leaving it.

Previous literature has identified several factors that influence customer loyalty. Among those the most discussed factor is 'customer satisfaction' which Kotler et al. (1995) defined as the positive result of comparing "perceived value" with "expected value." A considerable number of researchers (Siddiqi, 2011; Paulík, Kombo & Ključnikov, 2015; Khan & Fasih, 2014;Lau, Cheung, Lam & Chu, 2013; Rizan, Warokka & Listyawati, 2014) identified the positive association between customer loyalty and customer satisfaction. Several researchers (Siddiqi, 2011; Khan & Fasih, 2014; Cronin, Brady & Hult, 2000Ali, Leifu & Rehman, 2014) show that service quality influences customers loyalty by positively influencing customer satisfaction. Other major influencing factors of customer loyalty are trust (Husnain & Akhter, 2015; Ali, Leifu & Rehman, 2014;Chakiso, 2015;Taleghani, Gilaninia & Mousavian, 2011;Rizan, Warokka & Listyawati, 2014;Anabila, Narteh & Tweneboah-Koduah, 2012), commitment (Husnain & Akhter, 2015; Chakiso, 2015; Taleghani, Gilaninia & Mousavian, 2011; Anabila, Narteh & Tweneboah-Koduah, 2012), communication (Husnain & Akhter, 2015;Chakiso, 2015; Taleghani, Gilaninia & Mousavian, 2011; Anabila, Narteh & Tweneboah-Koduah, 2012).

Loyalty strategies can be categorized based on their principal goals. Previous literature identifies the goals into two broad groups: a) 'customer heterogeneity management' where specific marketing activities are developed for different customer profiles (Lacey and Sneath, 2006; Nunes and Dréze, 2009); and b) 'customer relationship management' where marketers tries to adjust the customer behavior to increase customer lifetime value (Uncles, Dowling& Hammond, 2003; Reinares, Reinares & Mercado, 2010).

To maintain the customer heterogeneity management marketers need to segment the customer base to separate customer groups with different needs and behaviors. And then they can better be served with products and services that fit their requirements. Peces, Idoeta & Román (2012) posits that although this is already happening for small groups of customer but future challenge for the financial industry is to develop reasonable level of personalization for larger segments which Mas (2003) defined as 'mass customization strategies'. According to Huete, Serrano, & Soler (2003) personalization elements with a traditional approach can be a cost-effective way of increasing client's perceived value, satisfaction and therefore loyalty to financial institution. To make customer segmentation strategy effective other two strategies are necessary: differentiated marketing strategies for each segment and as a consequence of above, the subsequent creation of client portfolios for each segment in order to manage marketing efforts through individualized channels. The successful implementation of these loyalty strategies in customer heterogeneity management requires the collection and management of large amounts of client data. According to Day (2003) having sufficient customer information in good quality and quantity, as well as right processes to spread this information internally is the key to achieve positive results from loyalty-development process. So here comes the another tool of loyalty development called scientific marketing (datawarehouse, datamining, neural networks, among others) which encompasses collecting, analyzing and incorporating information on all interactions with the client.

Furthermore, customer relationship management is the second goal of loyalty programs. Relationship marketing processes contribute to customer loyalty (Anabila, Narteh & Tweneboah-Koduah, 2012; Rizan, Warokka & Listyawati, 2014; Paidari & Namamian, 2015; Chakiso, 2015**;**). Having strong relationships with customer enables the company to offer products and services according to customer needs which results in loyalty (Reinares and Ponzoa, 2002). This leads to other loyalty strategy or multichannel strategy, which consists of reaching the client through a multitude of communication channels (virtual and/or physical) in order to achieve competitive advantage. Finally, the implementation of multichannel strategy in the banking sector usually increases customer interactivity which requires greater coordination among the strategy. To meet this need customer relationship management (CRM) tools arise that understand the customer needs, and satisfy them through the channel the customer chooses in each moment.

A lot of studies have been conducted on customer loyalty in banking sector. But lack of attention on implementation and effectiveness of customer loyalty in banking sector of Bangladesh calls for an extensive study in this sector. Implementation of these above loyalty strategies on banking sector of Bangladesh will be analyzed in this study which was absent in previous studies.

The Effectiveness of Customer Loyalty Strategies in the Banking Sector of Bangladesh

Objectives of the study:

The primary objective of the study is to ascertain the implementation of loyalty development strategies (as described in previous section) among banking industry in Bangladesh. The secondary objective is to identify the effectiveness of these loyalty strategies in this sector.

Methodology:

Research Design: The study is descriptive in nature and is administered to find out the effectiveness of loyalty development strategies in banking sector of Bangladesh. Quantitative data have been collected through questionnaire survey to conduct this study.

Population and Sample: All the commercial banks of Bangladesh are the population for this study. Among those private commercial bank have been chosen for the study. According to Bangladesh Bank (2016), there are 39 private commercial banks in Bangladesh. Out of 39 private commercial banks 30 private commercial banks were chosen as sample size based on purposive sampling method.

Data Collection: Data were collected from both the primary and secondary sources. Primary data was collected from mail survey sent out to the marketing directors of the respective bank. A questionnaire, consisting of 18 separate questions was adopted from Peces, Idoeta & Román, (2012). These questions were primarily close ended. Besides, some additional questions were used to capture descriptive comments. The authors have studied the evolution of the "desertion rates" for the past five years of the banks participating in the research, crossing this evolution with the implementation of the loyalty strategies considered in the study. The respondents were required to rate on a Likert-type, five point scale ranges from significantly reduced to significantly increased to indicate whether the customer desertion rates have reduced or not. Secondary data were collected from published reports, magazines, online and printed journals.

Data analysis: This refers to the examination of the coded data and making inferences. The descriptive statistic was administered for the basic features of data in this study. Descriptive statistic provides simple conclusions about the sample and the measures (Trochim 2008). Data were processed through SPSS version 20 software.

Results and findings:

The implementation of the different loyalty development strategies among banking sector of Bangladesh is shown below:

Table 1: Implementation of loyalty-development strategies

	Not in use	Future implementation	Implemented 1-2 years ago	Implemented 3 or more years ago
Client segmentation	0%	0%	4%	96%
Different marketing strategies for each segment	0%	39%	20%	41%
Client portfolios	0%	5%	20%	75%
Scientific marketing tools	0%	35%	51%	14%
Multichannel strategy	0%	30%	50%	20%
CRM tools	0%	30%	41%	29%

Source: Primary data collected through survey.

The result indicates (Table 1) that only the first loyalty strategy is fully implemented in the banking industry of Bangladesh. Among other loyalty strategies only Client portfolio was implemented 3 or more years ago in about 75% of banks. However, other strategies are implemented whether recently or are in process for future implementation.

As for the second objective of this study, to identify the effectiveness of the implementation of these strategies to improve customer loyalty of banking sector of Bangladesh, the evolution over the last five years of the "churn rate" for each one of these strategies has been analyzed.

To evaluate the first three strategies, exclusively the creation of client portfolios has been analyzed, as it is derived from the first two strategies, customer segmentation and differentiated marketing policies for each segment. So it is considered that client portfolios analysis includes the analysis of customer segmentation and differentiated marketing policies for each segment.

The results obtained by studying the evolution of the churn rate in the last five years, after implementing the creation of client portfolios among financial institutions, are shown in Table 2.

Table 2: Development of client desertion rates as a result of implementation of client portfolios

Implementation of client portfolios	Change in client desertion rates				
	Significantly reduced	Slightly reduced	No Change	Slightly increased	Significantly increased
Not in use or Future implementation	0%	33%	67%	0%	0%
Implemented 1-2 years ago	0%	47%	53%	0%	0%
Implemented 3 or more years ago	0%	64%	36%	0%	0%

Source: Primary data collected through survey.

According to Table 2 a higher percentage of financial institutions that implemented client portfolios for each segment in one or two years ago, shown a slight decrease in their client desertion rates in comparison with those that did not (47% versus 33%). However, banks that implemented this strategy in 3 or more years back achieved better result in terms reducing client desertion rate (64% versus 47%).

On the other hand, the results obtained by analyzing the evolution of the churn rate in the last five years, after implementing the scientific marketing tools, are shown in Table 3.

Table 3: Development of client desertion rates as a result of implementation of scientific marketing tools

Implementation of scientific marketing tools	Change in client desertion rates				
	Significantly reduced	Slightly reduced	No Change	Slightly increased	Significantly increased
Not in use or Future implementation	0%	39%	61%	0%	0%
Implemented 1-2 years ago	0%	68%	32%	0%	0%
Implemented 3 or more years ago	0%	59%	41%	0%	0%

Source: Primary data collected through survey.

Table 3 shows banks that implemented scientific marketing techniques in one or two years ago experienced a slight decrease in their client desertion rates in comparison with those that did not (68% versus 39%). There is not much change among the banks that implemented these tools in 1 or 2 years back and those that implemented them 3 or more years back (68% versus 59%).

Moreover, by cross-listing the evolution of desertion rates with the implementation of multichannel strategy, we obtain the results shown in Table 4.

Table 4: Development of client desertion rates as a result of implementation of multichannel strategy

Implementation of multichannel strategy	Change in client desertion rates				
	Significantly reduced	Slightly reduced	No Change	Slightly increased	Significantly increased
Not in use or Future implementation	0%	27%	73%	0%	0%
Implemented 1-2 years ago	0%	57%	43%	0%	0%
Implemented 3 or more years ago	0%	60%	40%	0%	0%

Source: Primary data collected through survey.

Table 4 shows banks that implemented multichannel strategy in 1-2 years ago are experiencing a larger percentage of slight reduction of client desertion rates in comparison of those that did not introduce this strategy (57% versus 27%). On the other hand, there is not a large difference between institutions that implemented these tools in 1 or 2 years ago and those that implemented them in 3 or more years ago (57% versus. 60%).

Finally, the results obtained by considering the evolution of the "churn rate" in the last five years after implementing CRM tools, are shown in Table 5.

Table 5: Development of client desertion rates as a result of implementation of CRM tools

Implementation of CRM tools	Change in client desertion rates				
	Significantly reduced	Slightly reduced	No Change	Slightly increased	Significantly increased
Not in use or Future implementation	0%	33%	67%	0%	0%
Implemented 1-2 years ago	0%	66%	44%	0%	0%
Implemented 3 or more years ago	0%	71%	29%	0%	0%

Source: Primary data collected through survey.

Table 5 indicates again that banks that implemented CRM tools are achieving higher percentage of slight reduction of client desertion rates in comparison of those that did not introduce this strategy (66% versus 33%). On the other hand, there is not a much difference between institutions that implemented these tools in 1 or 2 years ago and those that implemented them in 3 or more years ago (71% versus. 66%).

According to Table 1 only first loyalty development strategy is fully implemented among the sample banks. 5% to 39% of the sample banks have not yet implemented the other loyalty development strategy. But these loyalty development strategies are in process for future implantation. Though the marketing directors of those particular banks perceive the importance of these loyalty development strategies but lack of infrastructure facilities and skilled personnel are the major reasons that kept them behind. This

confirms the relevance, as indicated by Fainé and Tornabell (2001) that companies in this sector are trying to give much effort for the customer loyalty development processes.

As for the second objective of the study from Table 2 to Table 5 show that banks that implemented loyalty development strategies have been succeeded in reducing client desertion rates which confirms the effectiveness of loyalty development strategies suggested by previous researchers.

Conclusions:

Today most of the marketing directors think that due to customer oriented strategy banks are now accountable for keeping up better relationship with their customers, whereas in the past this was up to the customer. Because of continuous interaction with customers and sophisticated information system banks are now able to stock up information about customers and profile them easily for the sake of future contacts. Now profitable customer wants to be aware of their importance to the bank and they don't negotiate for anything less than first-rate service. These things are making the job tough for a marketing director. In this case customer loyalty can play a pivotal role. As the banks with loyalty development strategies are experiencing reduction in their client desertion rates the study concludes the effectiveness of loyalty development strategies in banking sector of Bangladesh. Instead of that fact the strategies are not fully implemented among the banks which should be a concerning matter for the policy makers.

References:

1.   Ali, R., Leifu, G. & Rehman, R., (2014), "Factors Influencing Customer Loyalty of Banking Industry: Empirical Evidence from Pakistan" *International Journal of Learning & Development*, Vol. 4, No. 2, pp. 9-26.

2.   Anabila, P., Narteh, B. & Tweneboah-Koduah, E.Y. (2012), "Relationship Marketing Practices and Customer Loyalty: Evidence from the Banking Industry in Ghana" *European Journal of Business and Management*, Vol. 4, No.13, pp. 51-61.

3.   Bae, Y.H., (2012), "Three Essays on the Customer Satisfaction-Customer Loyalty Association" PhD (Doctor of Philosophy) thesis, Business Administration, University of Iowa.

4.   Bagherzad, A, Chavosh, A. and Hosseinikhah, S. (2011), 'The Influence of Relationship Marketing Tactics on Customer's Loyalty in B2C Relationship– The Role of Communication and Personalization,' *European Journal of Economics, Finance and Administrative Sciences*, Vol. 5, No. 31, pp. 49-56.

5.   Bangladesh Bank (2016). [Online] Available from -https://www.bb.org.bd/fnansys/bankfi.php [Accessed: 4th April 2017]

6.   Bigne, E. &Andreu, L. (2004), "Emociones, satisfacción y lealtad del consumidor en entornoscomerciales" *Distribución y Consumo*, Julio-Agosto, pp. 77-87.

7.   Chakiso, C.B. (2015), "The effect of relationship marketing on customers' loyalty (Evidence from Zemen Bank)", *Emerging Markets Journal*, Vol. 5 No. 2, pp. 58-70.

8.   Cronin, J., Brady, M. and Hult, G. (2000), "Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments", *Journal of Retailing*, Vol. 76, No. 2, pp. 193-216.

9.   Day, G. (2003), "Creating a superior customer-relating capability", *MIT Sloan Management Review*, Vol. 44, No. 3, pp. 77-82.

10.   Day, G.S. (1969), "A Two-Dimensional Concept of Brand Loyalty," *Journal of Advertising Research*, Vol. 9 No. 3, pp. 29-35.

11.   Dick, A.S. and Basu, K., (1994), "Customer Loyalty: Toward an Integrated Conceptual Framework," *Journal of the Academy of Marketing Science*, Vol. 22 No. 2, pp. 99- 113.

12.   Duffy, D.L. (2003), "Internal and external factors which affect customer loyalty", *Journalof Consumer Marketing*, Vol. *20, No.* 5, pp. 480-485.

13.   Faine, I. and Tornabell, R. (2001) *Pasiónpor la Banca*. Bilbao: Ediciones Deusto.

14.   Huete, L., Serrano, J. and Soler, I (2003), *Servicios y Beneficios*, Bilbao: Ediciones Deusto.

15.   Husnain, M. & Akhter, M.W. (2015), "Relationship Marketing and Customer Loyalty: Evidence from Banking Sector in Pakistan", *Global Journal of Management and Business Research: E Marketing*, Vol. 15 Issue. 10 Version 1.0 Year 2015, pp. 1-15.

16.   Jacoby, J. and Chestnut, R.W., (1978), *Brand Loyalty Measurement and Management*. New York: Wiley.

17.   Jacoby, J. and Kyner, D.B., (1973), "Brand Loyalty vs. Repeat Purchasing Behavior," *Journal of Marketing Research*, Vol. 10 No. 1, pp. 1-9.

18.   Kandampully, J. & Duddy, R. (1999), "Relationship marketing: a concept beyond the primary relationship", *Marketing Intelligence& Planning*, Vol. 17, No. 7, pp. 315-23.

19.   Khan, M.M. & Fasih, M, (2014), "Impact of Service Quality on Customer Satisfaction and Customer Loyalty: Evidence from Banking", *Pakistan Journal of Commerce and Social Sciences*, Vol. 8, No. 2, pp. 331- 354.

20.   Kotler, P. (2000) *Marketing Management*. The Millennium Edition, New Jersey, N.J.: Prentice-Hall Inc.

21.   Kotler, P., Cámara, D. and Grande, I. (1995), *Dirección de Marketing*, 8th edition, Madrid: Editorial Pearson.

22.   Lacey, R. and Sneath, J. (2006), "Customer loyalty programs: are they fair to consumers?",*Journal of Consumer Marketing*, Vol. 23, No. 7, pp. 458-464.

23.   Lau, M.M, Cheung, R., Lam A.Y. & Chu, Y.T., (2013), "Measuring Service Quality in the Banking Industry: A Hong Kong Based Study", *Contemporary Management Research*, Vol. 9, No. 3, September 2013, pp. 263-282.

24.   Lovelock, CH. and Wright, L., (2002), Principles of Marketing and Services. Abolfazal Tajzadeh Namim, Tehran..

25.   Mas, S., (2003), *Servicios Financieros: La era del cliente*, Barcelona: Editorial Gestión 2000.

26.   Nunes, J. and Drèze, X. (2009), "Feeling superior: the impact of loyalty program structure on consumers´ perception of status", *Journal of Consumer Research*, Vol. 16, No. 6, pp. 890-905.

27.   Oliver, R.L. (1999), "Whence Consumer Loyalty," *Journal of Marketing*, 63 (Special Issue), pp. 33-44.

28.   Paidari, S. & Namamian, F. (2015), "A Study of Relation-Oriented Marketing on Banks' Customer Loyalty" *International Journal of Economy, Management and Social Sciences*, Vol. 4, No. 2, February, 2015. pp. 221-224.

29.   Paulík, J., Kombo, F. & Ključnikov, A., (2015), "CSR as a driver of satisfaction and loyalty in commercial banks in the Czech Republic", *Journal of International Studies*, Vol. 8, No 3, pp. 112-127.

30.   Peces, C.C., Idoeta, C.M & Román, C.P. (2012), " The Effectiveness of Customer Loyalty Strategies in the Spanish Banking Sector" *International Journal of Business and Social Science,* Vol. 3, No. 21, November 2012, pp.1-7.

31.   Pullman, M., & Gross, M. (2004), "Ability of Experience Design Elements to Elicit Emotions and Loyalty behaviors", *Decision Sciences Journal*, Vol. 35, No. 3, pp. 551-578.

32.   Quest, D., (2005), "Clubes y tarjetas de fidelización", *The Marketing Intelligence Review*, Vol. 5, pp. 4-9.

33.   Reichheld, F.E., & Sasser, W.E., (1990), "Zero defections: quality comes to service", *Harvard Business Review*, Vol. 68, No. 9, pp. 105-111.

34.   Reinares, P. and Ponzoa, J. (2002), *Marketing Relacional. Un nuevoen foquepara la seducción y fidelización del cliente*, Madrid: Editorial Financial Times- Prentice Hall.

35.   Reinares, P., Reinares, E. and Mercado, C. (2010), "Gestión de la heterogeneidad de los consumidores mediante programas de fidelización", *Revista Europea de Dirección y Economía de la Empresa*, Vol. 19, No. 3, pp. 143-160.

36.   Rizan, M., Warokka, A. & Listyawati, D. (2014), "Relationship Marketing and Customer Loyalty: Do Customer Satisfaction and Customer Trust Really Serve as Intervening Variables?"„*Journal of Marketing Research and Case Studies*, Vol. 2014 (2014), pp. 1-12.

37.   Schneider, B. (1980), "The service organisation: climate is crucial", *Organisational Dynamics*, Autumn, 52-65.

38.   Siddiqi, K.M., (2011), "Interrelations between Service Quality Attributes, Customer Satisfaction and Customer Loyalty in the Retail Banking Sector in Bangladesh", *International Journal of Business and Management*, Vol. 6, No. 3; March 2011, pp. 12-36.

39.   Srinivasan, S.S., Anderson, R. & Ponnavolu, K., (2007), "Customer loyalty in e-commerce: an exploration of its antecedents and consequences", *Journal of Retailing*, Vol. 78 No. 1, pp. 41-50.

40.   Taleghani, M., Gilaninia S. & Mousavian, S.J. (2011), "The Role of Relationship Marketing in Customer Orientation Process in the Banking Industry with focus on Loyalty" *International Journal of Business and Social Science,* Vol. 2, No. 19, October 2011, pp. 155-166.

41.   Trochim, W.M.K. (2008). *Research Methods Knowledge Base*, [Online] Available from - http://www.socialresearchmethods.net/kb/statdesc.php[Accessed: 30 June 2016].

42.   Uncles, M., Dowling, G. and Hammond, K. (2003), "Customer loyalty and customer loyalty programs", *Journal of Consumer Marketing*, Vol. 20, No. 4, pp. 294-316.

43.   Yi, Y. (1991), "A Critical Review of Consumer Satisfaction," *Review of Marketing 1990*, ed. Valarie A. Zeithmal, Chicago: American Marketing Association, pp. 68-123.

DETERMINANTS OF NON-PERFORMING INVESTMENT: EVIDENCE FROM ISLAMIC BANKS IN BANGLADESH

Md. Mahtab Uddin*

Md. Saif Uddin Rashed**

Papi Halder***

Abstract

The reason behind the Nonperforming Investment (NPI) in the Islamic banking sector since the adaptation of prudential guidelines in the credit risk grading (CRG) and loan loss provisioning system in 2005 has been analyzed in this paper. The objective of this study is to investigate the significant determinants that affect NPI at the Islamic Banks of Bangladesh and this study was guided by macroeconomic variables and bank specific variables in where macroeconomic variables are included unemployment rate ,inflation, real interest rate, broad money growth, growth rate of Foreign Direct Investment (FDI), Gross Domestic Product (GDP) growth rate and bank specific variables are growth rate of Investment , Non Performing Investment Ratio, Return on Asset (ROA) & Classified Investment Provision Ratio. This study covers data from year 2005 to 2016 for a sample of 6(six) Islamic banks in Bangladesh. The result of investigation reveals that more than 80% variation of NPI is caused by the macroeconomic and bank specific variables and the GDP growth, Broad Money Growth, Inflation & ROA have inverse relationship with NPI and Unemployment Rate, Classified Investment Provision, and the real interest rate affects NPI positively.

Keywords: Islamic Bank, NPI, Unemployment Rate, Inflation Rate, Broad Money Growth, Classified Investment Provision, ROA.

1.0 Introduction

In a traditional banking system, the bank earns profit through borrowing fund from surplus unit and extending loans to the deficit unit. Spread, difference between the borrowing rate and the lending rate, is

*Assistant Professor, Department of Finance and Banking, University of Barishal
**Lecturer, Department of Finance and Banking, University of Barishal.
*** Lecturer, Department of Finance and Banking, University of Barishal

the main sources of earnings for traditional banking system. On the other hand, Islamic banks operate on profit sharing and equity sharing system which are consistent with the principles of Islamic Shariah. Islamic banks collect funds from the depositors on the agreement of profit sharing and invest in businesses on the Profit Loss Sharing (PLS) system. The Islamic banking sector continued to show steady development since its beginning in 1983 until December 2016alongside with the growth in the conventional financial system. The increasing trend reflects in the market share of the Islamic banking sector in terms of total assets, fund disbursement and deposit collection of the total banking system. Bangladesh Bank reported that the total deposits and investments of the Islamic banking industry stood at 20.7 percent and 23.7 percent respectively at the end of December 2015.

The clause of Profit Loss Sharing (PLS) system in investment management has made the Islamic banks in an unique position. However, this uniqueness did not able to eliminate the risk of Non-Performing Investment from its investment portfolio. A loan or investment in Islamic banking sector is known as NPL or Non-Performing Investment (NPI) if the principal and payment of interest are not refined by the borrowers for a period of 90 days or more (Atauret al., 2017).Non performing loan(NPL) is one of the tools to measure the performance of commercial banks (Akhter & Roy 2017). Non performing loan including Non performing investment of Islamic banks has been showing a rising trend during the last few years (CPD,2017). Bangladesh Bank reported that Non-performing loan (NPL) ratios was 13.6 percent in 2005 but it came down to 10.1 percent in 2016. On the other hand, NPL was increasing from 2012 to 2016 except the year 2013. In this period banking sector experienced some loan scandal and breaking down of corporate governance issues that further deteriorated the NPL in banking sector. Over the period NPL increased to Taka 633.7 billion in june 2016 from Taka 427.3 billion in 2012 and the leading contributor to the growth in NPL were by the state owned bank although they provide only 19 percent loan to the total loans disbursed by all the scheduled banks(CPD , 2017).Almost 50 percent of NPL is contributed by the state owned banks (Lata, 2015).It is also observed that Bangladesh Bank has also taken initiatives to reduce this large volume of NPL from all categories of banks.But the consequence of their action is not fully reflected in the overall Non Performing Loan.

Determinants of Non-Performing Investment: Evidence From Islamic Banks In Bangladesh

The purpose of this study is to investigate the factors that affect the classification and management of non-performing investment in Islamic banks.

The rest of this paper proceeds as follows: section 2 summarizes some prominent previous empirical studies. methodology is explained in section 3. Section 4 provides the results from the analysis and finally section 5 concludes the paper.

2. Literature Review

Since the privatization and liberalization, the non-performing loans have been a burning issue in banking sector of Bangladesh. The soundness of banking system ensures an effective economic growth with the quality of loans in a macroeconomic ambience, commercial banks have to take sound consideration in macroeconomic determinants on non-performing loans. The following studies help us to continue the study.

Messai and Jouini(2013) conducted a study to detect the determinants of non-performing loans for 85 banks who have faced financial problems after the subprime crisis on 2008 in three countries (Italy, Greece and Spain) from 2004 to 2008. The macroeconomic variables like the rate of growth of GDP, unemployment rate and real interest rate with respect to specific variables opted for the return on assets, the change in loans and the loan loss reserves to total loans ratio have been fall into analysis. Analyzing panel data, the paper found that the loans vary negatively with the growth rate of GDP, the profitability of banks' assets and positively with the unemployment rate, the loan loss reserves to total loans and the real interest rate.

Adhikary (2006) investigated the magnitude of Nonperforming Loans in the banking sector of Bangladesh since the adoption of prudential norms in the loan classification and provisioning system in 1990. The results revealed that the presence of an alarming amount of NPLs both in the Nationalized Commercial Banks (NCBs) and in the Development Financial Institutions (DFIs), along with maintenance of inadequate loan loss provisions, diminishes the overall credit quality. This study also

found that poor enforcement of laws is one of the major causes for insufficient debt recovery in the banking sectors of Bangladesh.

In a study Badar et al (2013) investigated the long and short run dynamics between nonperforming loans and macro economic variables for the period of 2002 to 2011 in Pakistan. Inflation, exchange rate, interest rate, gross domestic product and money supply have been included as macroeconomic variables. A long run relationship was found among the variables by employing Johansen and Juselius multivariate co integration test. Granger causality test revealed that inflation and exchange rate cause Nonperforming loans. But Vector error correction model showed that weak short run relationship exists between Nonperforming loans with inflation and exchange rate.

Ranjan and Dhal (2003) showed how bank's non-performing loans are significantly affected by financial factors including credit policy, bank size, maturity and macroeconomic forces like GDP growth rate.

Khemraj and Pasha (2009) found that higher bank's interest rate and excessive lending are main causes for higher levels of non-performing loans. The study also added that non-performing loans and GDP growth have inverse relationship and non-performing loans can be decreased by improving real economy.

Reddy (2004) viewed that bank's lending policy has significant pressure on non-performing loans. A default can make little irrational decision. But a defaulter considers probabilistic assessment of different threats and opportunities of his decision. Bank's lending policy is also reflected by lazy banking.

Sujan et al (2014) explored the determinants of macro-economic variables on the non-performing loan taking 18 scheduled banks of Bangladesh from 2004 to 2013. GDP growth, inflation and interest spread have been selected as the determinants of non-performing loan. The study found that inflation affects NPLR positively but the local private commercial banks, GDP growth had inverse relation with NPLR.

Determinants of Non-Performing Investment: Evidence From Islamic Banks In Bangladesh

Haneef and Riaz (2012) identified that bank's profitability is largely affected by non-performing loans. The study suggested that non-performing loans of a bank can be reduced by taking steps which are recommended by the central bank of perspective country.

Lis, et. al (2000) examined that non-performing assets are negatively influenced by GDP growth, bank size and capital. It also found that non-performing assets are also positively influenced by loan growth, collateral, net interest margin, debt-equity, market power and regulation regime.

Ataur, Asaduzzaman & Shakhaowat (2017) carried out their own study examining how financial ratios have significant impact on non-performing loans of Bangladeshi commercial banks. They identified financial ratios as independent variables and the gross non-performing loans as dependent variable and showed their cause-effect relationship. The study investigated that credit-deposit ratio, sensitive sector's loan, priority sector's loan, net interest margin have a positive influence on NPL whereas unsafe loans, each employee's profit, capital adequacy ratio, return on asset, investment deposit ratio have a negative influence on NPL.

Muniappan (2002) suggested that no profitability and capital adequacy of a bank are significant with a high level of NPL because a bank with a high level of NPL is compelled to claim carrying costs on non-income yielding assets.

Saba, Kouser & Azeem (2012) suggested that Banks should check and repair their credit improvement policy with respect to real GDP per capita, inflation and total loans (independent variables) to have lower NPLs ratio (dependent variable). Although NPLs are negatively related to bank's profit efficiency (Fan and Shaffer 2004). Karim et al (2010) also identified bank's inefficiency which is caused by non-performing loans by studying the relationship between NPL and bank's efficiency.

Rozina and Jewel (2017) found the time series scenario of non-performing loan on bank's profitability by using 30 listed commercial banks of Dhaka Stock Exchange over the period of 2008 to 2013 which is examined through the linear regression model of econometric technique.

In determining the macro-economic performance on non-performing loan, N. Klein (2013) applied SVAR estimation to show the negative impact of NPL ratios on credit, growth and employment in Europe during 2008-2009 financial crisis.

Shafiqul ,Mahbubul and Kader (2015) identified some causes of non-performing loan that have severe influence on bank's stability. They found that deposit diversion, political interference, political instability, corrupted bankers involvement, invasive banking, failure of real-estate business, absence of quick monitoring and assistance among related parties are the main causes that increase NPL to a great extent.

Mamun, Yasmeen, Mehjabeen (2012) pointed out some factors accountable for lending decision by the commercial banks of Bangladesh applying a set of decision variables available in the standard loan application process. The most important factors for loan approval probabilities are investment type, investment risk grading score and borrower's previous transaction record which have been identified and examined by the authors.

3.0 Methodology

In our research we use secondary data and collect data in purposive sampling. For the analysis the data have been collected from the annual report of the selected banks and the annual reports of the Bangladesh bank from 2005 to 2016. Firstly data had processed in Microsoft Excel software and for analysis purpose we use analysis software Eviews 4.

This research considers that Non Performing Investment (NPL/TL)is dependent on the bank specific variables and macroeconomic variables. The independent variables of this study are broad money growth rate, foreign direct investment growth rate, GDP growth rate, Real interest rate, inflation rate,

unemployment rate as macroeconomic variables and bank specific variables are investment growth rate, classified investment provision ratio (LLR/NPL), Return on asset (ROA).

4.0 Result

Graphical overview

In any time series a visual plot of the data is usually the first step in the analysis (Gujrati,2005). The basic features of the data including patterns and unusual observations are most easily seen through graphs. Sometimes graphs also suggest possible explanations for some of the variation in the data (See for example, Makridakis, (2003)).

Gujrati (2005) also suggest the a plot gives an initial clue about the likely nature of the time series or shows an upward or downward trend, seasonal or cyclical variations etc. This suggests that the time series is not stationary. Such an intuitive feel is starting point of more formal test of stationarity.

We construct the time series plot of production of bank variables (Classified investment provision ratio, investment growth (loan growth), Classified investment ratio, ROA), GDP, Broad money, Inflation, Real interest rate from 2005 to 2016 and present them in the following paragraphs.
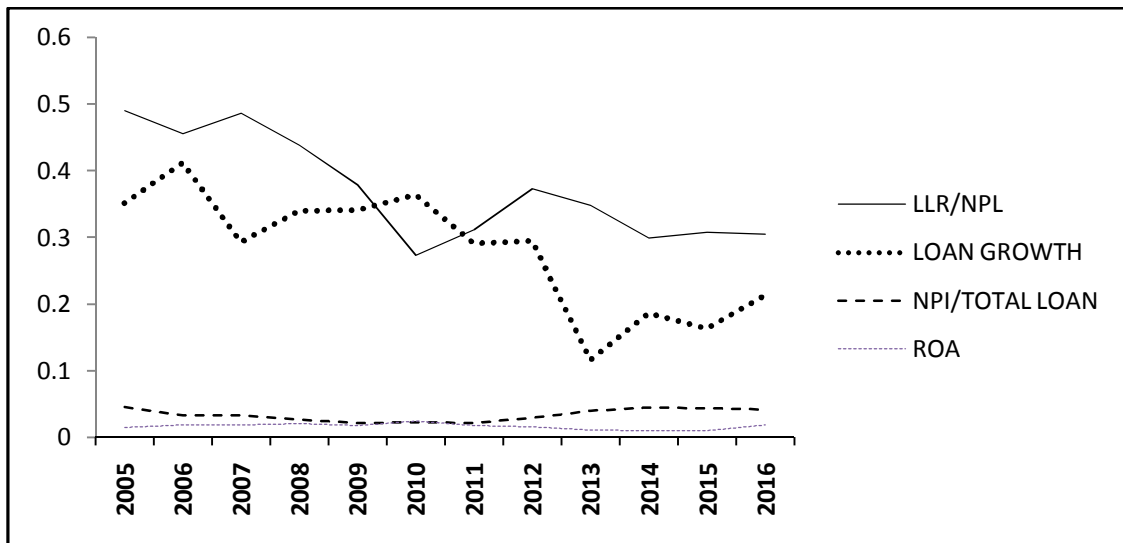
Fig .1. The line diagram of the bank variables (Classified investment provision ratio, investment growth, Classified investment ratio, ROA) from 2005 to 2016.
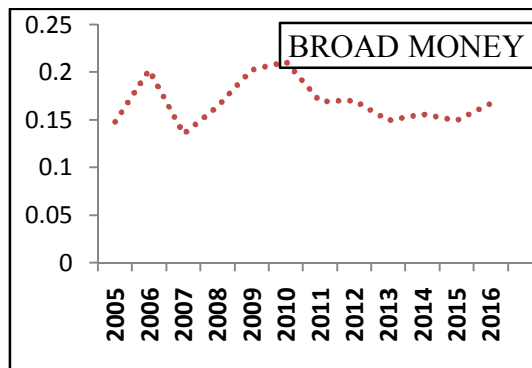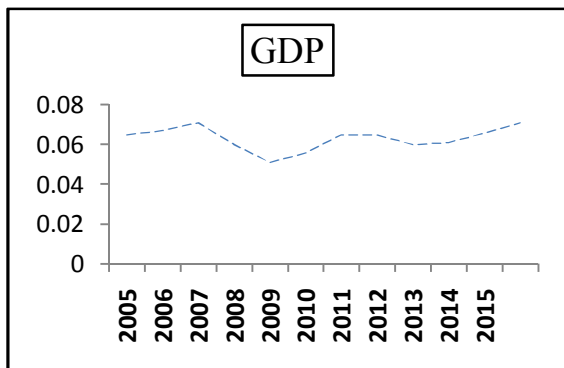
Fig.2. The GDP percentages from 2005 to 2016   Fig.3. The Broad money from 2005 to 2016
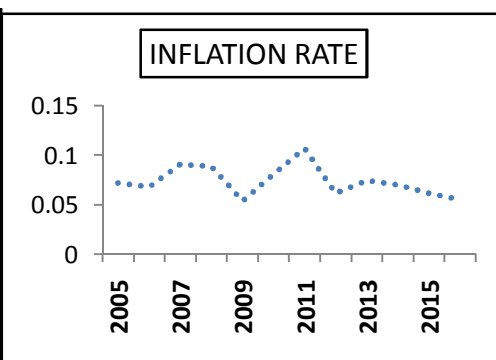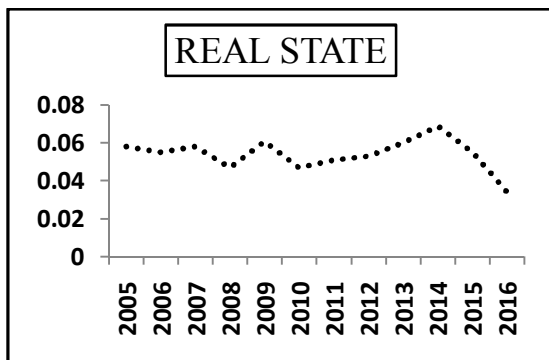
Fig.4.The Real state of interest 2005 to 2016   Fig.5. The Inflation rate from 2005 to 2016

The first impression that we get from these graphs is that all the time series shown in Figures 1, 2,3,4, and 5 seem to be "trending" upward, albeit with fluctuations.

Figures which indicate that the values of diagrams are increasing or decreasing over time. So the series has an upward trend variation and downward trend variation, also we can observe that there is three cyclical pattern. So the series is non-stationary as the mean is increasing and decreasing.

Descriptive analysis

For the description of the individuals macro variables (Broad money, GDP, Inflation, Real interest rate, Unemployment rate, FDI) and the Bank variables name investment growth rate, Classified investment

provision ratio (LLR/NPL), ROA, Classified investment ratio (NPI/TL) we conducted description analysis and results (mean and Standard deviation) listed in a histogram. From the figures 6 we can identify the variation or the standard deviation is high in the FDI variables. The variation of investment growth and Classified investment provision ratio variable is also high and comparatively less than FDI. In the rest of the variables like GDP, Inflation rate,ROA etc. the standard deviation is very low
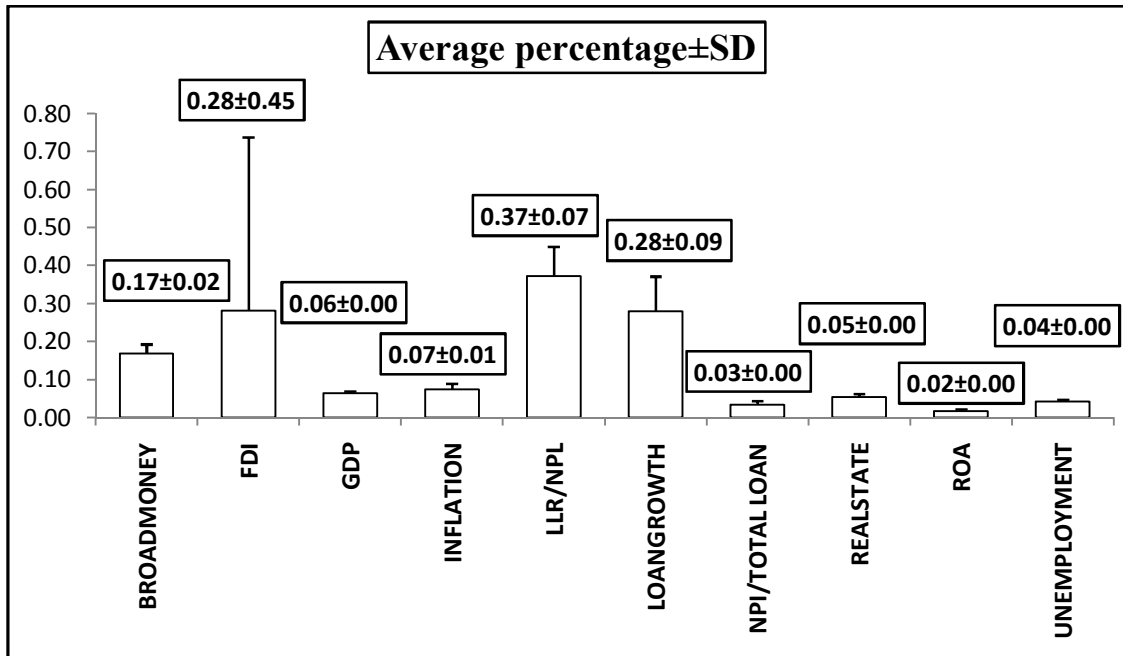
Fig.6. The mean and the Standard deviation of different variables.

Test of Stationary

Gujrati (2005) mention that there are several tests of stationarity, but we discuss only those thatare prominently discussed in the literature. In this section we discuss twotests: (1) graphical analysis (thecorrelogram test) and Unit root test.

Correlogram

For the test of the stationary especially by the graphical view we conducted the Correlogram test as below.
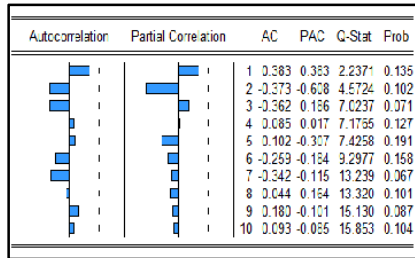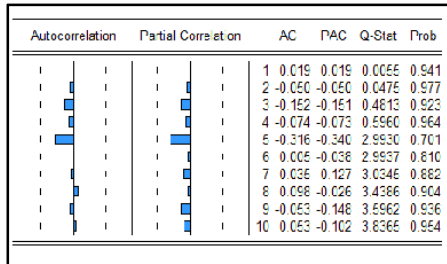
Fig.7. Thecorrelogram for Broad money at level   Fig.8. The Correlogram for GDP at level
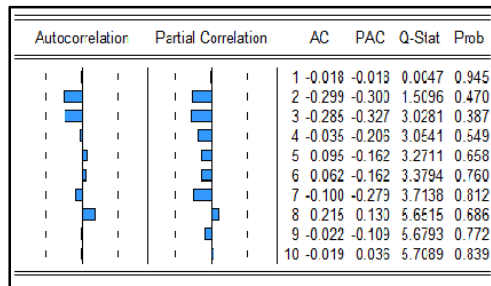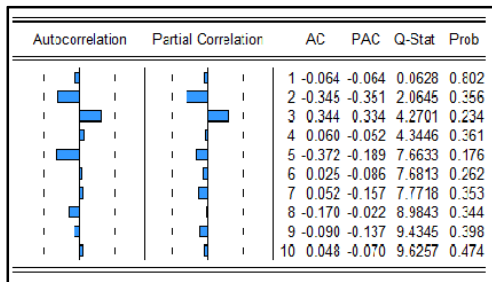
Fig.9. Thecorrelogram for Inflation rate at level Fig.10. The Correlogram for ROA at level
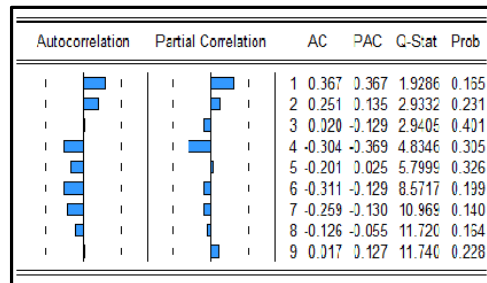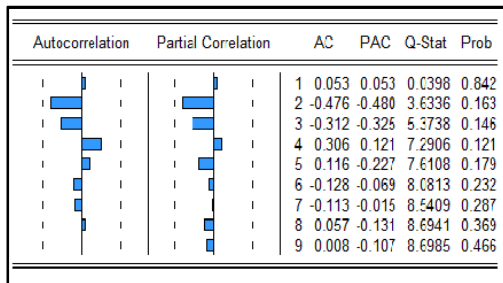
Fig.11. Thecorrelogram for LLR/NPL at 1stdeff   Fig.12. The correlogram for NPI/TL at 1st diff

Determinants of Non-Performing Investment: Evidence From Islamic Banks In Bangladesh

The correlogram test has shown that each variable has stationary assumption as the grids of auto correlation and partial auto correlation are not extend out of range at level or 1st deference which are shown above. For the more clarification we test the data by unit root test

Unit root test

Unit root test is the widely popular over the past several years to test of stationarity (or non-stationarity).the appropriate null hypothesis is $\delta = 0$; that is, there is a unit root-the time series data of selected industrial commodities is non-stationary against The alternative hypothesis is $\delta < 0$; that is, there is no unit root-the time series data. To estimate unit root test using Augmented Dickey-Fuller test for stationarity.

Table 1: Summery results of Unit root test for selected variables

Test for unit root-Level			
Variable name	t-value	P-value	Remarks
Broad money	-0.161	0.61	Non-stationary
FDI	-0.761	0.36	Non-stationary
GDP	0.156	0.71	Non-stationary
Inflation	-0.654	0.41	Non-stationary
LLR/NPL	-1.426	0.14	Non-stationary
Loan growth	-1.641	0.09	Non-stationary
Real Interest Rate	-0.854	0.32	Non-stationary
ROA	-0.184	0.60	Non-stationary
Unemployment	-0.344	0.54	Non-stationary
NPI/TL	0.235	0.73	Non-stationary

From the above table it is evident that, the *p*-values are more than 5% so the selected variables are non-stationary so we need to convert it stationary. For this purpose we take first difference of all variables and rename the variables.

Table 2: Summary results of Unit root test (first difference) for selected variables

Test for unit root -1st difference			
Variable name	t	P-value	Remarks
D(Broad money)	-5.341	0.000	Stationary
D(FDI)	-6.442	0.000	Stationary
D(GDP)	-2.302	0.027	Stationary
D(Inflation)	-4.422	0.001	Stationary
D(LLR/NPL)	-2.648	0.014	Stationary
D(Loan growth)	-5.159	0.000	Stationary
D(Real Interest Rate)	-3.053	0.006	Stationary
D(ROA)	-3.387	0.003	Stationary
D(unemployment)	-3.574	0.003	Stationary
D(NPI/TL)	-2.638	0.014	Stationary

From the above table it is evident that p-value of selected variables after taking thefirst difference are less than 0.05 so we concluded that all data series has no unit root problem the selected variables are stationary.

After the first difference all the data series become stationary and. In some results there are contrast between unit root test and Correlogram test but we emphasize to the unit root test results.

Determinants of Non-Performing Investment: Evidence From Islamic Banks In Bangladesh

Multicollinearity

For the test of Multicollinerity problem among the independent variables, we employ the correlation matrix among the independent variables.

Table 3: The Correlation matrix of independent variables

	D(BROAD MONEY)	D(FDI)	D(GDP)	D(INFLA TION)	D(LOANG ROWTH)	D(LLR/ NPL)	D(REAL STATE)	D(ROA)	D(UNEMPL OYMENT)
D(BROADMONEY)	1.00	-0.59	-0.45	-0.53	0.76	-0.56	-0.19	0.45	0.35
D(FDI)	-0.59	1.00	0.09	0.41	-0.42	0.16	-0.38	0.08	-0.75
D(GDP)	-0.45	0.09	1.00	0.44	-0.05	0.36	-0.31	0.17	-0.22
D(INFLATION)	-0.53	0.41	0.44	1.00	-0.41	-0.18	-0.18	0.06	-0.54
D(LOANGROWTH)	0.76	-0.42	-0.05	-0.41	1.00	-0.37	-0.37	0.60	0.07
D(LLR/NPL)	-0.56	0.16	0.36	-0.18	-0.37	1.00	0.10	-0.41	-0.09
D(REALSTATE)	-0.19	-0.38	-0.31	-0.18	-0.37	0.10	1.00	-0.79	0.51
D(ROA)	0.45	0.08	0.17	0.06	0.60	-0.41	-0.79	1.00	-0.26
D(UNEMPLOYMENT)	0.35	-0.75	-0.22	-0.54	0.07	-0.09	0.51	-0.26	1.00

The correlation matrix among the independent variables shows the individual correlation between two variables. Since from the tables we can see the correlation between or among the variables are not significantly high; we conclude that there is no multicollinearity among the variables.

Ganger Causality test

Most of time simple correlation does not imply that any variable can cause other variables. By the Ganger Causality test between dependent variable and independent variables we can find the causal relationships; the result of test between variables as follows:

Table 4: The Ganger causality test between endogenous and exogenous variable.

Null Hypothesis:	F-Statistic	Probability
D(NPI/TL) does not Granger Cause D(BROADMONEY)	1.67916	0.2955
D(BROADMONEY) does not Granger Cause D(NPI/TL)	0.11717	0.002
D(NPI/TL) does not Granger Cause D(FDI)	1.2234	0.38497
D(FDI) does not Granger Cause D(NPI/TL)	1.15985	0.005
D(NPI/TL) does not Granger Cause D(GDP)	2.37661	0.20883
D(GDP) does not Granger Cause D(NPI/TL)	0.14741	0.033
D(NPI/TL) does not Granger Cause D(INFLATION)	2.10265	0.23765
D(INFLATION) does not Granger Cause D(NPI/TL)	0.51579	0.044
D(NPI/TL) does not Granger Cause D(LOANGROWTH)	3.5979	0.12765
D(LOANGROWTH) does not Granger Cause D(NPI/TL)	0.08254	0.007
D(NPI/TL) does not Granger Cause D(LLR/NPL)	1.66155	0.29835
D(LLR/NPL) does not Granger Cause D(NPI/TL)	0.38433	0.034
D(REAL INTEREST RATE) does not Granger Cause D(NPI/TL)	1.65339	0.29969
D(NPI/TL) does not Granger Cause D(REAL INTEREST RATE)	0.38725	0.009
D(ROA) does not Granger Cause D(NPI/TL)	1.34586	0.35731
D(NPI/TL) does not Granger Cause D(ROA)	0.36411	0.042
D(UNEMPLOYMENT) does not Granger Cause D(NPI/TL)	0.54757	0.61632
D(NPI/TL) does not Granger Cause D(UNEMPLOYMENT)	1.82143	0.043

Since the p-value of the null hypothesis H_o: Dependent variable does not Granger Cause Independent variables is more than 5% so accept the null hypothesis so dependent variable does not cause the independent variable. Other hands the null hypothesis H_o: Independent variable does not Granger Cause dependent variable is not accepted because the p-value is less than 5%. So the independent variables are causing the dependent variable.

Homosce dasticity test

Table: 5 The result of homoscedasticity test (Breusch-Pagan-Gadfrey)

Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.502155	Prob. F(9,1)	0.8082
Obs*R-squared	9.007028	Prob. Chi-Square(9)	0.4366
Scaled explained SS	0.042393	Prob. Chi-Square(9)	1.0000

The observed R-square of the test which is resulted in the table 4 is 9.007 and Probability value is 0.43>.05. So the result suggest that the residual are homoscedastic.

Normality test
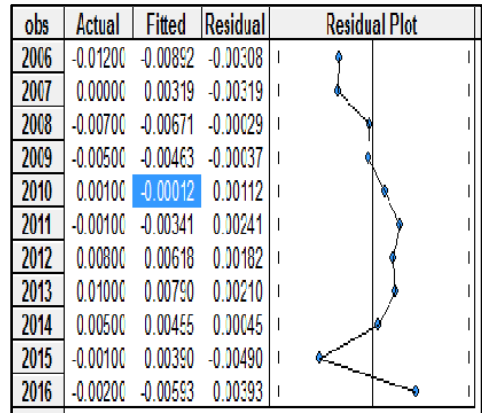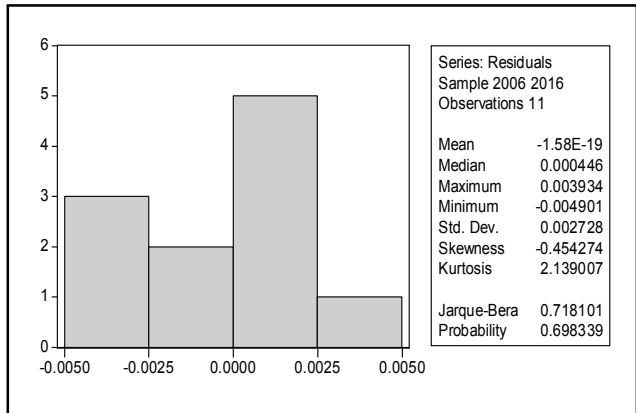
Fig.13. Normality plot(The Jarque-Bara)   Fig. 14. Residual plot

From the the Figure 11 we can see the probability value of Jarque-Bara is more than 5% which is 0.6983 so we accept the null hypothesis Ho: The residuals follows the normal distribution which mean the residuals follows normal distribution.

Another evidence of following the normality assumption we can get from Figure 12 where the residul plot does not go out of range. We also consider the serilaution correlation test and not found any serial autocorrelation among variables.

5.0 Regression model:

Since all the assumption of CLRM satisfied now we can run the regression model and the result of multiple regression analysis are reported as follows:

Table: 6 The result of the regression analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.006606	0.007440	-0.887940	0.5377
D(Broad money)	-0.245023	0.441709	-0.554717	0.0052
D(FDI)	-0.005626	0.016893	-0.333057	0.0432
D(GDP)	-0.774304	0.895525	0.864637	0.0356
D(Inflation)	-0.605212	0.500760	-1.208587	0.034
D(Loan growth)	0.082836	0.088782	-0.933032	0.5220
D(LLR/NPL)	0.210066	0.205650	-1.021473	0.007
D(Real interest rate)	0.065765	0.819761	-0.080224	0.9490
D(ROA)	-0.278828	1.224316	-0.227742	0.0087
D(unemployment)	1.140921	1.248540	-0.913804	0.5287
R-squared	0.819663	Mean dependent var		-0.000364
Adjusted R-squared	-0.803365	S.D. dependent var		0.006423
S.E. of regression	0.008625	Akaike info criterion		-7.247931
Sum squared resid	7.44E-05	Schwarz criterion		-6.886208
Log likelihood	49.86362	F-statistic		0.505021
Durbin-Watson stat	1.641407	Prob (F-statistic)		0.008

Determinants of Non-Performing Investment: Evidence From Islamic Banks In Bangladesh

Firstly from the table we can see that The R^2 value is 0.819 which means that more than 80% variation of dependent variable is caused by independent variable and the model is fitted well. Since for most of the variable's P-value is less than 5% so they have significant influence in fitted model. In addition, The probability value of F-statistic is less than 5% so the model is statistically significant. By the value of coefficient we express the regression as follows:

Estimation Equation:

D(NPI/TL) = C(1) + C(2)* D(Broad money) + C(3)* D(FDI) + C(4)* D(GDP) + C(5)*DLG + C(6)* D(Inflation) + C(7)* D(LLR/NPL) + C(8)* D(Real interest rate) + C(9)* D(ROA) + C(10)* D(unemployment)

Substituted Coefficients:

D(NPI/TL) = -0.00660620041646 - 0.245023319061* D(Broad money) - 0.0056264642793* D(FDI) - 0.774303851802* D(GDP)+ 0.0828363315041* D(Loan growth) - 0.605211842956* D(Inflation)+ 0.210065744956* D(LLR/NPL)+ 0.0657645559139*D(Real interest rate)- 0.278827864585* D(ROA) + 1.14092061225* D(unemployment)

6.0 Conclusion

This study tried to identify the significant bank specific and macro economic factors that can affect and influence on the Non performing Investment of Islamic banking sector of Bangladesh. Islamic Banks classify and manage their non-performing investment differently from the conventional banks in Bangladesh due to the unique nature of profit and loss sharing system (PLS) in their investment process. At the end of research it has come to know that the macroeconomic factors including Board Money, FDI, GDP, Inflation have significant negative relationship with the NPI of Islami banks. Unemployment rate negatively affects the individual & enterprises because it reduces the purchasing power & production in the economy. The study also finds the significant positive relationship among the real interest rate, classified investment provision ratio and investment growth rate and NPI.

This research finds that the classification and management of non-performing investment in Islamic banks are not quite satisfactory despite having PLS-system in investment management. This paper recommends that Islamic banks authority should review their PLS system for their investment management.

References

Adhikary, B.K. (2006)."Non-performing Loans in the Banking Sector of Bangladesh: Realities and Challenges." Bangladesh Institute of Bank Management (BIBM).

Ahlem Selma Messai and FathiJouini (2013) , " Micro and Macro determinants of Non-performing Loans." International Journal of Economics and financial issues, Vol.3, No.4.

Akter, R. and Roy, J.K., 2017. "The Impacts of Non-Performing Loan on Profitability: An Empirical Study on Banking Sector of Dhaka Stock Exchange". International Journal of Economics and Finance, 9(3), p.126.

BB, (2015). Annual Report 2015-2016, Dhaka, Bangladesh Bank .

CPD (2017): State of the Bangladesh Economy in FY2017

Ataur, Asaduzzaman & Shakhaowat (2017) "Impact of Financial Ratios on Non-Performing Loans of Publicly Traded Commercial Banks in Bangladesh**."** International Journal of Financial Research, Vol.8, No.1, January 2017.

Haneef, S., & Riaz, T. (April 2012). Impact of Risk Management on Non-Performing Loans and Profitability of Banking Sector of Pakistan. International Journal of Business and Social Science, 3(7).

Khan A. R. (2008) "Bank Management: A Fund Emphasis" Brothers' Publication, Dhaka.

Khemraj and Pasha (2009) " The determinants of non-performing loans: An econometric case study of Guyana. The Caribbean Centre for Banking and Finance Bi-annual Conference on Banking and Finance, St. Augustine, Trinidad.

Lata, R.S., 2015. "Non-Performing Loan and Profitability: The Case of State Owned Commercial Banks in Bangladesh". World Review of Business Research, 5(3), pp.171-182.

Lis, S.F.de, J.M. Pages, and J.Saurina (2000). Credit Growth, Problem Loans and CreditRisk Provisioning in Spain Banco de España -Servicio de Estudios, Documentode Trabajo no. 0018.

Mamun, Yasmeen, Mehjabeen (2012). "A Logit Analysis of Loan Decision in Bangladeshi Banks" Journal of Applied Research in business Administration & Economics Vol 01, No 03.

Ministry of Finance, (2001-2016). People Republic of Bangladesh. Functions of Banks and Financial Institutions. Dhaka: Various Issues.

Muniappan, G.P. (2002) "The NPA Overhang- Magnitude, Solutions, Legal Reforms." Paper presented atCII Banking Summit, Mumbai, Unpublished, PP: 25-26, April 2002.

Munib Badar et al (2013)."Impact of Macroecomic forces on Nonperforming loans an empirical study of commercial banks in Pakistan." Elixir International Journal.

N. Klein (2013), "Non-Performing Loans in CESEE: Determinants and Macroeconomic Performance", IMF Working Paper 13/72.

Ranjan and Dhal (2003), "Determinants of Non-Performing Loans Case Study Guyana" http://www.ukessays.com/dissertation/literature-review/determinants-ofnon-performing-loans-case-study-guyana-finance.php#ixzz3m04JF3D9

Reddy, P.K. (2004), "A comparative study of non-performing assets in India in the Globa context similarities and dissimilarities, Remedial Measures." The Indian Institute of Management, Ahmedabad, India.

Rozina and Jewel(2017), "The Impacts of Non-performing loan on profitability : An Empirical Study on Banking Sector of Dhaka Stock Exchange." International Journal of Economics and Finance; Vol. 9, No. 3; 2017 ISSN 1916-971X E-ISSN 1916-9728.

Shafiqul, Mahbubul and Kader (2015) ,"Nonperforming Loan and Banking Sustainability: Bangladesh Perspective." International Journal of Advanced Research (2015), Volume 3, Issue 8, 1197 – 1210.

Saba, I, Kouser, R & Azeem, M 2012 'Determinants of Non Performing Loans: Case of US Banking Sector' vol. 44.

Sujan, Pappu and Probir (2014) "Non-performing loans in private commercial banks of Bangladesh: Macro-economic determinants and impacts." The Jahangirnagar Journal of Business Studies, Vol.4, No.1, June 2014.

Empirical Evidence on Macroeconomic Determinants of Foreign Direct Investment Flows to Bangladesh

Tandra Mondal*

Abstract

This study presents an empirical investigation into the macroeconomic determinants of foreign direct investment (FDI) flows to Bangladesh both in the long and short run over the period 1972 - 2016. Using the unit root test, after ascertaining all the data series are stationary at first difference but not at level, Johansen co-integration test was employed to derive the long-run equilibrium relationship. The result indicates that FDI flows to Bangladesh are significantly influenced by the openness to economy, inflation rate, exchange rate, general government consumption expenditure and labor cost. GDP and gross fixed capital formation exhibited negative but insignificant influence on FDI. Moreover, Granger causality results reveal that there is a unidirectional causality running from FDI to GDP and from each of openness to economy and gross fixed capital formation to FDI. Policy recommendation calls for stable macroeconomic policies to enhance FDI flows to Bangladesh.

Keywords: FDI, Macroeconomic variables, Co-integration, Granger causality, Bangladesh.

1. Introduction

Foreign direct investment (FDI) is a macroeconomic variable indicating inflows of foreign investment in a country's economy by foreign entities. It normally happens when foreign company or government invest in host country in order to maximize returns for their shareholders. Globally, multinational and transnational companies continuously are seeking favorable economies for expanding their businesses, particularly for boosting their revenues and generating cost efficiencies. As the global economy is gradually becoming complex and more competitive, these multinational companies (MNCs) are moving towards developing economies for setting up their businesses and profit centers. Hence, foreign direct

*Assistant Professor, Department of Finance and Banking, University of Barishal

investment, in a sense, is a crucial economic phenomenon of any country. It contributes to poverty alleviation, job creation, tax revenues, competitive environment cultivation and productivity increase in host economy.

After global economic and financial crisis of 2008-2009, global FDI flows increased to the highest level of US$1.7 trillion which is 36% jump in 2015 since 2007 though it plummeted to US$1.52 trillion in 2016 due to weak trade volumes. FDI in developed countries has been even dropped particularly in EU and US countries. Although there was high level of FDI in 2015, developed countries accounted for 9% de-growth of total FDI inflows in 2016. This happened because of slow economic growth and dropping commodity prices in those countries. With negative FDI growth of 9% than that of 2015 in developed countries, developing Asia also experienced 22% decline to US$413 billion in 2015.

Bangladesh, after getting independence in 1971, is continuously trying to promote business environment for foreign investors to come in the domestic market. Bangladesh, being an agrarian economy, is gradually moving towards an industrial economy by the passage of time. Economist and researchers manifested FDI as the prime driving forces in augmenting economic success of the country. In Bangladesh, there is always the flavor of low wages for the skilled and semi-skilled workers along with reasonably stable political environment, moderate inflation rate, steady exchange rate and striking incentive packages.

When the GDP stood from US$ 115.28 billion (2010) to US$ 221.31 billion (2016), FDI inflows (net) reached to US$ 2004 million in 2016 from US$ 913.02 million in 2010. It is also evident that in 2015, banking sector, textile and wearing sector, gas and petroleum sector, telecommunication sector and power sector are major contributors to the FDI inflows of the economy. These five sectors accounted for 67.26% of the total FDI in 2016. Furthermore, 79.83% of total FDI inflows came from United Kingdom, United States, Singapore, South Korea, Malaysia, Norway, Netherlands, Hong Kong, India and China in the same fiscal year.

Empirical Evidence on Macroeconomic Determinants of Foreign Direct Investment Flows to Bangladesh

Sound FDI flows are dependent on some crucial macroeconomic factors such as market size, inflation rate, exchange rates, labor costs, political environment, openness to economy and so on. In these consequences, this paper investigates the behaviors of various macroeconomic variables with foreign direct in vestment in the context of Bangladesh economy. This study tries to explore the macro determinants of FDI flows of a developing country that may impact FDI behavior. Therefore, the objective of this paper is to find out the drivers of FDI flows to Bangladesh to help further research in this sector as well as to provide proper policy implications to enhance FDI flows that will boostup the growth of the economy.

2. Literature Review

A number of studies have been conducted regarding driving forces of foreign direct investment of various countries predominantly for regional basis. In this paper macroeconomic variables of various kinds have been taken into accounts to examine the likely or assumed relationship with actual relationships with foreign direct investment.

Brima (2015) examined macroeconomic determinants of FDI in Sierra Leon by Ordinary Least Squares (OLS) method. The result calculated that market size, openness, exchange rate and natural resource availability have positive relationship with the flow of FDI whereas inflation and money supply have negative relationship therewith. It was also found that political instability reacts negatively with the FDI. There is a strong positive relationship among FDI flow, economic growth, openness to trade and ICT investment, while the level of risk affects FDI negatively in the context of Kurdistan (Almas Heshmati & Rhona Davis, 2007).

A study of CASI and RESMINI (2010) included locational FDI information of 260 regions in 25 EU countries during 2005-2007. They found that traditional drivers for FDI are equal for all regions but some country specific policies are responsible for varying FDI growth for those regions. Ibrahim and Hassan

(2012) conducted a research on Sudanese economy and originated that market size, inflation rate, exchange rate, and investment incentive policy are key determinants of FDI therein.

In a cross country analysis of FDI, O'Meara (2015) stated that size and scale of economic activity are explanatory variables (about 40%) of FDI inflows across 99 countries in 2005. Government policy has also been given importance in boosting up FDI inflows of developing countries. Classical locational factors preserve influence on FDI but the distribution of FDI on transitional countries is largely depended on specific market and institutional factors (Gorbunova, Infante and Smirnova, 2012).

Ho, Ahmad and Dahan (2013) published a research paper on Economic freedom, macroeconomic fundamentals and foreign direct investment in fast emerging BRICS and Malaysia. Panel regressions and granger causality tests over the data of 1977 to 2010 have been conducted and found statistically significant while the most contributing factors to FDI are assessed to be trade openness, economic growth, government expenditure and infrastructure quality. According to the research findings of Kiiru (2014), economic growth, price stability, resource price and country specific factors are important for determination of FDI flows in the economy of sub-Saharan Africa.

Kornecki and Ekanayake (2012) in their paper on "State Based Determinants of Inward FDI Flow in the US Economy" substantiated that the real per capita income, real per capita expenditure on education, FDI related employment, research and development expenditure, and capital expenditure are found to have a significant positive impact on FDI in flows. Trade openness and inflation rate are significant factors to the FDI whereas market size, infrastructure and human capital are assessed to be insignificant factors for Ethiopia during the time of 1990-2011(Workneh, 2015).

In a study of FDI of manufacturing industry of Malaysia, Tsen (2005) examined two models of FDI determining factors consisting of inflation, infrastructure, education, exchange rate, market size and current account balance. It was found that all the macroeconomic variables are rationally correlated with FDI flows of manufacturing industry in Malaysia. This study is also supported by a research paper of

Othman (SSRN-id2276388) except exchange rate which did not respond significantly in the regression model.

Panel data for fifteen MENA countries for the period 1980 to 2003 has been used in a study conducted by Shirazi, Rodrigues and Karnik (2008) for determination of FDI. They found service sector to be powerful contributor to FDI inflows in those countries. In assessing the determinants of foreign direct investment in Africa, Sichei and Kinyondo (2012**)** used dynamic panel data framework for a sample of 45 countries over the period of 1980 to 2009. Their estimation found that FDI inflows are significant to agglomeration economies, existence of natural resources, real GDP growth, domestic and international FDI policy. Therefore, contributing determinants are not same for every country and varies with the variant of time.

3. Research Methodology

This section provides the research methodology of this study. Here, a full description on the selection and collection of data, research model and methods of data analysis is presented one after the other.

3.1 Selection and Collection of Data

In this study, 45 years time series data from 1972 to 2016 has been used for analysis. All the data used in this paper are secondary data. Data were collected from official websites of World Bank Database, National Board of Revenue, Transparency International of Bangladesh, Bangladesh Bank, Bangladesh Bureau of Statistics, Worldwide Governance Indicators and UNCTAD.

3.2 Research Model

This paper considers only those country specific variables as exogenous variables that may have an effect on FDI flows, the endogenous variable, to that country. All the variables have been selected based on past research in this sector.

Research model can be expressed mathematically as follows:

$$FDI = f(GDPG, OPEN, INF, GFCF, EXHR, GVCN, LBCT)$$

Endogenous variable of this study is the FDI flows (FDI) which is expressed as a percentage of GDP. Seven exogenous variables have been included in this research. GDP growth rate (GDPG) has been used as a proxy for market size. Openness to economy (OPEN) has been measured as sum of export and import to GDP. Consumer Price Index (CPI) has been taken as a proxy for inflation rate (INF). Gross fixed capital formation (GFCF) is also expressed as a percentage of GDP. Exchange rate (EXHR) refers to the exchange rate of Taka per US $. Again, general government final consumption expenditure (GVCN) is measured as a percentage of GDP. Finally, change in per capita income has been used as a proxy variable for labor cost (LBCT).

3.3 Methods of Data Analysis

Four types of test namely Augmented Dickey-Fuller (ADF) unit root test, Johansen co-integration test, vector error correction (VEC) model and Granger causality test have been employed sequentially in this study for analysis.

ADF Test

To avoid the chance of spurious regression all the time series data under the study must be stationary. Hence, the data are first analyzed by employing ADF unit root test (1979) to find out whether time series data are stationary and integrated of the same order or not.

Johansen Co-integration Test

Co-integration is a technique of defining the long-run relationship amongst a group of variables. The basis of the co-integration test is to find out whether a group of non-stationary series is integrated or not. It is a linear combination of non-stationary time series resulting in a stationary time series having co-integration among the variables. The presence of such a linear combination stands for the long-run equilibrium relationship among those co-integrating variables. Here, Johansen co-integration test (1988) has been used.

VEC Model

This model is designed to deal with non-stationary time series that are known to be co-integrated. The presence of a co-integrating relation is a must for the VEC specification. As the deviation from long-run equilibrium is corrected gradually through a series of partial short-run dynamics, the co-integration term of this model is known as the error correction term.

Granger Causality Test

To find out the causality among the variables (whether changes in one variable is a cause of changes in another), Engle-Granger (1969) causality model has been employed in this study.

4. Empirical Results and Findings

This section represents the necessary analysis in line with the purpose of this study along with the findings of this analysis.

4.1 Unit Root Test

As already mentioned before, the Augmented Dickey Fuller (1979) tests are employed to check the presence of a unit root. Table 1 reports the results of the unit root tests. The optimal lag length is decided using the Akaike Information Criterion (AIC). The result in table 1 shows that all the selected variables are found to be non-stationary at level but become stationary at first difference. That means all the level data series are co-integrated of order one.

Table 1: Results of Unit Root Tests

Variables	Test for Unit Root in	t-statistics	Probability	Remarks
FDI	Level	0.987	0.331	Non-stationary
	1st Difference	-2.717	0.010	Stationary
GDPG	Level	-1.724	0.102	Non-stationary
	1st Difference	-3.913	0.000	Stationary
OPEN	Level	-1.480	0.157	Non-stationary

	1st Difference	-7.087	0.000	Stationary
INF	Level	-0.805	0.431	Non-stationary
	1st Difference	-8.876	0.000	Stationary
GFCF	Level	-0.593	0.561	Non-stationary
	1st Difference	-6.661	0.000	Stationary
EXHR	Level	-2.456	0.144	Non-stationary
	1st Difference	-6.063	0.000	Stationary
GVCN	Level	-0.098	0.922	Non-stationary
	1st Difference	-7.769	0.004	Stationary
LBCT	Level	-1.873	0.078	Non-stationary
	1st Difference	-8.916	0.001	Stationary

Source: Compiled by author

4.2 Co-integration Test for Long-run Equilibrium Relationship

Since all the variables are non-stationary at level but stationary at first difference, long-run equation can be estimated by using co-integration test. Johansen maximum likelihood procedure has been employed to test the long-run equilibrium relationship between FDI and macroeconomic variables as well as to identify the number of co-integrating equations among the variables. The number of lags applied in this test is decided by the multivariate generalization of the AIC. Table 2shows the result of the co-integration test. Both Trace test and Maximum Eigen value test indicate 1 co-integrating equation since the trace statistics and Max-Eigen test statistics are less than their critical values at the 5% significance level. So, the null hypothesis of no co-integration is rejected. That implies the existence of long-run relationship between FDI and the selected macroeconomic variables.

Table 2: Findings of Trace and Max- Eigen Test

Hypothesized no. of CE(s)	Eigen value	Trace Test			Max- Eigen Test		
		Statistic	Critical Value	p-values	Statistic	Critical Value	p-values
None*	0.937	291.835	159.529	0.000	118.940	52.362	0.000
At most 1	0.634	122.895	125.615	0.054	74.321	76.231	0.090
At most 2	0.573	93.5736	95.753	0.061	36.649	40.077	0.115
At most 3	0.529	58.924	69.818	0.269	32.408	33.876	0.074
At most 4	0.264	26.515	47.856	0.871	13.183	27.584	0.874
At most 5	0.210	13.332	29.797	0.875	10.167	21.131	0.728
At most 6	0.068	3.164	15.494	0.959	3.029	14.264	0.944
At most 7	0.003	0.135	3.841	0.713	0.135	3.841	0.713

* denotes rejection of the hypothesis at the 0.05 level
Source: *Compiled by author*

Table 3 presents the long-run model. The long-run equilibrium relationship can be expressed as:

FDI = -2.306 − 0.239GDPG + 0.04OPEN + 0.09INF − 0.035GFCF + 0.018EXHR + 0.473GVCN − 0.012LBCT

According to the result of the model, GDP and gross fixed capital formation (GFCF) have negative impact on foreign direct investment flows (FDI) but the results are not statistically significant at 5% significance level. Negative significant relationship has been found between labor cost (LBCT) and FDI.

Less labor cost in the country leads to more FDI flows to Bangladesh. On the other hand, openness to economy (OPEN), inflation rate (INF), exchange rate (EXHR) and general government consumption expenditure (GVCN) are found to have positive as well as significant relation with FDI. So the increase in export and import, CPI, exchange rate and government expenditure attracts FDI flows to the economy.

Table 3: Co-integrating Coefficients of Long-run Model

	FDI	GDPG	OPEN	INF	GFCF	EXHR	GVCN	LBCT	C
Coefficients	1.000	0.239	-0.040	-0.090	0.035	-0.018	-0.473	0.012	2.306
S. E.		0.049	0.009	0.025	0.023	0.004	0.069	0.005	
t-statistics		4.863	-4.489*	-3.640*	1.520	-4.275*	-6.882*	2.496*	

* denotes significant relationship at 5% significance level
Source: *Compiled by author*

4.3 Test for Short-run Dynamic Adjustment

Since FDI, GDPG, OPEN, INF, GFCF, EXHR, GVCN and LBCT are found to be co-integrated in the long-run, VEC model can be used to test the presence of short-run relationship among the variables. The error correction term measures the adjustments of the data series from the long run equilibrium relations. Table 4 contains the result of the error correction estimate for foreign direct investment flows. The estimated coefficients show the immediate impact of D(GDPG), D(OPEN), D(INF), D(GFCF), D(EXHR), D(GVCN) and D(LBCT) on D(FDI). From table 4, it is apparent that the error correction term has a positive sign and is not statistically significant at 5% significance level. This implies that there exists no short-run adjustment which makes the FDI flows converged to the long-run equilibrium.

Table 4: Vector Error Correction Estimates

Error Correction	D(FDI)		Error Correction	D(FDI)	
	Coefficients	t-statistics		Coefficients	t-statistics
CointEq1	0.172	1.243	D(GFCF(-1))	0.067	1.065
D(FDI(-1))	-0.432	-2.333	D(GFCF(-2))	0.078	1.179
D(FDI(-2))	-0.222	-1.352*	D(EXHR(-1))	0.005	0.214*

D(GDPG(-1))	0.027	1.095	D(EXHR(-2))	0.032	1.396*
D(GDPG(-2))	0.007	0.420	D(GVCN(-1))	0.028	0.264
D(OPEN(-1))	-0.038	-2.657	D(GVCN(-2))	0.188	1.650
D(OPEN(-2))	-0.005	-0.301*	D(LBCT(-1))	-0.004	-1.243
D(INF(-1))	0.012	0.554*	D(LBCT(-2))	0.002	1.418*
D(INF(-2))	0.047	2.474	C	-0.035	-0.607

* denotes significant relationship at 5% significance level
Source: *Compiled by author*

4.4 Test for Causal Relationship: Use of Granger Causality Test

Pair-wise Granger causality has been tested for the selected variables under study. The findings of the tests are presented in table 5.

Table 5: Results of the Pair-wise Granger Causality Test

Direction of Causality			Direction of Causality		
GDPG	~	FDI	EXHR	~	FDI
FDI	→	GDPG	FDI	~	EXHR
OPEN	→	FDI	GVCN	~	FDI
FDI	~	OPEN	FDI	~	GVCN
INF	~	FDI	LBCT	~	FDI
FDI	~	INF	FDI	~	LBCT
GFCF	→	FDI			
FDI	~	GFCF			

Note: (~) implies lack of any causal relationship and (→) shows the direction of causal relationship at 5 % significance level.
Source: *Compiled by author*

The above Granger causality test suggests that there exists no bilateral directional relationship between FDI flows and GDP, openness to economy, inflation, gross fixed capital formation, exchange rate, general government consumption expenditure and labor cost at 5 % significance level. But unidirectional causality is observed between FDI and three independent variables. There is a positive and direct relationship between FDI and GDP meaning that the more FDI we have in Bangladesh the higher the level of economic growth and development. This implies that FDI flows have contributed significantly to

the growth of Bangladesh economy during 1972-2016. The result reveals that openness to economy does granger cause FDI which implies that the more the export and import, the more the FDI flows to Bangladesh. Also there exists positive unidirectional relationship between FDI and gross fixed capital formation. This implies that more capital formation leads to more FDI flows to Bangladesh.

5. Concluding Remarks

This paper analyzed the relationship between FDI flows to Bangladesh and seven macroeconomic variables empirically in the context of the Bangladesh economy covering a period from 1972to 2016.

It is apparent from the afore mentioned analysis that GDP and gross fixed capital formation (GFCF) have insignificant negative influence on FDI. Again, labor cost (LBCT) reacts negatively with flows of FDI to Bangladesh and the result is statistically significant. This result itself is found to be useful. Higher labor cost does not attract FDI rather it reduces attention of investment from foreigners. Nonetheless, openness to economy (OPEN), inflation rate (INF), exchange rate (EXHR) and general government consumption expenditure (GVCN) are found to be positively correlated with FDI indicating lucid and fruitful result. These macroeconomic variables require attention of foreign investors in Bangladesh. There exists no short-run dynamic adjustments among the variables under study according to the error correction model. Granger causality test explores that though FDI has direct impact on GDP; openness to economy and gross fixed capital formation have direct and strong force on FDI as well. This finding is interesting since an opposite relationship has been established on GDP by FDI implying more FDI enhances GDP growth rate of Bangladesh economy.

Bangladesh is a developing country located at South Asia region which is still a heaven for foreign investors to spend as return on investment is higher than other Asian countries. Consequently, each year since independence, FDI inflow in the country is increasing gradually in various productive sectors. Bangladesh government should take necessary steps to regulate macroeconomic policy (trade openness, inflation rate, exchange rate, general government consumption expenditure, labor cost) to attract FDI

inflows into the country. Furthermore, it has to be mentioned that FDI in Bangladesh is not only related with seven variables mentioned in the study rather there could have been other strong forces which need to be considered in further analysis.

References

Abubakar, M. and Abdullahi, F. A., 2013, 'An Inquiry into the Determinants of Foreign Direct Investment in Nigeria', *European Scientific Journal,* September 2013 edition,9(25).

Agosin, M. and Machado, R., 2007, 'Openness and the international allocation of foreign direct investment', *Journal of Development Studies,* 43(7), 1234-1247.

Al Nasser, O., 2007, 'The determinants of the U.S foreign direct investment: does the region matter?'*Global Economic Review,* 36(1), 37-51.

Aw, T. and Tang, T., 2010, 'The determinants of inward foreign direct investment: The case of Malaysia', *International Journal of Business and Society,* 11(1), 59-76.

Bakir, A. and Alfawwaz, T., 2009, 'Determinants of foreign direct investment in Jordan', *International Management Review,* 5(2), 66-73.

Borensztein, E., Gregorio, J. and Lee, J., 1998,'How does foreign direct investment affect economic growth?'*Journal of International Economics,* 45(1), 115-135.

Brima, S., 2015, 'Macroeconomic Determinants of Foreign Direct Investment in Sierra Leone: An Empirical Analysis', *International Journal of Economics and Finance,* 7(3).

Brzozowski, M., 2006, 'Exchange rate variability and foreign direct investment: consequences of EMU enlargement', *Eastern European Economics*, 44(1), 5-24.

Caetano, J. and Caleiro, A., 2009, 'Economic freedom and foreign direct investment: How different are the MENA Countries from EU', *i Business*, 1(2), 65-74.

CASI, L. and RESMINI, L., 2010, 'Evidence on the determinants of foreign direct investment: the case of EU regions, *Eastern Journal of European Studies,* December 2010, 1(2).

Duanmu, J. and Guney, Y., 2009, 'A panel data analysis of locational determinants of Chinese and Indian outward foreign direct investment', *Journal of Asia Business Studies*, 3(2), 1-15.

Erdal, F. and Tatoglu, E., 2002, 'Locational determinants of FDI in an emerging market economy: evidence from Turkey', *Multinational Business Review*, 10(1), 21-28.

Gast, M. and Herrmann, R., 2008, 'Determinants of foreign direct investment of OECD countries 1991-2001', *International Economic Journal,* 22(4), 509-524.

Gorbunova, Y., Infante, D. and Smirnova, J., 2012, 'New Evidence on FDI Determinants: An Appraisal Over The Transition Period', *Prague Economic Papers (2).*

Hailu, Z., 2010, 'Demand side factors affecting the inflow of foreign direct investment to African countries: does capital market matter?'*International Journal of Business and Management*, 5(5), 104-116.

Hayakawa, K., Lee, H. H. and Park, D., 2010,'The role of home and host country characteristics in FDI: firm-level evidence from Japan, Korea and Taiwan', *IDE Discussion Paper* (267), 1-25.

Heckelman, J. C., 2000, 'Economic freedom and economic growth: A short-run causal investigation', *Journal of Applied Economics,* 3(1), 71-91.

Heshmati, A. and Davis, R., 2007, 'The Determinants of Foreign Direct Investment Flows to the Federal Region of Kurdistan', December 2007, *Discussion Paper (*3218).

Ho, C. S. F., Ahmad, N. and Dahan, H. M., 2011, 'Macroeconomic and country specific determinants of FDI', *The Business Review Cambridge,* 18(1), 219-234.

Ibrahim, O. I. and Hassan, H.M., 2012, 'Determinants of foreign direct investment in Sudan: an econometric perspective', *The Journal of North African Studies,* first published: 16 Jul 2012.

Jensen, N. M. and Rosas, G., 2007, 'Foreign direct investment and income inequality in Mexico 1990-2000', *International Organization,* 61(3), 467-487.

Kiiru, J. O. W., 2014, 'Exploring Determinants and Effects of Foreign Direct Investment: The Case of Sub-Saharan Africa', *Graduate Masters Theses,* University of Massachusetts Boston.

Kornecki, L. and Ekanayake, E. M., 2012, 'State Based Determinants of Inward FDI Flow in the US Economy', http://commons.erau.edu/db-accounting/2.

Lipsey, R. E. and Sjoholm, F., 2010,'FDI and growth in East Asia: Lessons for Indonesia', *IFN Working Paper* (852), 1-49.

Mac Dermott, R., 2008, 'Linking exchange rates to foreign direct investment', *The International Trade Journal,* 22(1), 3-16.

Mateev, M., 2009, 'Determinants of foreign direct investment in Central and Southeastern Europe', *Oxford Journal*, 8(1), 133-149.

O'Meara, G., 2015. 'Examining the Determinants of Foreign Direct Investment', *Undergraduate Economic Review,* 11(1), Article 13.

Othman, N.F. B. 'The determinants of Foreign Direct Investment of Malaysia', *SSRN-id2276388.*

Rogoff, K. and Reinhart, C., 2003,'FDI to Africa: The role of price stability and currency instability', *IMF Working Paper* 03/10.

Sichei, M. M. and Kinyondo, G. 2012, 'Determinants of Foreign Direct Investment in Africa: A Panel Data Analysis', *Global Journal of Management and Business Research,* 12(18), Version 1.0.

Shirazi, A., Rodrigues, G. and Karnik, A., 2008, 'Determinants of Foreign Direct Investment in MENA countries: an empirical analysis', *First International Business Conference.*

Torrisi, C. and Delaunay, C. J., 2008,'FDI in Central Europe: Determinants and policy implication', *Journal of International Finance and Economics,* 8(4), 136-147.

Tsen, W. H., 2005., 'The Determinants of Foreign Direct Investment in the Manufacturing Industry of Malaysia', *Journal of Economic Cooperation 26,* 2, 91-110.

Uwubanmwen, A. E. and Ajao, M. G., 2012. 'The Determinants and Impacts of Foreign Direct Investment in Nigeria', *International Journal of Business and Management,* 7(24).

Workneh, A. M., 2015., 'Factors Affecting FDI Flow in Ethiopia: An Empirical Investigation', *International Journal of Current Research,* 7(2), 12608-12614.

Zhang, K. H., 2001, 'What attracts foreign multinational corporations to China?' *Contemporary Economic Policy,* 19(3), 336-346.

THE IMPACT OF SCRM ON RETENTION OF CUSTOMERS: A CASE STUDY ON SOCIAL ISLAMIC BANK LIMITED

Md. Abdul Kaium*

Nuzhat Nuery**

Provakor Ghosh***

ABSTRACT

In today's world, the rise of information technology has made it possible to connect majority of the population. This also presents the opportunity to understand customer at personal level. Business has the ample resource to build relationship with customers through social media. Social customer relationship management (SCRM) proved to have greater impact than traditional customer relationship management (CRM). As a middle developed country, Bangladesh has tremendous potentiality for growth in every sector. This research has focused on the banking sector to examine the impact of SCRM. Regression model has been used to understand the role of social media on customer retention. To represent customer loyalty, independent variables like service delivery, customer engagement, interpersonal communication, attraction of alternatives, response to customer complaints have been considered. It was found that all other variables except attraction of alternatives and response to customer complain are quite significant

Key words: Social customer relationship management (SCRM), Banking, Social Islamic Bank limited (SIBL), Customer Loyalty.

INTRODUCTION

Over the past 40 years, a radical shift has been occurred in how businesses are conducted and how people interact with the business due to the expansion of personal computers, the internet, and e-commerce. The rise of social media is challenging the traditional notion of customer relationship management (CRM). In a traditional CRM framework, the organization possesses substantial information about its customers, which it uses to manage its relationships with them (Payne and Frow, 2005). With the rise of vast social networking platforms, the customer is no longer limited to a passive role in his or her relationship with a company. Malthouse et al. (2013) proposed a framework, the social CRM house, to understand how social media affect CRM. To construct this framework, first it is necessary to conceptualize the degree of influence of social media to which customers can engage with a company. Banks are suggested to retain and develop long term relationships with their customers in order to sustain business (Wise and Ali, 2009). In Bangladesh banking sector, e-banking is being used substantially for better service quality and relationship with the customers (Nupur, 2010), but the scope of web 2.0 is yet to be utilized.

The level of engagement may be an indication how CRM affects the company and how the company can affect the components of traditional CRM— acquisition, maintenance, and termination. The banking

*Assistant Professor, Department of Marketing, University of Barishal.
** Assistant professor, Department of Marketing, University of Dhaka.
*** Research Assistant, Department of Marketing, University of Dhaka.

industry also tries to change themselves with modern age and modern technology. Banks now-a-days try to use SCRM rather than using traditional CRM activities. Social Customer relationship management (SCRM) provides better result in customer loyalty and customer retention (Woodcock et al., 2011; Khaligh et al., 2012). Recently more customers are engaged with SCRM and it plays a vital role in creating customer loyalty and customer retention.

The scope of the study has been limited to social media marketing and social customer relationship management only. The study has been confined to Dhaka region as this area has greater internet penetration and plenty of social network sites users than the rest of Bangladesh. To identify the relationship between SCRM and customer retention, we have also selected five exploratory variables: Service delivery, Customer Engagement, Interpersonal Communication, attraction of alternatives and response to customer complain (Khaligh et al., 2012; Woodcock et al., 2011; Ang, 2011). The research conducted on Social Islami Bank Limited (SIBL) because it holds the 14th position of top private banks of Bangladesh (Hossain, 2017).

Banking Sector in Bangladesh

Bangladesh is a third world country with an under developed banking system. This is true especially for the government controlled banks in terms of the services and customer care. Recently the private banks are trying to imitate the banking structure of the more developed countries, but this attempt is often foiled by inexpert or politically motivated government policies executed by Bangladesh Bank, the central bank of Bangladesh.

Social Islami Bank Limited (SIBL)

SIBL is a pioneer in introducing on-line banking among all the Islami banks of the country with state-of-the-art banking software, which will enable the bank to perform as any branch real time banking service to the clients. Besides they have increasing number of social customers (siblbd.com, 2017).

This study will help to identify new opportunity of SCRM in marketing. and its prospect and profitability. In order to do that, it is necessary to understand the relationship between SCRM and customer retention.

LITERATURE REVIEW

Brand Communities and Social Networks

Brand community facilitates social networking, impression management, community engagement and brand use (Schau et al., 2009). Marketers can use virtual brand community to understand customer needs and promote brand loyalty and involvement (Casalo´ et al., 2008). Commitment arises when a customer's values, self-image and attitude have matched with product class (Bowden, 2009). Social-networking enhances social-bond (De Valck et.al., 2009). Bond among members create higher participation and engagement and loyalty (Algesheimer et al., 2005; McAlexander et al., 2002; Schau et al., 2009).

The Impact of SCRM on Retention of Customers: A Case Study on Social Islamic Bank Limited

Social Media

The world is squeezing its economic, social and political boundaries and giving it a common platform for development. The convergence of the media has expanded the usage of internet that gave birth to social media (Boyd and Ellison, 2007). Though Kaplan and Haenlein (2010) have admitted that, it is confusing to define "social media" in terms of different technologies and what they can accomplish, however, Edosomwan et al. (2011) has defined social media as the production, consumption and exchange of information across platforms for social interaction through new ways of communication. It uses web-based technologies to transform monologues into social media dialogues. This technology has facilitated search engine optimization and digital marketing.

Since social media technology enables people to engage in a conversation, they can disseminate knowledge and information, which transform people from content customers to content producers. Intrinsically, social media is more about sociology than technology (Breakenridge, 2009). People now rely more on social media to learn about events and be influenced by it more than by their peers. As a result, social media now play a significant role in forming public opinion. Because of the expansion of internet, increasing number of online public are communicating with each other through a new medium like, logs, micro blogging websites and social networking websites like face book, Twitter, LinkedIn and many others along with e-mail and instant messengers (Ahuja, 2010).

Relationship Marketing and customer relationship management

Relationship marketing emerged as a popular new paradigm in the 1980s due to a shift in focus from customer acquisition to customer retention (Chakraborty, 2006). Relationship marketing represents the practice of developing valuable relationships with customers by satisfying their needs and wants (Berry,1995; Gronroos,1994). Relationship marketing stresses the importance of developing long-term relationships with customers and other stakeholders (Gummesson, 2004). CRM is a subcomponent of relationship marketing (Gummesson, 2004; Palmatier, 2008). While relationship marketing focuses on developing relationships with all stakeholders, CRM focuses specifically on the relationships with the customer (Harrigan et al., 2011). Due to its development from relationship marketing, CRM has a strong emphasis on customer loyalty (Lovelock and Wirtz, 2011). However, as CRM continues to develop, the emphasis of CRM moves beyond customer loyalty and explores other benefits of forming valuable customer relationships (Swarts, 2014).

Payne and Frow (2005, p.11) have presented a more wholesome definition of CRM: "A cross-functional strategic approach concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments. It typically involves identifying appropriate business and customer strategies, the acquisition and diffusion of customer knowledge, deciding appropriate segment granularity, managing the co-creation of customer value, developing integrated channel strategies and the intelligent use of data and technology solutions to create superior customer experience." In other words, CRM involves managing this continuous bi-directional communication and interaction relationship so that it is profitable and mutually beneficial, which involves continuous corporate changes in culture and strategies along with organization and people. CRM used in business for identifying the new selling opportunities. Also it delivers instant, company-

wide access to customer histories. It involves new and advance marketing strategies that not only retain the existing customers but also acquire new customer.

There are three key elements to successful CRM initiatives: people, business process, and technology. CRM is viewed as a strategic management approach that is concerned with the use of data and technology, the integration process, various organizational functions, value co-creation, and the acquisition and diffusion of customer knowledge (Boulding et al.,2005; cited by Lehmkuhl, 2014). To sum up, CRM attempts to establish, maintain, and enhance long term relationships and customer exchanges i.e. prolong the customer relationship lifecycle (Raab et al., 2008).

Social Customers and Social CRM (SCRM)

SCRM is similar to e-CRM, which is CRM with the use of electronic technology; however, SCRM focus on social media technologies (Harrigan et al., 2011). With the development of Web 2.0 technologies, a new type of 'social customer' has emerged that requires a new way of approaching customer relationships (Acker et al., 2011). Social media has enabled that new ways of building relationships with these social customers, which is replacing traditional CRM practices (Harrigan, et al., 2011; Jekimovics, et al., 2013; Greenberg, 2010).

The social CRM from technological standpoint bridges social media with the traditional CRM and let the companies be, where the customers spend their time. It combines the elements of social media and CRM: social networks, communication technology, communities, relationships, strategy, and customer value to optimize the power of social interactions to get closer to customers. Paul Greenberg (2009, p. 34) defines SCRM as: "A philosophy and a business strategy, supported by a technology platform, business rules, workflow, processes and social characteristics, designed to engage the customer in a collaborative conversation in order to provide mutually beneficial value in a trusted and transparent business environment. It's the company's programmatic response to the customer's control of the conversation."

SCRM enable companies to listen the social media conversations by tracking new leads from Tweets or Facebook posts and formulate sales strategy accordingly (Greenberg, 2010). Social media continuously generate hordes of information so that it becomes difficult for enterprises to monitor them. As a result, an increasing number of CRM developing companies are now offering social media integration. CRM customization allows social media accounts to be linked and managed through customer relationship management software. It helps businesses in devising business strategy using the insight gained from societies. Customer channels have to identify before a company can build and manage its customer relationships via social networks. Once done, the full potential of social-CRM can be realized, because nowadays, customers like to use the social networks to share information about themselves and their interests.

Greenberg (2010) and Askool and Nakata (2011) refers SCRM as a fully integrated strategy and system, which is yet to be developed, but ongoing and increasingly coexistent with social media and CRM (CRM research 2014). As such, SCRM is a new and developing academic field that provides an opportunity for managers to build new types of relationships and get closer to their customers (Woodcock et al., 2011).

Building Customer Loyalty and Customer Retention

Studies often report that, on average, it costs a company more to attract a new customer as it does to implement a retention strategy (Kelley et al., 2003). Reichheld and Sasser (1990) have found that customer acquisition cost is 20% to 40% greater than acquiring a new customer in the traditional retailing marketplace. This leads to higher losses in the early stages of the relationship. However, the retained internet customers are likely to spend twice as much in months 24-30 as they did in the first 6 months. Existing customers are not only less price sensitive; they are more economical to maintain than new customers (Reichheld and Schefter, 2000). Similarly, Bentley (1999) has linked customer loyalty directly to profitability. Simultaneously, it is suggested that loyal customers are less sensitive to price changes and are more susceptible to being charged premium prices Yin and Kannan (1999) defines "hard-core" loyalty as repeat purchase behavior. Gilbert (1996) postulates that relationship management (RM) schemes can reduce the long-term costs of attracting new customers by increasing the length of time they would stay with a company. In other words, customer retention is the result of customer loyalty (Fornell, 1992; Reichheld, 1996).

Due to the increasing pressure of banking system of Bangladesh, non-banking institutions and globalized capital market, banks should focus on developing long-term relationships. CRM is essential for banks to set strategies, processes and services that fit efficiently with the demand of the customers and secure continuous flow of profit (Wise and Ali, 2009). In their study on banking industry of Bangladesh, (Siddiqi et al., 2018) have proved that, CRM dimensions like customer orientation, customer experience and service process substantially influence customer satisfaction. A successful CRM strategy will build customer loyalty (Siddiqi et al., 2018) Social media data can improve the CRM systems to maintain durable relationship by understanding the customers and their interests (Choudhury and Harrigan, 2014). So it is important to understand how the social media is affect ting the variables of customer retention,

Customer Retention Variables:
The following variables are chosen from the work of different researchers:

Service delivery
Service delivery defines the interaction between providers and clients where the provider offers a service, like, information or a task. The client either may find value or lose value as a result of the service. Good service delivery provides clients with an increase in value (Khaligh et al., 2012).

Customer engagement
Customer engagement (CE) is an effect, a reaction, a connection, a response and/or an experience of customers with one another, with a company or with a brand. The initiative to engage can be made either by consumer or by company and the medium of engagement can be online and/or offline (Woodcock et al., 2011**).**

Interpersonal Communication
Through social media it is very easy to communicate personally with customer. Customers can get very quick and reliable solution of their rising problems (Khaligh et al., 2012).

Attraction of alternatives
Attraction of alternatives defines as offering various kinds of services at the time of using one specific service. Customers will aware about the new services if SM able to attract customers through new

offerings. It also helps in customer retention process (Ang, 2011).

Response to customer complains
Customers retention will be possible through quick response of customer complain. Through social-media, company can able to response fast and easily to the customers complain and quire (Khalighet al., 2012).

THE RATIONALE AND THE OBJECTIVE OF THE STUDY

It is inevitable that traditional business practices have to be modified that suits with this era of information technology. Therefore, in order to understand the aspects of customer relationship management (CRM) in this modern time, this research intends to identify how SCRM affects the customer retention rate. For this research, Social Islamic Bank Limited has been chosen as a case to study, since banking industry is one of the major industries in every country of the world.

The purpose of this study is to discover and analyze the impact of social media customer relationship management on customer retention of Social Islami Bank Limited.

METHODOLOGY
In this empirical study, the research question is addressed through interpretivist approach (Saunders et al., 2011). Since the objective of this research is to find the association of SCRM, the marketing variable, with the customer retention, descriptive research has been undertaken. Metric data has been generated through 7 point Likert scale for both independent and dependent variables, because metric data is needed for regression analysis. In this research, regression analysis has been employed because the association of dependent variable, customer retention, has to be measured with the independent variables- service delivery, customer engagement, interpersonal communication, attraction of alternatives and response to customer complains. 5% level of significance has been used in this research, since most of the researches on customer retention have used 5% level of significance (Malhotra and Dash, 2014).

The structured questionnaire has been formulated from works of different researchers as mentioned earlier in the variables section of the literature review. The sample size should be mathematically chosen, but there is no available standard deviation of the population of SCBL, who use SCRM. On top of that, no research has been found on SCRM in banking sector, so taking the sample size as per similar researches, proved to be impossible (Malhotra and Dash, 2014). In this research, a sample size of 30 has been chosen to generalize the findings, which is stated by (Lind et al., 2013) as a rule of thumb of choosing sample size. The mathematical model is specified as follows:

$$Y (CUS\_RET) = \beta_o + \beta_1 (SER\_DEL) + \beta_2 (CUS\_ENG) + \beta_3 (INT\_COM) + \beta_4 (ATTR\_ALT) + \beta_5 (RES\_COM) + e$$

Where,
- *Y= Dependent Variable (Retention of Customers through SCRM)*
- *β_o= intercept of the line*
- *β= Slopes of the line*
- *e = error term*

Hypotheses:

H_0: There is no relationship exist among SCRM and building customer loyalty and customer retention in SIBL.

H_1: There is relationship between SCRM and customer retention.

Using β's Value: H0: $\beta1 = \beta2 = \beta3 = \beta4 = \beta5 = 0$

H1: $\beta1 \neq \beta2 \neq \beta3 \neq \beta4 \neq \beta5 \neq 0$

DATA ANALYSIS

Table 1: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	$.909^a$	.827	.791	.41114

Model		Sum of Squares	Df	Mean Square		Sig.
1	Regression	19.410	5	3.882	22.965	$.000^a$
	Residual	4.057	24	.169		
	Total	23.467	29			

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta		
1	(Constant)	-.600	.404		-1.485	.151
	Service_Delivery	.236	.104	.245	2.265	.033
	Customer_Engagement	.313	.122	.305	2.573	.017
	Interpersonal_Communicatio	.264	.114	.273	2.327	.029
	Alternatives_Attraction	.265	.140	.218	1.895	.070
	Response_Complain	.124	.148	.107	.836	.411

The coefficient of correlation, R= .909, The R is close to +1 means there are significant positive relationship existing among dependent variables and independent variables (Gujrati, 2017). Therefore, we can conclude that Customer retention through SCRM are highly correlated with the identified predictors- Customer Engagement, Response to complain, Service Delivery, Interpersonal Communication and Attraction of Alternatives.

R^2(coefficient of determination) = **.827** the strength of association can be measured by the; means approximately. 83% of the customer retention through SCRM is accounted for by the variation in Customer Engagement, Response to Complain, Service Delivery, Interpersonal Communication and Attraction of Alternatives.

Adjusted R^2= .791; means explanatory variables can explain 79% of the total variability of the dependent variable '*Y (Customer Retention)*. Since the difference between R^2 and adjusted R^2 is so trivial (.827-.791=.036), we can infer that, almost all of the variables those have been included in this research have some influence on Customer retention (Gujrati et al., 2013).

F test: for 5 and 24 degrees of freedom, he calculated f value is 22.965, which is higher than the F value 2.62 from the table. So the null hypothesis is rejected. (Malhotra and Dash, 2014).

a. **Dependent Variable: Customer Retention**

We can reject the null hypothesis ($\beta_k = 0$) at 5% level of significance. In this table we found that how much each variable explains the dependent variable. So decision makers have to give more influence on those variable which beta's value is higher than others.

a. **Dependent Variable: Customer Retention**

Coefficient Table indicates the explanatory variables' significance for the model, where it is noticeable that five explanatory variables are included in the regression model. Here two exploratory variables are insignificant which are .070 (Alternatives_Attraction) and .411(Response_Complain). So we can say that those exploratory variables have less effect on dependent variable(Customer retention).

CUSTOMER RETENTION (Y2) RESULT:

$$Y2 \ (CUS\_RET) = \beta o + \beta 1 \ (SER\_DEL) + \beta 2 \ (CUS\_ENG) + \beta 3 \ (INT\_COM) + \beta 4 \ (ATTR\_ALT) + \beta 5 \ (RES\_COM) + e$$

$$Y2 \ (CUS\_RET) = (-.600) + (.245) \ (SER\_DEL) + (.305) \ (CUS\_ENG) + (.273) \ (INT\_COM) + (.218) \ (ATTR\_ALT) + (.107) \ (RES\_COM) + e$$

ANOVA explains the dependability of the model as the F statistic showed high value and appeared significant at 1% level. In Table 1, ANOVA we have got the significant explanatory variables. Additionally, the table provided the level of contribution by each explanatory variable to explain the dependent variable '*Y (Customer Retention)*'. For example, customer retention rate will change by 30.5 unit for 1 unit change in Customer Engagement. With standardized beta (β) coefficient, the most important to least important variable can be found. Among the five independent variables 'Alternative Attractions' and 'Response to Complain' have, .070 and .411 level of significance respectively, which exceeded .05 level of significance. In other words, these two variables have low level of significance.

Table 2: Coefficients

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Service_Delivery	.615	1.626
	Customer_Engagement	.512	1.952
	Interpersonal_Communication	.524	1.907
	Alternatives_Attraction	.545	1.836
	Response_Complain	.443	2.258

The variance in the dependent variable explained by each explanatory variable is expected to be independent. From table 2 it can be found that the multicollinearity problem in this regression analysis is not significant. As a rule of thumb, when the VIF of a variable exceeds 10 then we can consideritas a serious multicollinearity problem (Kleinbaum et al., 1988).

CONCLUSION

In conclusion, given the general findings of the study, thorough and quantitative research should be conducted regularly on the topic of social media customer relationship management and its impact on building consumer loyalty and customer retention. Since this medium is being utilized at increased rates, routine data collection and interviews should be performed to better understand SCRM's effect on building consumer loyalty and customer retention. Overall, the study presented the strong relationship among SCRM and customer retention. Therefore, the study recommends social to apply social media customer relationship management to retain the customers with SIBL.

Several benefits are observed such as it raises marketing return on investment and development of product quality, improve effectiveness of marketing through innovation and creativity encourages companies to identify new business opportunities through new and existing customers through social networking, reduction in sales commission costs through community building around a product or service, increase R&D capabilities and innovative idea through social customer's initiatives, create abilities to increase customer loyalty through promotion of transparent dialogue and also encourage employee/customer interaction, ability to decrease customer's service costs through self-helping communities. The study conducted can serve as an educational tool for marketing and public relations professionals who are interested in strategies, tactics, and tools utilized within social media to increase customer retention.

REFERENCES

Acker, O, Gröne, F, Akkad, F, Pötscher, F & Yazbek, R (2011), 'Social CRM: How companies can link into the social web of consumers', *Journal of Direct, Data and Digital Marketing Practice*, vol. 13, no. 1, pp. 3-10.

Ahuja, V. (2010), March 23). Corporate blogs as e-CRM tools-building customer engagement through content Management. *Journal of Databases Marketing & Customer Strategy Management*, Vol.17, 2, 91-105.

Algesheimer, R., Dholakia, U. M. and Herrmann, A. (2005) 'The social influence of brand community: Evidence from European car clubs', *Journal of Marketing*, 69(3), pp. 19–34. Available from: *http://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=6&sid=0ac6a5f6-a0be-4d5c-a00c-ce48d68f7924%40sessionmgr104. (Accessed: 20th November 2017).*

Ang, L., (2011). Community Relationship Management and SM, *Database Marketing and Customer Strategy Management,* Vol. 18, 1, 31-38.

Askool, S & Nakata, K (2011), 'A conceptual model for acceptance of social CRM systems based on a scoping study', *AI & Society*, vol. 26, no. 3, pp. 205-220.

Baird, C. H., and Parasnis, G., (2011). From Social Media to Social Customer Relationship Management, *Strategy & Leadership*, Vol. 39 Iss: 5, pp.30 − 37.

Barnes, J (1954), 'Class and committees in a Norwegian island parish', *Human Relations*, vol. 7, pp. 39-58.

Bentley, A. (1999). Sales through service. *International Journal of Customer Relationship Management, 1*(4), 337-334.

Berry, LL (1995), 'Relationship marketing of services: Growing   interest, emerging perspectives', *Academy of Marketing Science. Journal*, vol. 23, no. 4, p. 236.

Boyd, DM& Ellison, NB (2007), 'Social network sites: Definition, history, and scholarship', *Journal of Computer-Mediated Communication*, vol. 13, no. 1, pp. 210-230.

Bowden, J. L. H. (2009) 'The process of customer engagement: A conceptual framework', *Journal of Marketing Theory and Practice*, 17(1), pp. 63–74. *doi:10.2753/MTP1069-6679170105*

Breakenridge, D (2009), 'Sociology and technology: The power of the people', *CPA Practice Management Forum*, vol. 5, no. 12, pp. 19-22.

Casalo´, L. V., Flavia´ N, C. and Guinali´u, M. (2008) 'Promoting consumer's participation in virtual brand communities: A new paradigm in branding strategy', *Journal of Marketing Communications*, 14(1), pp. 19–36. *doi: 10.1080/13527260701535236.*

Chakraborty, S (2006), 'Customer relationship management: A content analysis of issues and best practices', Florida International University.

Choudhury, M. M. & Harrigan, P. (2014) CRM to social CRM: the integration of new technologies into customer relationship management. *Journal of Strategic Marketing.* 22(2) pp. 149-176. *doi: 10.1080/0965254X.2013.876069*

CRMsearch (2014), Thought *leaders: Paul Greenberg*, viewed 24 May 2014, <*http://www.crmsearch.com/paul-greenberg.php*>.

Edosomwan, S, Prakasan, SK, Kouame, D, Watson, J & Seymour, T (2011), 'The history of social media and its impact on business', *Journal of Applied Management and Entrepreneurship*, vol. 16, no. 3, pp. 79-91.

Fiore, FD (2007), 'Communities versus networks: The implications on innovation and social change', *The American Behavioral Scientist*, vol. 50, no. 7, pp. 857-866.

Fornell, C. (1992). A national customer Retention barometer: The Swedish experience. *Journal of Marketing, 56*(1), 6-21.

Galpin, CJ (1915), The social anatomy of an agricultural community, vol. Bulletin 34, University of Wisconsin Agricultural Experiment Station, Madison.

Gilbert, D. C. (1996). Relationship marketing and airline loyalty schemes. *Tourism Management, 17(8), 575-582.http://dx.doi.org/10.1016/S0261-5177(96)00078-7.*

Greenberg, P (2009), CRM at the speed of light: social CRM strategies, tools and techniques, 4 edn, McGraw-Hill, USA.

Greenberg, P. (2010) "The impact of CRM 2.0 on customer insight", *Journal of Business & Industrial Marketing,* Vol. 25 Issue: 6, pp.410-419, *https://doi.org/10.1108/08858621011066008*

Gronroos, C (1994), 'From marketing mix to relationship marketing: Towards a paradigm shift in marketing', *Management Decision*, vol. 32, no. 2, pp. 4-21.

Gujrati, D.M. (2017) *Essentials of Econometrics,* 3rd edition Boston, McGraw-Hill Irwin.

Gujrati, D.M., Porter, D.C and Gunasekar, S. (2013) *Basic econometrics*, 5thed. New Delhi, McGraw-Hill

Gummesson, E (2004), 'Return on relationships (ROR): The value of relationship marketing and CRM in business-to-business contexts', *The Journal of Business & Industrial Marketing*, vol. 19, no. 2, pp. 136-148.

Hossain, M. T. (2017) Top Banks in Bangladesh. *Bangladesh Dictionary.com.* Accessed 25th September 27, 2017, available at*: http://bangladeshidirectory.com/articles/Business/Top-Banks-in-Bangladesh*

Harper, EH & Dunham, A (1959), *Community organization in action: Basic literature and critical comments*, Association Press, New York.

Harrigan, P, Ramsey, E & Ibbotson, P (2011), 'Critical factors underpinning the e-CRM activities of SMEs', *Journal of Marketing Management*, vol. 27, no. 5-6, pp. 803 -529.

Jekimovics, L, Wickham, M & Danzinger, F (2013), 'Social networking and e-CRM: 'Revolution' or 'e-business as usual'?', *Academy of Taiwan Business Management Review*, vol. 9, no. 1, pp. 153-162.

Kleinbaum, Kupper, and Muller; (1988), 'Applied regression analysis and other multivariable methods', *PWS Publishing Co. Boston, MA, USA, pp 65-83*

Kaplan, AM & Haenlein, M (2010), 'Users of the world, unite! The challenges and opportunities of social

media', *Business Horizons*, vol. 53, no. 1, pp.59-68.

Kelley, L. L., Gilbert, D., & Mannicom, R. (2003). How e-CRM Can Enhance Customer Loyalty. *Marketing Intelligence and Planning, 21*(4), 239-248.*http://dx.doi.org/10.1108/02634500310480121*

Khaligh, A. A. H, Miremadi, A, and Aminilari, M (2012). The Impact of eCRM on Loyalty and Retention of Customers in Iranian Telecommunication Sector. *International Journal of Business and Management,* Vol. 7, No. 2; January 2012. *http://dx.doi.org/10.5539/ijbm.v7n2p150.*

Lind, D. A., Marchal, W. G. and Wathen, S. A. (2013) *Statistical Techniques in Business and Economics*,13th edition, New Delhi, McGraw Hill Education (India) Private Limited.
Lovelock, C & Wirtz, J (2011), *Services marketing*, Pearson, New Jersey.

Mc Alexander, J. H., Schouten, J. W. and Koenig, H. F. (2002) 'Building brand community', *Journal of Marketing,* 66(1), pp. 38-54. Available at: *http://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=14 & sid=0ac6a5f6-a0be-4d5c-a00c-ce48d68f7924%40sessionmgr104. (Accessed: 22nd November 2017)*
Malhotra, K, Naresh, Dash, Satyabhushan, (2010), *marketing research: an applied orientation*, 6th edition, pp.68-384, Prentice Hall of India private limited.

Memmi, D (2006), 'The nature of virtual communities', *AI & Society*, vol. 20, no. 3, pp. 288-300.

Miller, F (2012), Aristotle's *political theory*, viewed 25 July 2014, *<http://plato.stanford.edu/archives/fall2012/entries/aristotle-politics/>*.

Malthouse, E. C., Haenlein, M., Skiera, B., Wege, E and Zhang, M (2013) Managing Customer Relationships in the Social Media Era: Introducing the Social CRM House. *Journal of Interactive Marketing, Volume 27, Issue 4, November 2013, Pages 270–280, http://dx.doi.org/10.1016/j.intmar.2013.09.008.*

Neuman, WL (2011), *Social research methods: Qualitative and quantitative approaches*, Pearson Education, Boston.

Nupur, J. M. (2010) E-Banking and Customers' Satisfaction in Bangladesh: *An Analysis. International Review of Business Research Papers.* 6(4). pp. 145 – 156.

Parasuraman, A, Zeithaml, VA & Berry, LL (1985), 'A conceptual model of service quality and its implications for future research', *Journal of Marketing (pre-1986)*, vol. 49, no. 4, p. 41.
Patil, M. Y. (No date) Social Media and Customer Relationship Management. *IOSR Journal of Business and Management (IOSR-JBM), e-ISSN: 2278-487X, p-ISSN: 2319-7668 PP 27-32,* www.iosrjournals.org

Payne, A. and Frow, P. (2005), "A Strategic Framework for Customer Relationship Management," *Journal of Marketing,* 69, 4, 167–76.
Raab, G., Ajami, A. R., Gargeya, B. V., Goddard, J. G. (2008). *Customer Relationship Management: A Global Perspective*. Farnham: Gower.

Reichheld, F. F., &Sasser, W. E. J. (1990), September-October). Zero defects come to services.

Reichheld, F. F., & Schefter, P. (2000), July-August). E-loyalty: your secret weapon on the Web. *Harvard Business Review,* 105-113.

Siddiqi, T, Khan, A and Sharna, S. M. (2018) Impact of Customer Relationship Management on Customer Loyalty, *International Journal of Business, Economics and Law*, 15(5). Pp. 92-101. ISSN 2289-1552

Siddiqi, T., Sahel, S. and Mahmud, I (2018) CRM Dimensions Affecting Customer Satisfaction in Bangladeshi Banking Industry: A Structural Equation Modeling Approach. *European Journal of Business and Management*. 10(8) pp. 11-22.ISSN 2222-2839 (Online)

Schau, H. J., Muñiz Jr., A. M. and Arnould, E. J. (2009) 'How brand community practices create value', *Journal of Marketing,* 73(5), pp. 30–51. doi: 10.1509/jmkg.73.5.30.*Harvard Business Review,* 105-111. Smith, MK (2001), *What is community?*, Infed YMCA George Williams College, viewed 25 July 2014, *<http://infed.org/mobi/community/>*.

Siblbd.com (2017) SIBL, *Social Islamic Bank Ltd.* Accessed 25th September 27, 2017, available at: *http://www.siblbd.com/home*

Swarts, K. M. (2014), Social media as a customer relationship management tool within the building and construction industry, *Research gate.* Nov 28, 2014. *https://www.researchgate.net/publication/268812838.*

Trainro, M (2011), 'Excavating Epaphras of Colossae', in Vandenhoeck & Ruprecht, Gottingen.de Valck, K., van Bruggen, G. H. and Wierenga, B. (2009) 'Virtual communities: A marketing perspective', Decision Support Systems, 47(3), pp. 185–203. doi: 10.1016/j.dss.2009.02.008.

Wise, Victoria and Ali, Muhammad (2009), Customer relationship management in banks with special reference to Bangladesh*, in AIBSW 2009: Proceedings of the 2009 Academy of International Business (AIB) US Southwest Chapter Annual Conference*, Academy of International Business, Southwest Chapter, East Lansing, Mich., pp. 45-57.

Woodcock, N., Green, A., Starkey, M. & FRAMEWORK™, T. C. (2011). Social CRM as a business strategy. *Journal of Database Marketing & Customer Strategy Management,* 18**,** 50-64.

Yin, C. K., & Kannan, P. K. (1999). Consumer behavior loyalty: a segmentation model and analysis. *Journal of Business Research, 44(2), 75-92. http://dx.doi.org/10.1016/S0148- 2963(97)00243-9*

Factors Determining Passenger Satisfaction on Inter district Bus Services: A Study on Barishal, Bangladesh

Md. Alamgir Mollah*

Md. Imran Hossain**

Abstract

Interdistrict bus service is one of the most common modes of public transport in Bangladesh. It works as backbone by connecting one district to other(s). Passenger Satisfaction on this type of bus service is crucial to service providers for increasing the quality of service delivery. This study aims at identifying the factors that determine the satisfaction of bus passengers travelling to and from Barisal district. 330 respondents were interviewed face-to-face using a self-administered questionnaire following non-probability convenience sampling method. Thirty (30) variables are selected for this purpose. Factor analysis is used to decompose the variables and then, regression analysis is employed to find out the effect of those variables on the satisfaction of bus passengers. When factor analysis was applied these variables constitute eight (8) factors based on Eigen value namely-Physical Comfort of Passengers in the Bus, Quality of the Ride, Passenger-friendly Ticket Purchase Facilities, Behavior of Co-passengers, Adequate Resting Facilities at the Bus Terminal, Security of the Goods Carried With Passengers, Fitness of the Buses, Delightful Value Added Services Offered to Passengers. The regression analysis of the factors revealed that these 8 factors have significant effect on passenger satisfaction on interdistrict bus services. This study will help bus operators formulate passenger-oriented quality services for maximizing customer lifetime value.

Keywords: Interdistrict Bus Services, Passenger Satisfaction, Value Added Service, Passenger-oriented Quality Services, Customer Lifetime Value

1. Introduction

Road Transportation plays an important role for proper functioning of the economy of Bangladesh. Generally, bus services take two forms: intradistrict short distance service and interdistrict long distance service. People use interdistrict bus services as public transport to travel to or from one district to other(s).

*Assistant Professor, Department of Management Studies, University of Barishal.
**Assistant Professor, Department of Marketing, University of Barishal.

According to KFH Group and WBA Research (2014) interdistrict or intercity bus operates with limited stops over fixed routes, connects long distance communities, has the ability to carry passenger baggage, and makes significant connections with the national interdistrict transportation network. Similarly, Garber and Hoel (2009) defines interdistrict bus service as a transport service that has a single stop at one location in or near a city, and travels long distances without stopping at all.

In Bangladesh both government and private bus operators conduct interdistrict bus services to serve the travelers. The common interdistrict bus services operating to and from Barisal are BRTC, Sakura Paribahan, Chaklader Paribahan, Tuhin Enterprise, Padma Paribahan, Emon Enterprise, Akib Paribahan, Eagle Paribahan, Green Line, Hanif, Golden Line, MM Paribahan, GM Enterprise, Desh Travels, Sohag Paribahan, Meghna Paribahan, and many more. These operators are serving passengers for long time by connecting northern, southern, central, eastern parts of Bangladesh to Barisal.

Every day thousands of passengers are traveling to different parts of this country using these transports. Usually, a passenger has to spend large amount of time due to long distance route to travel from one location to other using interdistrict bus services. Hence, satisfaction of the passengers using these bus services is significant to the bus operators. Passengers want various in-bus services, efficient ticketing system and different terminal facilities from the bus operators.

The study takes into consideration the satisfaction of the passengers who use interdistrict bus services. Since the interdistrict bus service is a popular mode of transportaion, satifaction of the passengers remain vital to the service providers. Identification of the factors influencing passenger satisfaction and the effect of the factors on passenger satisfaction may be effective in increasing customer base of the service providers.

This study is an endeavor to find out the determinants of satisfaction of interdistrict bus service users. It will review enormous literatures to identify those determinants or factors and will also attempt to find their effect on passenger satisfaction. Finally, some recommendations will be made for service improvement, if necessary.

2. Literature Review

Very handful literatures are found in interdistrict bus service passenger satisfaction. This study presents the concept of interdistrict bus services and proceeds with the aim that passenger satisfaction on interdistrict bus services is determined by a number of factors.

Intercity, also known as interdistrict bus service, is an economical way to travel between cities and that mostly takes access to highways for the majority of their routes. The journey may continue up to several hours long, without any stops, but may also include longer routes with one or more stops for picking up and discharging passengers (Wikitravel, 2018).

Since, interdistrict bus service is vital to the economy of Bangladesh it may be crucial to the service providers to measure the satisfaction level of passengers using this network. However, bus passenger satisfaction is influenced by different factors. In a study, Andaleeb et al (2007) found that passenger bus service satisfaction depends on several things like comfort, quality of the ride, co-passengers behavior, insecurity, bus staffs behavior, adequacy, bus stand facilities, changed buses and government supervision. KFH Group and WBA Research (2014) also found that passenger satisfaction on this service may be influenced by driver professionalism, heating/air conditioning system of the buses, availability of luggage space and easy ticket purchase facility.

Ponrahono et al (2016) mentioned that trip purpose, frequency, safety and security, comfort, convenience and cost and distance of the trip can determine satisfaction of bus passengers. Reliability, safety, communication, comfort and cleanliness are important to the satisfaction of passengers travelling in bus (Rohani et al., 2013). Ismail et al (2012) came up with similar types of findings and presented that satisfaction of passengers using bus are significantly influenced by frequency, price, punctuality and travel time. Kogi (1979) stated that bus passengers demand timely service, limiting fare increase, increasing service frequency, reliability for their satisfaction. He also inferred that comfort within vehicle, safety in transit, seat comfort, availability of luggage racks, improved air conditioning, and space allowance are required for passenger satisfaction.

Andreassen (1995) claimed that customer (dis) satisfaction in public transportation depends on three things: ticket price, price level and, finally, the layout of the platform or the station, especially for buses. There is no standard definition of measuring service quality but it can be identified by the differences of perceived expectation and perceived performance. Hanan and Karp (1989) also described that Customer satisfaction varies according to the situation related to goods and services that experienced by the customer but greatly modified by the expectation and assessment of personal behavior.

Park et al (2004) commented that customer satisfaction and service quality judgments have involved consumers comparing their prior expectations to actual service performance. According to Wright and Ashford (1989) overall service characteristics affect the service level. This can be measured with some associated quantitative factors such as travel time, speed and cost etc. There is a controversy that through increasing retention, customer satisfaction may secure for future benefits and also decrease the cost of the future transaction of such as communications, sales, and service. Study by Anderson et al (2004) supported the fundamental logic that customer satisfaction positively influences customer retention.

In case of bus service, there are several issues that are also related to transport operation; they are reliability, passenger comfort and safeties are playing a key role (Rahman & Nahrin, 2012).They also explained that Comfort level, Quality of the ride, Co-passengers' behavior, Insecurity, Behavior of bus operators, Adequacy, Amenities and facilities at bus stand, Government supervision as well as Direct Services are also supportive indicators for public service satisfaction. In this regard Currie (2003) explained that public transport operations affects reliability, passenger comfort, safety and most importantly where passengers wait. In a studyit is found that reliability of the services, friendliness of services, clean bus interiors, comfort, value for money, clean bus exteriors, easy access, reasonable fares and easy to understand, and easy to remember the timetables are some of the factors that are mostly important for customer service (Disney, 1998).

The literatures that are reviewed to conduct this research mainly focus on the satisfaction of bus service users. Moreover, most of the literatures are found in the context of countries other than Bangladesh. Besides, satisfaction level may vary among the passengers traveling within a district and between

districts. So, there lies a significant gap in exploring the passenger satisfaction of interdistrict bus services in Bangladesh. This study is undertaken to fill this gap. This study mainly focuses on measuring the satisfaction of passengers of interdistrict bus services specifically tapping into the transport sector of Barisal, Bangladesh.

After review of enormous literatures this study poses that reliability, ease of passengers, ease of travelling, cleanliness, in-bus facilities, compliance issues, number of buses in a route, timeliness of the service providers, and some other factors can influence the passenger satisfaction of interdistrict bus services. After identifying the variable that may determine the satisfaction of passengers of interdistrict bus services in Barisal, Bangladesh this study present the following hypothesis that will be tested later.

H_0: *There is no significant difference among the factors determining passenger satisfaction on interdistrict bus services.*

H_1: *There is significant difference among the factors determining passenger satisfaction on interdistrict bus services.*

3. Objectives of the Study

The main objective of this study is to identify the factors that determine passenger satisfaction on interdistrict bus services in Barisal, Bangladesh. This study also tries to explore the concept of interdistrict bus services and passenger satisfaction of interdistrict bus services. The authors will present some policy suggestions based on findings of this study to improve the interdistrict bus service quality.

4. Methodology of the Study

This study is descriptive in nature and conducted to identify and describe some factors that determine satisfaction of passengers of interdistrict bus services. Creswell (1994) mentioned that descriptive research is a research that describes the existing situation rather than interpreting and making judgments.

4.1 Sampling Design

Passengers of interdistrict bus services traveling to and from Barisal district have been selected as respondents for this study. Non-probability convenience sampling technique is used to select the

respondents. Malhotra and Dash (2011) stated that this sampling technique is a quick method of locating desired number of participants from the nearby population.

330 respondents or sample shave been reached and interviewed face-to-face to complete the study. To determine the sample size for this research the authors took help from the research of Gorsuch (1983). According to Gorsuch (1983) at least 100 samples be appropriate for factor analysis. However, Tabachnick and Fidell (1996) inferred that to conduct factor analysis 300 cases or samples are viable. Based on the research precedents, this study uses 330 samples for data collection.

4.2 Data Collection Instruments and Measures

The study works with both primary and secondary data. Primary data has been collected from the respondents using survey method. A structured questionnaire is used to conduct personal interview with the respondents. The questionnaire contains two sections. Section 'A' has socio-demographic questions and Section 'B' has research questions related to passenger satisfact ion. In the questionnaire 5-point Likert scale is used as satisfaction measurement scale where Strongly Disagree equals to 1, Disagree 2, Neutral 3, Agree 4, and Strongly Agree 5.

Secondary data used in this study has been collected from journal, books, articles, websites, reports and other relevant sources.

4.3 Data Analysis Method

The research data have been analyzed using Statistical Package for Social Science (SPSS) 23.0 software. Factor analysis is used to identify the factors determining passenger satisfaction on interdistrict bus services. Principal Component Analysis (PCA) using Varimax rotation with Kaiser Normalization (K1) method of Factor Analysis is used for this purpose. Multiple regression analysis is used to measure the effect of factors decomposed in factor analysis on passenger satisfaction. Demographic data of the respondents are interpreted using frequency distribution.

5. Analyses and Findings of the Study

5.1 Tests for Analysis

Cronbach's Alpha	N of Items
0.775	30

Table 1: Cronbach's Alpha for Data Reliability

The Cronbach's Alpha is a measure of reliability of the statistics. Hairet al (1998) stated that Alpha value of 0.70 or higher is often considered the criterion for internally consistent established factors. This study has an Alpha value of 0.775 with internally consistent 30 items which is higher than the acceptable level. This indicates that this study has good data reliability.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.805
Bartlett's Test of Sphericity	Approx. Chi-Square	3361.299
	df	435
	Sig.	.000

Table 2: KMO and Bartlett's Test of Sphericity

The adequacy of the sample can be assessed by using the Kaiser-Meyer-Olkin (KMO) (Kaiser, 1970) measure. KMO measure ranges from 0 to 1. For this study, Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.805. This measure is adequate and well-accepted for conducting Factor Analysis.

Bartlett's Test of Sphericity (Bartlett, 1950) is used to make the chi-square significant. Hair, et al (1995) noted that Bartlett's Test of Sphericity verifies that correlation matrix is not an identity matrix and is significant at $p < 0.05$ in Factor Analysis.

This study has an approximate Chi-Square statistic of 3361.299. This is significant at the 0.05 significance level. This infers that the null hypothesis, that the population correlation matrix is an identity matrix, is rejected by Bartlett's Test of Sphericity (Malhotra & Dash, 2011). Therefore, this study finds that there is significant difference among the factors determining passenger satisfaction on interdistrict bus services.

In case of Factor extraction this study uses Principal Components Analysis (PCA) method. Principle Component Analysis (PCA) is appropriate when researchers have initially developed an instrument with several items and are interested in reducing the number of items (Netemeyer et al., 2003). This study also uses the Kaiser Normalization method, known as K1, in PCA analysis. According to Malhotra and Dash (2011) in K1 approach, Eigenvlaues greater than 1.00 are retained for interpretation and other values less than 1.00 are not considered.

5.2 Demographic statistics of the respondents

	Number of respondent (s)	**Percentage (%)**
Gender		
Male	106	32.1
Female	224	67.9
Total	330	100
Bus Category		
Air Conditioned	47	14.2
Non-air Conditioned	283	85.8
Total	330	100
Educational Qualification		
PSC or Up to Class Five	5	1.5
JSC or Class Eight	7	2.1
SSC or Equivalent	25	8.0
HSC or Equivalent	179	54.2
Honor's	76	23.0
Degree	14	4.2
Masters	24	7.3
Total	330	100
Income Range		
Zero	17	5.2
Below Tk. 5000	25	7.5
Tk. 5000 to 10000	101	30.6
Tk. 11000 to 20000	55	16.7
Tk. 21000 to 30000	38	11.5
Tk. 31000 to 40000	41	12.4
Tk. 40000 to 50000	28	8.5
More than Tk. 50000	25	7.6
Total	330	100

Table 3: Frequency of the Demographic Data of Respondents

Table 3 shows that among 330 respondents, 32.15% are female and 67.9% male. The table also shows that passengers travel in two categories of buses: Air Conditioned (14.2%) and Non-Air Conditioned

Factors Determining Passenger Satisfaction on Interdistrict Bus Services: A Study on Barishal, Bangladesh

(85.8%). This study exhibits that more than 90% passengers have HSC or higher equivalent education as well as two third number of travelers belong to Tk. 11000 to 20000 or higher income group.

5.3 Factor Analysis

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.330	21.101	21.101	6.330	21.101	21.101	3.577	11.923	11.923
2	3.075	10.251	31.352	3.075	10.251	31.352	3.071	10.236	22.159
3	2.006	6.688	38.040	2.006	6.688	38.040	2.510	8.367	30.526
4	1.666	5.554	43.594	1.666	5.554	43.594	2.087	6.956	37.482
5	1.605	5.349	48.943	1.605	5.349	48.943	1.908	6.359	43.841
6	1.334	4.445	53.389	1.334	4.445	53.389	1.764	5.878	49.719
7	1.259	4.195	57.584	1.259	4.195	57.584	1.757	5.856	55.575
8	1.089	3.631	61.215	1.089	3.631	61.215	1.692	5.641	61.215
9	.947	3.156	64.372						
10	.875	2.916	67.288						
11	.813	2.709	69.997						
12	.777	2.588	72.585						
13	.740	2.466	75.051						
14	.667	2.224	77.274						
15	.636	2.119	79.394						
16	.612	2.041	81.435						
17	.573	1.910	83.345						
18	.544	1.815	85.160						
19	.525	1.751	86.911						
20	.488	1.625	88.536						
21	.458	1.526	90.062						
22	.437	1.458	91.520						
23	.417	1.391	92.910						
24	.404	1.348	94.258						
25	.378	1.261	95.519						
26	.349	1.164	96.683						
27	.310	1.035	97.718						
28	.254	.848	98.566						
29	.221	.736	99.302						
30	.209	.698	100.000						

Extraction Method: Principal Component Analysis

Table 4: Total Variance Explained

IBM (2018) found that, the total column shows the Eigenvalues or amount of variance in the original variables accounted for by each component. The % of Variance column shows the percentage ratio of the variance accounted for by each component to the total variance. The Cumulative % column shows the percentage of variance accounted for by the first n components. Hafez (2014) mentioned that, Eigenvalues indicate how much of the total variance of all variables are accounted for by the factor.

The above table shows eight (8) factors that have Eigenvalues greater than 1. The cumulative percentage for the eight factors is 61.215 % where the first factor explained 21.101% of the total variance. The remaining seven factors respectively explained 10.251%, 6.688%, 5.554%, 5.349%, 4.449%, 4.195% and 3.631% of the total variance.
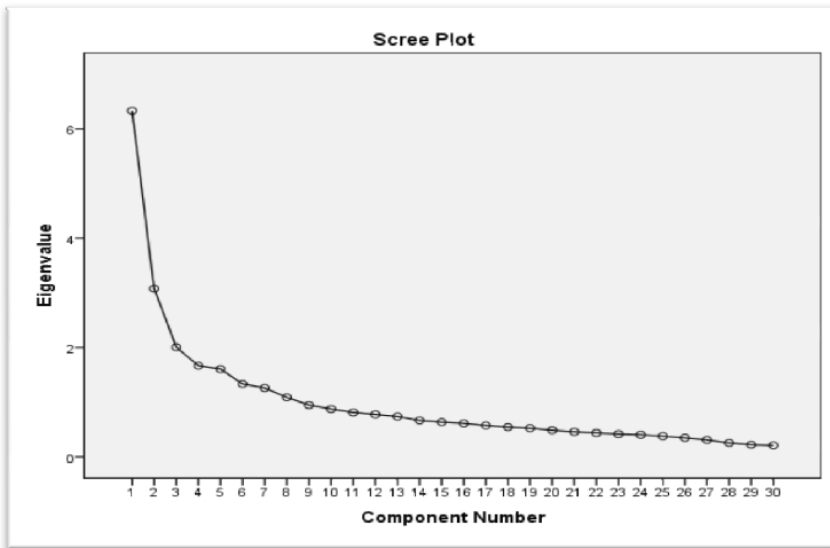
Figure 1: Scree Plot

According to Cattell (1966) to plot the visual exploration of a graphical representation of the Eigenvalues a scree plot is used. A scree plot shows steep curve pattern which is followed by a bend and then a flat or horizontal line.

Factors Determining Passenger Satisfaction on Interdistrict Bus Services: A Study on Barishal, Bangladesh

The above scree plot denotes that eight (8) factors explain most of the variability as a distinct break happens at factor 8. The remaining factors are less considerable as it contributes very small portion of the variability.

	Component							
	1	2	3	4	5	6	7	8
Comfortable seats	**.831**	-.054	.147	040	.067	.103	-.034	-.068
Good Facilities inside the buses	**.767**	-.137	.220	.071	.131	.110	-.162	-.035
Well maintained buses	**.722**	-.020	.080	.125	.188	-.080	.044	-.020
Well decorated buses	**.624**	.007	.135	.031	.000	-.053	.257	.206
Enough blank space within bus	**.561**	.064	.299	.271	.045	.085	.075	.098
Decent behavior of staffs with passenger	**.535**	-.140	.329	.162	-.087	-.149	.127	.263
Dangerous overtaking	-.038	**.824**	.028	-.040	-.035	.078	-.012	-.062
Too fast driving	.135	**.729**	.062	.047	-.050	-.005	-.047	.004
Frequent hard-braking	-.061	**.666**	-.289	.048	-.086	.015	.075	-.082
Blowing too much horns	-.116	**.653**	-.016	-.180	.072	.056	.016	.118
Frequent breakdown of buses on the road	-.125	**.643**	-.108	-.043	-.073	.132	-.144	.002
Good outlook of the buses	-.061	**.524**	-.034	.069	.048	.386	-.220	.032
Easy ticket purchase facility	.275	-.075	**.777**	.224	.079	-.013	.050	-.008
Online ticket purchase option	.190	-.025	**.754**	.257	.109	-.002	.092	.080
Allowing seat-booking over telephone	.240	-.101	**.739**	-.053	.086	-.110	.055	.007
No seats sold through black market.	.246	-.064	**.423**	-.220	.034	-.235	.149	.257
Cleanliness of passengers	038	.004	.033	**.757**	.100	-.075	.101	.082
Good behavior of passengers	.106	-.051	.100	**.753**	.115	-.002	-.091	-.035
Discipline of passengers	.275	-.075	.126	**.738**	-.111	.086	.044	.077
Enough shelter at terminal during inclement weather	.074	-.080	.159	.020	**.798**	-.019	.020	.006
Enough seating arrangement at the terminal	.069	-.028	.087	-.039	**.735**	.012	.260	.105
Enough lighting at the bus terminal	.147	.003	-.016	.164	**.651**	-.157	.129	.044
Proper handling of luggage by the bus operators	.102	.125	-.226	-.058	.005	**.835**	-.022	.057
Fear of being robbed/mugged in the buses	-.016	.202	.055	.028	-.197	**.820**	.144	.067
Fitness and route permit of the buses	.027	-.029	.007	.068	.184	-.015	**.831**	-.083
Bus operators compliance with allowed speed limits	.078	-.174	.260	-.030	.242	.131	**.720**	-.066
Handling of passenger complaints	.256	-.118	.062	.058	.095	.073	-.085	**.696**
Safety instructions inside the buses	-.189	.229	.029	.049	.024	.108	-.123	**.637**
Availability of first aid box in the buses	.380	-.210	.100	.064	.107	-.123	.361	**.475**
Stopping only at the designated stands for saving time	-.251	.241	.081	.042	.050	.147	-.199	**.544**

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 8 iterations.

Table 5: Rotated Component Matrix

This study uses Principal Component Analysis (PCA) method of Factor Analysis and Varimax rotation with Kaiser Normalization method. Varimax rotation produces factors that have small number of large loadings and large number of small loadings (Abdi,2003).

This study has accepted those factor loadings whose absolute values are greater than 0.40. This decision is supported by Samuels (2016) who recommended that factor loadings with values less than 0.3 be ignored.

The Rotated Component Matrix of this study has extracted eight (8) rotated factors along with their loadings.

Factor 1 is positively correlated with Q1, Q2, Q3, Q4, Q5 and Q6. Hence, Factor 1 can be called "Physical Comfort of Passengers in the Bus".

Factor 2 is positively correlated with Q7, Q8, Q9, Q10, Q11 and Q12. Hence, Factor 2 can be called "Quality of the Ride".

Factor 3 is positively correlated with Q13, Q14, Q15 and Q16. Hence, Factor 3 can be called "Passenger-friendly Ticket Purchase Facilities".

Factor 4 is positively correlated with Q17, Q18 and Q19. Hence, Factor 4 can be called"Behavior of Co-passengers".

Factor 5 is positively correlated with Q20, Q21 and Q22. Hence, Factor 5 can be called "Adequate Resting Facilities at Bus Terminal".

Factor 6 is positively correlated with Q23 and Q24. Hence, Factor 6 can be called "Security of the Goods Carried With Passengers".

Factor 7 is positively correlated with Q25 and Q26. Hence, Factor 7 can be called "Fitness of the Buses".

Factor 8 is positively correlated with Q27, Q28, Q29 and Q30. Hence, Factor 8 can be called "Delightful Value Added Services Offered to Passengers".

5.4 Regression Analysis of the Factors

The eight (8) factors derived from factor analysis can be used as independent variables in multiple regression model to test hypothesis and determine their ability to explain passenger satisfaction on interdistrict bus services.

The linear multiple regression model has been developed as follows:

PSIDBS = α + β1 PCPB + β2 QR + β3 PFTPF + β4 BCP + β5 ARFBT + β6 SGCP + β7 FB + β8 DVASOP

Where, PSIDBS = Passenger Satisfaction on Interdistrict Bus Services, α = Multiple Regression Consent, PCPB=Physical Comfort of Passengers in the Bus, QR=Quality of the Ride, PFTPF=Passenger-friendly Ticket Purchase Facilities, BCP=Behavior of Co-passengers, ARFBT=Adequate Resting Facilities at Bus Terminal, SGCP=Security of the Goods Carried With Passengers, FB=Fitness of the Buses, DVASOP=Delightful Value Added Services Offered to Passengers.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.651[a]	.423	.409	.907	.423	29.471	8	321	.000

Table 6: Model Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	194.052	8	24.256	29.471	.000[b]
	Residual	264.203	321	.823		
	Total	458.255	329			

a. Dependent Variable: Passenger Satisfaction on Interdistrict Bus Services

b. Predictors: (Constant), Physical Comfort of Passengers in the Bus, Quality of the Ride, Passenger-friendly Ticket Purchase Facilities, Behavior of Co-passengers, Adequate Resting Facilities at the Bus Terminal, Security of the Goods Carried With Passengers, Fitness of the Buses, Delightful Value Added Services Offered to Passengers

Table 7: ANOVA

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.215	.454		-.474	.636
Physical comfort of passengers in the bus	.845	.079	.586	10.761	.000
Quality of the ride	.069	.075	.042	.922	.357
Passenger-friendly ticket purchase facilities	.073	.073	.053	1.001	.018
Behavior of co-passengers	.030	.076	.018	.396	.692
Adequate resting facilities at the bus terminal	-.003	.067	-.002	-.039	.969
Security of the goods carried with passengers	-.081	.054	-.068	-1.481	.434
Fitness of the buses	.002	.068	.002	.034	.031
Delightful value-added services offered to passengers	.124	.073	.078	1.707	.043

a. Dependent Variable: Passenger Satisfaction on Interdistrict Bus Services

Table 8: Coefficients

Here R^2 = 0.423. This indicates that 42.3% variation in the dependent variable can be explained by the regression model. The value of adjusted R^2 = 0.409 or 40.9%. This suggests that, addition of the other independent variables does not make a contribution in explaining the variation in the dependent variable. The ANOVA table of this study presents whether there is any relationship between dependent variable and independent variables. The ANOVA table shows a significance value of 0.000. The values of all independent variables are as follows:

Passenger Satisfaction on Interdistrict Bus Services = -0.215 + 0.845 (Physical Comfort of Passengers in the Bus) + .0069 (Quality of the Ride) + 0.073 (Passenger-friendly Ticket Purchase Facilities) + 0.030 (Behavior of Co-passengers) + -0.003 (Adequate Resting Facilities at the Bus Terminal) + -0.081 (Security of the Goods Carried With Passengers) + 0.002 (Fitness of the Buses) + 0.124 (Delightful Value Added Services Offered to Passengers).

This indicates that there is a significant relationship between Passenger Satisfaction on Interdistrict Bus Services with Physical Comfort of Passengers in the Bus, Quality of the Ride, Passenger-friendly Ticket Purchase Facilities, Behavior of Co-passengers, Adequate Resting Facilities at the Bus Terminal, Security

of the Goods Carried With Passengers, Fitness of the Buses, Delightful Value Added Services Offered to Passengers. Among these factors- Physical Comfort of Passengers in the Bus(0.000), Passenger-friendly Ticket Purchase Facilities (0.018), Fitness of the Buses (0.031) and Delightful Value Added Services Offered to Passengers (0.043) are highly significant in determining Passenger Satisfaction on Interdistrict Bus Services.

The negative value of the beta intercept (constant) indicates that there is collinearity problem in the independent variables. This also indicates that there is negative correlation between the dependent variable and the corresponding independent variables if the other independent variables are held constant.

6. Conclusion and scope of further study

The study aimed at identifying the factors determining passenger satisfaction on interdistrict bus services. Utilization of factor analysis presents that eight factors contribute to the satisfaction level of interdistrict bus service users in Barisal. The multiple regression analysis justifies the claims by demonstrating that these eight factors have meaningful impact on Passenger Satisfaction on Interdistrict Bus Services. The findings of this study present that consideration of ease of passengers, service quality, e-ticketing facility, increasing facilities of the terminal, in-service security may be meaningful to the bus operators. This implies that bus operators should increase physical comfort of the passengers, introduce bus routes in new geography, introduce e-ticketing facility, and improve service quality for attaining passenger satisfaction. This study faced some constraints while working on this paper such as unavailability of relevant literatures in Bangladeshi context, refusal of some respondents to cooperate in the survey etc. This study uses 30 variables in conducting Factor Analysis. Addition of some new variables may generate few more factors that might affect the passenger satisfaction on interdistrict bus services. The authors recommend that more studies may be viable in this field of maximizing Passenger Equity in interdistrict bus services.

7. References

Abdi, H. (2003). Factor Rotations in Factor Analyses. In: Lewis-Beck, M., Bryman, A., & Futing, T. (eds.). *Encyclopedia for Research Methods for the Social Sciences*, Sage, Thousand Oaks, CA. pp. 792-795.

Andaleeb, S. S., Haq, M., & Ahmed, R. I. (2007). Reforming innercity bus transportation in a developing country: A passenger-driven model. *Journal of Public Transportation, 10(1), 1.*

Anderson, E. W..Fornell, C., & Mazvancheryl, S. K. (2004). Customer Satisfaction and Shareholder Value. *Journal of Marketing*, Vol. 68, No. 4, pp. 172-185.

Andreassen, T. W. (1995). (Dis) satisfaction with public services: the case of public transportation. *Journal of Services Marketing*, 9(5), 30–41

Bartlett, M. S. (1950). Tests of significance in factor analysis. *British Journal of Psychology*. 3(2), pp. 77-85.

Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research.* 1(2), pp. 245-276.

Creswell, J. W. (1994). *Research Design: Qualitative and Quantitative Approaches.* Thousand Oaks. London: SAGE.

Currie, G. V. (2003). Planning and design for on-road public transport. *In: Institute of transport Studies, eds. Traffic Engineering and Management.* Monash: Monash University.

Disney, J. (1998). Competing through quality in transport services. *Managing Service Quality: An International Journal, 8(2),* 112–118.

Garber, N. J., & Hoel, L. A. (2009). *Traffic and Highway Engineering*. 4th edition, Cengage Learning, Canada.

Gorsuch, R. L. (1983). *Factor Analysis*. 2nd edition, Hillsdale, NJ: Erlbaum.

Hafez, M. (2014). Factors Affecting Green Purchase Behavior of Bangladeshi Customers: A Study on Energy Saving Lamp. *The AUST Journal of Science and Technology,* 6 (1 & 2), pp. 17-29.

Hair, J. F., Anderson, R. E., Tatham R. L., & Black, W. C. (1995). *Multivariate Data Analysis with Readings,* 4th Edition, Prentice Hall, Englewood Cliffs, NJ.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate Data Analysis*. 5th edition, Upper Saddle River, NJ: Prentice Hall.

Hanan, M., & Karp, P. (1989).*Customer Satisfaction: How to Maximize, Measure, and Market Your Company's Ultimate Product*. American Management Association.

IBM (2018). *Total Variance Explained.* IBM Knowledge Centre. Retrieved fromibm.com.

Ismail, R., Hafezi, M. H., Nor, R. M., & Ambak, K. (2012). Passengers preference and satisfaction of public transport in Malaysia. *Australian Journal of Basic and Applied Sciences,* 6(8), 410-416.

Factors Determining Passenger Satisfaction on Interdistrict Bus Services: A Study on Barishal, Bangladesh

Kaiser, H. F. (1970). A Second-Generation Little Jiffy. *Psychometrika.* 35(4), pp. 401-415.

KFH Group & WBA Research (2014).Minnesota Intercity Bus Study. March, 2014.

Kogi, K. (1979). Passenger Requirements and Ergonomics in Public Transport. *Ergonomics*, 22:6, 631-639, DOI: 10.1080/00140137908924648.

Malhotra, N. K. & Dash, S. (2011). *Marketing Research: An Applied Orientation.*6th edition, Pearson, Delhi.

Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling procedures: issues and applications.* Thousand Oaks: Sage.

Park, J. W., Robertson, R., & Wu, C.L. (2004). The effect of airline service quality on passengers' behavioural intentions: a Korean case study. *Journal of Air Transport Management*, 10(6), 435–439.

Ponrahono, Z., Bachok, S., Ibrahim, M., & Osman, M.M. (2016). Assessing Passengers' Satisfaction Level on Bus Services in Selected Urban and Rural Centres of Peninsular Malaysia. *Procedia-Social and Behavioral Sciences*, 222 (2016) 837 – 844.

Rahman, M. S. U., & Nahrin, K. (2012).Bus services in Dhaka City-users' experiences and opinions. *Journal of Bangladesh Institute of Planners*, ISSN, 2075, 9363.

Rohani, M.M., Wijeyesekera, D.C., & Karim, A.T.A. (2013). Bus Operation, Quality Service and The Role of Bus Provider and Driver. *Procedia Engineering* 53 (2013) 167 – 178.

Samuels, P. (2016). Advice on Exploratory Factor Analysis. doi:10.13140/RG.2.1.5013.9766.

Tabachnick, B. G. & Fidell, L. S. (2001). *Using multivariate statistics.* Needham Heights, MA, Allyn & Bacon.

Wikitravel (2018). *Intercity bus travel in North America.* Retrieved from wikitravel.org.

Wright, P. H. & Ashford, N. J. (1989). *Transportation engineering planning and design.*3rd Edition, New York, USA.

Appendix: Questionnaire of the Study

This survey asks some questions regarding **"Factors Determining Passenger Satisfaction on Interdistrict Bus Services: A Study on Barisal, Bangladesh".** This survey is for academic use and highly confidential. Your co-operation for being a respondent is greatly appreciated and voluntary.

A. Name:

B. Gender: (1) Male   (2) Female

C. Category of the buses you ride: (1) Air-Conditioned (2) Non-Air Conditioned

D. Educational Qualification: (1) PSC or Upto Class Five   (2) JSC or Class Eight   (3) SSC or Equivalent   (4) HSC or Equivalent   (5) Honor's (6) Degree (7) Masters

E. Income Range:(1) Zero (2) Below Tk. 5000 (3) Tk. 5000 to 10000 (4) Tk. 11000 to 20000 (5) Tk. 21000 to 30000 (6) Tk. 31000 to 40000 (7) Tk. 40000 to 50000 (8) More than Tk. 50000

Research Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Seats in the buses are comfortable to passengers.	1	2	3	4	5
Buses are furnished with good facilities.	1	2	3	4	5
Buses are well maintained in terms of schedule.	1	2	3	4	5
Buses are well decorated with necessary amenities.	1	2	3	4	5
There is enough blank space within buses in the walkway.	1	2	3	4	5
Staffs of the buses behave decently with passengers.	1	2	3	4	5
Buses overtake other vehicles dangerously.	1	2	3	4	5
Drivers drive too fast that is scary to passengers.	1	2	3	4	5
Buses drivers frequently brake hard unnecessarily.	1	2	3	4	5
Drivers blow horn too much that distracts passengers.	1	2	3	4	5
Buses frequently break down on the road for poor fitness.	1	2	3	4	5
The outlook of the buses is good.	1	2	3	4	5
Purchase of ticket is easy for the passengers.	1	2	3	4	5
Online ticket purchase option is available to passengers.	1	2	3	4	5
Buses allow passengers to book seat over telephone.	1	2	3	4	5
No bus seats are sold through black market.	1	2	3	4	5
Passengers maintain cleanliness in the buses.	1	2	3	4	5
Good behavior of passengers inside the buses is important.	1	2	3	4	5

Factors Determining Passenger Satisfaction on Interdistrict Bus Services: A Study on Barishal, Bangladesh

Discipline of passengers is important inside the buses.	1	2	3	4	5
Enough shelter at terminal during bad weather is essential.	1	2	3	4	5
Enough seating arrangement at terminal is essential.	1	2	3	4	5
Enough lighting at the bus terminal is required.	1	2	3	4	5
Proper handling of luggage by bus operators is essential.	1	2	3	4	5
Fear of being robbed/mugged in the buses make passengers vulnerable to safety.	1	2	3	4	5
Fitness and route permit of buses are vital to passenger.	1	2	3	4	5
Bus operators comply with allowed speed limits.	1	2	3	4	5
Handling of passenger complaints is essential.	1	2	3	4	5
Safety instructions inside the buses are available.	1	2	3	4	5
First aid box in the buses are needed in emergency health issue.	1	2	3	4	5
Buses stop only at the designated stands for saving time.	1	2	3	4	5

Determinants of
Brand Loyalty of Millennial or Generation Y

Md. Mehedi Hassan*

Md. Khairul Alam Rasel[**]

Abstract: *Today's marketers are much more concerned about millennial due to their majority in market. They also dedicate maximum of their resources to understand their unique characteristics. This study helps the marketer to understand reasons which make the millennial loyal to a particular brand. This study is based on primary data and descriptive in nature. We took 300 samples to conduct the study at Dhaka city. The study revealed that millennial are loyal to those brands which deliver as it promises, give importance to consumer preference, have connection with social media and have compassion over different societal issues. Marketer, who rightly identify these unique features of the millennial, surely get the share of the mind of millennial. However as this study is limited to Dhaka city, more profound result would come if samples were taken from other areas of the country. Many researchers focuses on consumer to study their brand preference but this study focuses on millennial in particular.*

Keywords: *Millennial, Consumer preference, Brand, Brand loyalty.*

Introduction

Currently there are approximately 45 million people in Bangladesh who is aged between18 to 34 years of age, Indexmundi.com, (2018). These huge number of young people is also referred as generation Y or millennial. Though there is no specific date range but researcher and the demographers are somewhat agreed that millennials have their birth within early 1980s to early 2000s, En.wikipedia.org, (2018). This huge number of population are entering into the job market. They have their own purchasing power besides millennial holds an important position as family member which also make them decision maker. As they are young and enthusiastic, they also play their role as trendsetter. Being earning member, decision maker, trendsetter, Millennial are much important to the marketer. Catching the attention of the millennial will result in profitability and viability in the competitive marketplace for the marketer of different brand producer of cloths, electronic devices, footwear etc. Nonetheless holding the attention of the millennial is quite difficult. Millennial possess information which is their knowledge. They are educated. One of their biggest characteristics is their connectivity with social media. They remain connected with smart mobile phones. They are called tech oriented, self-possessed and highly informative customer group. They also try to avoid advertisement and they love to go through review before making any purchase decision. They also tend to use their own judgement in purchase decision process. They love to hang around with their friends.

They spend money on having food outside. They love to explore the unexplored. Millennial expect delivery on promise. Their perception is good for those companies who is authentic in delivering the product or service right. Marketer involves with patronizing different social cause get favourable attitude

*Assistant Professor, Department of Marketing, University of Barisal.
**Lecturer, Department of Marketing, Business Studies Group, National University.

from the millennials. Millennial expect service to be fast and accurate. This diversified nature of millennial have made it difficult to get their attention by the marketer. One good news for the marketer is millennial are brand loyal but retaining their loyalty requires vigorous effort. Therefore learning about this group of customers is mandatory for the marketer. This study will provide important insight about the factors which help millennial to form their choices regarding various products and services of marketer.

Literature Review

There are young people who seems to be crazy about brands. Their passion is to go after brands in order to be latest in the friends' arena. Marketer have rightly identified this group of young passionate brand seekers who is also called Millennial aged between 18 to 35 in 2016, Fry (2019).

In this regard, Gill (2017) opined that Millennial are said to be the most loyal generation so far. He also brought the reference of many promoters and marketers whose target markets are people who is aged in between 18 to 34.

kokemuller (2007) pointed that Business organization has to take decision on various arena like product, store layout development and promoting the business etc. Target market is a crucial factor while taking decision on these factors. Deeply analysing the inspiration and interests of the target market provides meaningful insights about those factors.

kokemuller (2007) further stated that sometimes few business organization give price discounts on their brands which don't get attention from the target market, called as off-brands. Customers choose these off-brands because of price benefits. But customers buy brands for a variety of reasons.

Malär et al. (2011) found that brand equity enlarges when people will have an emotional brand attachment to a particular brand. He further pointed out that brand attachment is created when there is a connection in between consumers and brand personality of a specific brand.

Nurunnobi et al. (2016) conducted a study on young consumers in Bangladesh. They tried to figure out buying behaviour of those young consumers on fashion items. Their investigation brought the result that firstly, young consumers in Bangladesh are more concerned about quality of the garments. Secondly young consumers emphasizes on colour.

Similarly Gill (2017) focused on the issue that customers always want to be happy. Customer move around various brand but finally they get back to brand where they feel something. That means where they have emotional bonding or connection.

Edensor (2016) said that every people of the society is a part of the society. People are social beings. Being part of the society, people like those brands which elicits a broader meaning in the social groups.

Mitchell (2012) opined marketers these days have understood that young people are the market maker. They are the key to the market. They represent different market like new technology, mobile, fashion, snacks food and entertainment. Consequently marketer focuses young people while designing their strategy.

Haskins (2015) stated that a particular brand can make it different from other brand. He also added that branding helps to define a product immediately with a minimum thinking. Such as while purchasing soya bean oil, we instantly think about Rupchada or Teer but we don't think about Pusti which is not that much popular among the consumers of Bangladesh.

Determinants of Brand Loyalty of Millennial or Generation Y

A brand resides into the mind of the consumer. Customers automatically utters the name of an established brand. Moreover a consumer may buy products without studying products features and benefits, if it is a brand, Boykin (2012). According to him brand also works as a trust maker.

Joshi (2013) opined that a consumer considers choices of brand, psychological factors and mostly 4 P's of marketing while making a product purchase decision. He also stated that branding reinforces psychological factors like motivation, learning, perception, belief and attitude.

Linton (2011) found that consumer behaviour can be affected by either price of the product or preference to a specific brand. Loyal consumer tends to be less sensitive about price who have specific fond to a particular brand and price sensitive customers tends to bargain in all their products categories.

Sometimes people become nostalgic about a particular brand which they are using for so long a time. This is primarily because the brand itself has a glorious history to grow in parallel way with the target customers. Taking into consideration, Foster (2016) suggested to uphold a sense of belongingness and relationship with the target market to create loyalty.

Foster (2016) emphasised about the importance of social media. He further clarified that social media has made the way of interaction with customers more accessible than ever.

Llopis (2014) opined that consumer are searching reasons a brand pursued for, because they want to know what a brand positioned for and what they prioritizes. He also opined that consumer wants to live by the brand they prefer. He further explained that if a brand wants to position its quality, consumer will search quality always.

Marks (2016) stated that Millennial are flooded with huge number of products while they visit different site at online. Therefore millennial can easily get diverted about which one to choose out of huge array of products. He also added that keeping the millennial loyal to a particular brand requires creating an interesting experience and adopting a social cause as well as making millennial engaged with different social media.

Schawbel (2015) opined that the number of millennial is much substantial that companies are now fighting hard with other marketer to get the share of their mind. This huge number of millennialhave buying power worth $200 billion annually in USA only. He also stated that millennial are trendsetter and they have enough power to influence the older generation of the society. He further told that millennial are not attracted by traditional advertisements and it is not true that millennial are not brand loyal.

Nelson (2012) said that millennial have the habit of multitasking. They uses one or two internet devices while watching TV. She also said that though millennial are connected and they live in the age of information. They only remind a fraction of what they listen, read, see. She also emphasized that due to brand loyalty, millennial get back to brand they prefer most.

Today millennial have everything in their mobile phone. They can do many of their activities using the mobile phone. In expressing the dependency on mobile phone, Radin (2017) opined that Google teaches herself and Netflix gives herself entertainment as well as Amazon gives the opportunity to do necessary shopping.

Golkar (2017) stated that Millennial wants to adopt brand which will be available through browsing sites in online. They expect that the marketer of a brand will provide opportunity to order product through a click. They also expect a quick handover of the product without a minimum hassle. All they want is to put no effort but getting a perfect brand.

Golkar (2017) also opined that brand, which provide benefit to society and environment, is more preferable to millennials. Millennials positively responds to brands that have commitment to do benevolent works for the betterment of the society.

According to James (2017) Millennial do not prefer advertisement. They always try to avoid advertisement by their own way. He also stated that millennials prefer personalization in content that marketer make to promote their brand.

Fromm (2017) opined that Millennials have feelings and love as well as they want to engage with brands which have concentration on making content participatory, informative and engaging. He further pointed out that strong brand fix up problem so quickly that customer do not understand about the problem.

Millennials are reffered as young adults of the society. They do not follow anything without judgement. All the marketers have agreed to refer them as tech people, absorbed within themselves or free spirited. Therefore Speier (2016) told that millennial do not take any societal norms as granted. They prefer to conduct analysis to gather opinion about any social norms.

Speier (2016) also opined about the adoption of new brand by the millennial. Millennial have always inclination to something new which come into the marketplace. They sometimes form their choices based on recommendation by their peer. They are also influenced by word of mouth.

Jones (2016) expressed his opinion that Millennial are not impulse buyer. Tremendous upsurge of social media has created the opportunity to be connected with friends, celebrity trends, and different blogs always. Now when making any purchase decision people look for review and recommendations from different social media and blogs.

Millennial have grown up in a time where they know the importance of production of energy. Because their daily life is totally dependent on electricity. Therefore Weinstein (2015) rightly said that millennial want those products which provides convenience and which is energy efficient.

According to Smith (2012) few of the digital marketing strategies can be so useful to catch the response of the millennials, inspiring them to visit website and motivating them to write evaluations in online.

Necessity of the study

Many research have been conducted to explore customer behaviour regarding clothing apparel, cell phones, and foreign brands. After reviewing different literatures available in the internet, it has been found that previously no study have been conducted in Bangladesh to explore the expectation of millennial to be loyal to marketer of different products or service such as fashion wear, footwear and electronic goods.

Aims of the study

The broad objective of the study is to examine the factors make the millennial or generation Y motivated to be loyal about a marketer's products or services. The specific objective of the study are

- ❖ To find out the determinants of brand loyalty of Generation Y or Millennial.
- ❖ To find out the importance of those determinants.

Hypothesis

H1: There may have relationship between concern over societal issues and brand loyalty of millennial.
H2: There may have significant positive relationship between delivery on promise and brand loyalty of millennial.
H3: There may have significant positive relationship between connection of brand with social media and brand loyalty of millennial.
H4: There may have significant positive relationship between Brand accountability and brand loyalty of millennial.
H5: There may have relationship between response of the marketer and brand loyalty of millennial.
H6: There may have significant positive relationship between priority to consumer preference and brand loyalty of millennial.
H7: There may have relationship between Brand accessibility and brand loyalty of millennial.
H8: There may have relationship between Advertisement and brand loyalty of millennial.
H9: Determinants influence the brand loyalty of Generation Y or Millennial.

Methodology of the study

This study is descriptive in nature. Our motive is to gain more insight about the millennial. Therefore forming some characteristics of the millennial which are being used by them while forming choice about different product or services by the marketer. We used convenient sampling. We took Dhaka city to conduct the study. So all the people aged in between 16 to 34 are our population. We took student of Dhaka University, Jahangirnagar University, Jagannath University, Dhaka Commerce College, Dhaka City College and employees of BRAC Bank, National Bank, National Board of Revenue (NBR), Election Commission, Sonali Bank as our sample. We collected primary information from the above institution by conducting a survey through a questionnaire. We used 7 point likert scale in our questionnaire. Then we analysed the data through different statistical tool like Regression, factor analysis.

Results and Discussion

Multiple regression analysis

Table: Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.85	.723	.711	.35141

R^2 is the percentage of the variation in the dependent variable that is anticipated from the independent variable. That is to say, the value of R^2 measures the variation of dependent variables which is explained by independent variables. In our study, the result of R^2 is .723 that suggests a moderate association in between dependent and independent variables. Therefore, 72.30% variation in dependent variable is explained by independent variable. (Malhotra & Dash 2010).

Table: ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.533	8	7.692	62.285	.000[b]
	Residual	23.587	191	.123		
	Total	85.120	199			

The value of F test is 62.285 which is significant at .05 level with an 8 and 191 degrees of freedom. This implies about the statistical significance of the regression model. Therefore, the null hypothesis is rejected. That is to say, independent variables do not impact dependent variable is rejected.

Table: Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-5.325	.688		-7.741	.000
	Concern over societal issues	.393	.089	.277	4.432	.000
	Delivery on promise	.567	.099	.629	5.746	.000
	Connection of brand with social media	.479	.079	.464	6.065	.000
	Brand accountability	.053	.086	.059	.613	.540
	Response from the marketer	.067	.073	.101	.909	.364
	Prority to consumer preference	.556	.118	.493	4.708	.000
	Brand accessbility	.252	.039	.275	6.484	.000
	Advertisement	.054	.075	.068	.719	.473

Standardized coefficients, of different independent variables of the above table, shows the percentage of variation in the dependent variable caused by the different independent variables. From the above table, it is evident that Delivery on promise, Priority to consumer preference, Connection of brand with social media and Concern over societal issues are significant at .05 level. The standardized beta coefficients for independent variables like Delivery on promise, Priority to consumer preference, Connection of brand with social media and Concern over societal issues are .629, .493, .464 and .277 respectively.Therefore, these independent variables are important determinants of brand preference of Generation Y or Millennial.

However using the values from the coefficients table, the regression model becomes:

Determinants = -5.325 + .277 (Concern over societal issues) + .629 (Delivery on promise) + .464 (Connection of brand with social media) + .059 (Brand accountability) + .101 (Response from the marketer) + .493 (Priority to consumer preference) + .275 (Brand accessibility) + .068 (Advertisement)

Determinants of Brand Loyalty of Millennial or Generation Y

				Table: Correlation Matrix				
Variables	Concern over societal issues	Delivery on promise	Connection of brand with social media	Brand accountability	Response from the marketer	Prority to consumer preference	Brand accessbility	Advertisement
Concern over societal issues	1.000	-0.593	0.102	0.179	0.232	-0.443	-0.139	0.619
Delivery on promise	-0.593	1.000	-0.151	-0.434	-0.035	0.607	0.065	-0.280
Connection of brand with social media	0.102	-0.151	1.000	0.157	-0.280	-0.408	-0.290	-0.008
Brand accountability	0.179	-0.434	0.157	1.000	0.347	0.096	-0.207	0.213
Response from the marketer	0.232	-0.035	-0.280	0.347	1.000	-0.070	-0.143	0.707
Prority to consumer preference	-0.443	0.607	-0.408	0.096	-0.070	1.000	0.118	-0.214
Brand accessbility	-0.139	0.065	-0.290	-0.207	-0.143	0.118	1.000	-0.259
Advertisement	0.619	-0.280	-0.008	.213[**]	0.707	-0.214	-0.259	1.000

Table: Result of principal component analysis		
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.545
Bartlett's Test of Sphericity	Approx. Chi-Square	118.197
	df	28
	Sig.	.000

From the correlation matrix table, we can observe that variables are highly correlated with each other. So it can be concluded that multicollinearity is deemed to be a problem. The result of Kaiser-Meyer-Olkin Measure of Sampling Adequacy. (KMO) test is .545 which is greater than .5. Therefore, factor analysis is an appropriate technique.

Table: Result of principal component analysis								
Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Compone nt	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.823	35.282	35.282	2.823	35.282	35.282	2.251	28.134	28.134
2	1.692	21.153	56.435	1.692	21.153	56.435	2.012	25.151	53.285
3	1.191	14.884	71.319	1.191	14.884	71.319	1.443	18.034	71.319
4	.992	12.402	83.721						
5	.582	7.275	90.996						
6	.512	6.402	97.397						
7	.178	2.221	99.618						
8	.031	.382	100.000						

Total variance explained represents the number of common factors identified. The above table also shows the eigenvalues associated with each factors and percentage of variance caused by each factors as well as the cumulative percentage of total variance accounted for by the factors. By adopting the criteria of retaining eigenvalues 1 or greater than 1, we can retain only three factors. Factor 1 accounted for a variance of 35.282%. Factor 2 and factor 3 accounted for a variance of 21.153% and 14.884% respectively. Cumulatively these three factors contributed 71.319% of total variance.

Table: Rotated Component Matrix[a]			
	Component		
	1	**2**	**3**
Concern over societal issues	**.752**	.409	.039
Delivery on promise	**.823**	-.126	-.128
Prority to consumer preference	**.862**	.119	-.052
Response from the marketer	.007	**.896**	.107
Advertisement	-.360	**.795**	.172
Brand accessbility	.012	-.106	**.793**
Brand accountability	-.057	.378	**.596**
Connection of brand with social media	-.361	-.476	**.630**

Rotated component matrix have identified three factors. From the above table, we can see that Concern over societal issues, Delivery on promise and Priority to consumer preference are correlated with factor 1. Response from the marketer, Advertisement are correlated with factor 2. Brand accessibility, Brand accountability and Connection of brand with social media are correlated with factor 3. Thereafter, factor 1

can be named as performance of the brand producer. Factor 2 can be named as external communication made by the brand producer. Finally factor 3 can be termed as Brand exposure.

Findings and Recommendations

Millennial are the market maker. They hold a significant portion of the total market share of any Brand producer. They either purchase the product or they help in making decision in purchasing products. They also play role as a trend setter. For this reason, understanding the nature of millennial is a prime task of Brand producer as this will reveal different strategies to be adopted by the brand producer. This study will reveal and provide important insights about the millennial. These insights will help the Brand producer to adopt strategies to be competitive to capture the share of mind of the millennials.

However from the statistical analysis, few variables have been identified to focus on by the Brand producer. Delivery on promise is the major issue to be focussed. Not only the millennial, every customer desire product that satisfy their need as promised by the marketer. Once millennial get product as per promise, they never give a second thought while purchasing the product for the second time. So marketer should primarily focus on making a logical yet satisfactory promise. Then they should make and send the product to the target market. This will certainly create a match in between promise and delivery.

Marketer should also be concerned about the consumer preference. Millennial have tendency to be loyal to those brands which prioritise the consumer preference. They take it positively, when they see their suggestion have been implemented by the marketer. They want their voice to be heard by the marketer. Therefore marketer should take the voice of the millennial seriously. They should evaluate the opinion of the millennial while planning for their brand.

It is so true that millennial are connected with social media through their mobile phone. They are connected everywhere. Maximum of the millennial use wifi technology to be connected with social media. This tendency of being connected with social media have significant impact in making choice of different brand. They love to review comments of other purchaser before making purchase decision. They search for information about brands. They can make comparison between products. Marketer can take into consideration this feature of the millennial. Marketer can open a Facebook page providing their products details like price, visual picture of the product, benefit of the product, usage of the product. They can also deploy a dedicated team who will answer different question of millennial in social network. Thus marketer can come so closer to the millennial.

Millennial also prefer organization supports different social cause. Marketer spending part of their income in supporting social cause like providing basic education to street children, helping recover malnutrition, providing shelter to street people, helping flood affected people etc. gets more attention of the millennial. So marketer should engage with different social causes as it can make the millennial loyal to their brands.

Marketer of brands may adopt the mentioned strategies to be competitive over market and thereby maintaining profitability with sustainability in the long run.

Conclusion

Brand marketer specifies the target market based on the share of the target market. Millennial are majority in any target market as per the demographics characteristics of population in Bangladesh. They either directly purchase product or helps people to purchase product. They influence friends and family members. They form choices of the elderly people of the family. They also perform the role of the trendsetter in the society. Therefore brand marketer have specific focus on the millennial or Generation Y of Bangladesh. They are more connected than ever. They are connected because of the boon of smart phone as it is easy to afford a smart phone now. They are connected everywhere with social network. Millennial love marketer to be socially responsible. They have place in their mind for the marketer who promote social causes by spending money. Though they have thousands of information and so many products around them, but they are brand loyal. They have tendency to purchase those brands which delivers according to their promise. They are not price sensitive about Brands. But they are price sensitive about off brands. They love to be heard by the marketer. Millennial prefer brand which prioritise their preference. So marketer should consider these unique features of the millennial. They should formulate strategies considering the above mentioned characteristics of millennial. Thus marketer of Bangladesh may take the huge market of millennial to do their business well.

References

Boykin, G. (2012). *The effect of a brand on consumer behaviour*. [Online] Chron. Available at: http://smallbusiness.chron.com/effect-brand-consumer-behavior-61767.html [Accessed 18 Dec. 2017].

Edensor, H. (2016). *Young people just don't care about brands*. [Online] Bandt. Available at: http://www.bandt.com.au/marketing/young-people-just-dont-care-brands-youth-marketing-brand-specialist [Accessed 19 Dec. 2017].

En.wikipedia.org. (2019). *Millennials (disambiguation)*. [online] Available at: https://en.wikipedia.org/wiki/Millennials_(disambiguation) [Accessed 12 Feb. 2019].

Foster, M. (2016). *What makes customers loyal to brands?*. [Online]Sailthru. Available at: https://www.sailthru.com/marketing-blog/written-customer-loyalty-to-brands/ [Accessed 21 Dec. 2017].

Fromm, J. (2017). *How Brands Build Authority To Win With Millennial Consumers*. [Online] Forbes. Available at: https://www.forbes.com/sites/jefffromm/2017/04/21/how-brands-build-authority-to-win-with-millennial-consumers/#34606fa84a0c [Accessed 31 Dec. 2017].

Fry, R. (2019). *5 facts about Millennial households*. [online] Pew Research Center. Available at: http://www.pewresearch.org/fact-tank/2017/09/06/5-facts-about-millennial-households/ [Accessed 12 Feb. 2019].

Gill, L. (2017).*Brand Loyalty: what influences consumer loyalty to specific brands?*. [Online] gillsolutions. Available at: https://www.gillsolutions.com/blog/brand-loyalty-influences/ [Accessed 22 Dec. 2017].

Determinants of Brand Loyalty of Millennial or Generation Y

Golkar, G. (2017). *6 Millennial Customer Expectations Every Brand Should Meet.* [Online] VOCALCOM. Available at: https://www.vocalcom.com/en/blog/customer-experience/6-millennial-customer-expectations-every-brand-should-meet/ [Accessed 28 Dec. 2017].

Haskins, D. (2015). *7 reasons why brands matter to your consumers.* [Online] Microarts Creative Agency. Available at: https://microarts.com/insights/7-reasons-why-brands-matter-to-your-consumers/ [Accessed 26 Dec. 2017].

Indexmundi.com. (2019). *Bangladesh Age structure - Demographics.* [online] Available at: https://www.indexmundi.com/bangladesh/age_structure.html [Accessed 12 Feb. 2019].

James, D. (2017). *9 Must-Know Millennial Shopping Trends & Marketing Strategies of 2017.* [Blog] Rakuten Marketing. Available at: https://blog.marketing.rakuten.com/affiliate/9-must-know-millennial-shopping-trends-of-2017 [Accessed 29 Dec. 2017].

Jones, S. (2016). *How Millennials Buy And What That Means For Your Brand Marketing.* [Blog] Hollywood Branded. Available at: https://blog.hollywoodbranded.com/how-millennials-buy-and-what-that-means-for-your-brand [Accessed 10 Jan. 2018].

Joshi, D. (2013). *Effects of branding on buying behaviour. The Macrotheme Review,* [Online] Volume 2(7), p. 159. Available at: http://macrotheme.com/yahoo_site_admin/assets/docs/14JosMR27.32040732.pdf [Accessed 19 Dec. 2017].

Kokemuller, N. (2007). *Why do people buy brand names?.* [online] Chron. Available at: http://smallbusiness.chron.com/people-buy-brand-names-69654.html [Accessed 18 Dec. 2017].

Linton, I. (2011). *Brand loyalty's influence on consumer behaviour.* [Online] Chron. Available at: http://smallbusiness.chron.com/brand-loyaltys-influence-consumer-behavior-18048.html [Accessed 20 Dec. 2017].

Llopis, G. (2014). *Consumers are no longer brand loyal.* [Online] Forbes. Available at: https://www.forbes.com/sites/glennllopis/2014/12/10/consumers-are-no-longer-brand-loyal/#7a0b720a2ae0 [Accessed 21 Dec. 2017].

Malär, L., Krohmer, H., Hoyer, W. and Nyffenegger, B. (2011), *"Emotional Brand Attachment and Brand Personality: The Relative Importance of the Actual and the Ideal Self," Journal of Marketing*, [Online] 75 (Issue 4), 35-52. Available at: http://journals.ama.org/doi/pdf/10.1509/jmkg.75.4.35 [Accessed 14 Nov. 2017].

Marks, T. (2016). *Think Tank: Millennials are More Brand Loyal Than You Think.* [Online] WWD. Available at: http://wwd.com/business-news/retail/millennials-brand-loyal-engagement-10517533/ [Accessed 25 Dec. 2017].

Mitchell, L. (2012). *The future of marketing according to youth: what 16-24s want from brands.* [Online] theguardian. Available at: https://www.theguardian.com/media-network/media-network-blog/2012/oct/25/future-marketing-youth [Accessed 25 Dec. 2017].

Nelson, E. (2012). *MILLENNIAL WANT TO PARTY WITH YOUR BRAND BUT ON THEIR OWN TERMS.* [Online] AdAge. Available at: http://adage.com/article/digitalnext/millennials-party-brand-terms/236444/ [Accessed 26 Dec. 2017].

Nurunnobi, Prasad, R., Arifuzzaman, M. (2016). *Buying Behavior of Young Customers in Bangladesh - A Movement towards Investigation of Their Fashion Attributes. International Journal of Textile Science 2016.* [Online] 5(1), pp. 19-24. Available at: http://article.sapub.org/10.5923.j.textile.20160501.03.html [Accessed 17 Jan. 2018].

Radin, S. (2017). *Confessions of a Millennial.* [Blog] SPARK. Available at: https://www.boundlessnetwork.com/confessions-of-a-millennial/ [Accessed 27 Dec. 2017].

Schawbel, D. (2015). *1o New Findings About The Millennial consumer.* [Online] Forbes. Available at: https://www.forbes.com/sites/danschawbel/2015/01/20/10-new-findings-about-the-millennial-consumer/#698898526c8f [Accessed 25 Dec. 2017].

Smith, K. (2012). *Longitudinal study of digital marketing strategies targeting Millennials. Journal of Consumer Marketing,* [Online] Volume 29(2), pp.86-92. Available at: https://doi.org/10.1108/07363761211206339 [Accessed 15 Jan. 2018].

Speier, K. (2016). *Why are marketers so obsessed with millennials?* [Online] Social Media Today. Available at: https://www.socialmediatoday.com/marketing/why-are-marketers-so-obsessed-millennials [Accessed 5 Jan. 2018].

Weinstein, M. (2015). *A Trillion-Dollar Demographic: 10 Brands That Got Millennial Marketing Right.* [Online] Search Engine Journal. Available at: https://www.searchenginejournal.com/trillion-dollar-demographic-10-brands-got-millennial-marketing-right/135969/ [Accessed 12 Jan. 2018].

A Critical Review of Employee Rights Indicators of Decent Work: Evidence from International Labor Organization

Md. Mamin Ullah*

Abstract

Since the last few years, literature has been augmented concerning work and workers' rights throughout the world. In response to the increasing concerns among labor economists and pressure groups at national and international level, International Labor Organization (ILO) has adopted decent work agenda with a view to improving work and working conditions. Subsequently, this organization has set some fundamental indicators to measure different dimensions of decent work. Using the latest statistics from ILO official database, this paper intends to make a critical review of employee rights indicators of decent work along with a brief note on current status of employee rights across countries. A critical analysis of working papers, background reports, technical notes and various statistical publications have revealed a wider degree of differences of employee rights across countries and regional blocks. In addition, countries' usage of indicators to measure employee rights differs to some extent. This in turn creates barriers in evaluating cross-country status of employee rights. A common but worldly acceptable set of indicators is badly needed in order to explore the real scenario of employee rights across and within countries. Undoubtedly, ILO should play the dominant role in this perspective. Implications of different indicators are outlined in the paper.

Keywords: Decent work, employee rights, International Labor Organization

1. Introduction

With a vision to establishing social justice throughout the world, International Labor Organization (ILO) has been struggling to improve work and working conditions since its inception in 1919. Arrangements of different conventions and adoption of strategic initiatives are such examples. Nonetheless, inhumane working conditions remain a major threat to ILO's initiatives. Workers are largely toiled across countries and their rights are therefore neglected to a large extent (Deranty & MacMillan, 2012). Employee rights in terms of working hours, wages, non-discrimination and quality employment have become serious concern across countries, especially in terms of human development. In response to these deteriorating conditions of work and employee rights, ILO adopted a special slogan that 'labor is not a commodity' as reflected in the 1944 Philadelphia Declaration. Following the different initiatives and core beliefs of Philadelphia Declaration, ILO took Decent Work Agenda in 1999. The things became clearer when Juan Somavia, the Director General of ILO, made the following statement in the 87th international labor conference.

> "The primary goal of the ILO today is to promote opportunities for women and men to obtain decent and productive work, in conditions of freedom, equity, security and human dignity" (ILO, 1999).

As noted above, decent work concept embraces the basic features of work and working conditions in both quantitative and qualitative forms (Ghai, 2002). In one side, decent work emphasizes the work opportunities, remuneration and working conditions.

---

* Assistant Professor, Department of Management Studies, University of Barishal.

In another side, it incorporates fundamental employee rights in the areas of freedom of association, non-discrimination in work, and the absence of forced and child labor. In essence, different perspective of work, wages and workers' rights are more comprehensively placed within the domain of decent wok concept. Notwithstanding, since the introduction in 1999, labor economists and researchers (e.g., Rodgers et al., 2009;Sen, 2000; Standing, 2008) have largely criticized ILO's notion of Decent Work on several grounds. Out of many, Hughes (2005) pointed out that ILO's decent work agenda has mainly focused on human rights rather than workers' rights. Employee rights in the realm of work are therefore narrowly focused. Following the widespread criticisms and the heterogonous characteristics of labor statistics across countries, ILO introduced different sets of indicators to measure and evaluate the progress of its member countries towards the roads of decent work movement. However, these indicators are also subject to criticism from multiple perspectives.

In line with the concurrent debates and discussions concerning the effectiveness of decent work indicators, this paper aims to make a critical review of employee rights indicators of decent work as suggested in ILO's discussion paper in 2002 (DP/139/2002). The remaining part of this paper follows four consecutive sections. The rationale, purpose and methodology of conducting this study are justified in section two. In section three, a list of key indicators of employee rights are critically evaluated along with the existing scenario of workers' rights throughout the world. Several policy recommendations are put forward in section four. Finally, the paper is concluded along with a list of research agenda for further studies.

2. Rationale, Purpose and Methodology

This study is critically important for four distinct reasons. First, the concurrent debates and discussions concerning decent work and its related measurement indicators have rightly laid down the foundation of conducting this study. Second, the importance of the field under investigation has further justified the importance of the current study. Considering the importance of ILO's decent work agenda, the United Nations has incorporated decent work notion into its 2030 agenda for Sustainable Development. Third, the existing research gap is also an important factor. Although decent work indicators have widely been criticized, employee rights perspectives remain unstudied to a large extent. Finally, the paper is expected to contribute to the exiting field of study.

In alignment with above justifications, the basic objective of this study is set as to critically review the employee rights indicators of decent work. More specifically, the paper strives to find out the answer of the following three fundamental questions:

(i) Are the ILO's suggested indicators adequate?

(ii)Do these indicators rightly portray the actual status of employee rights across countries?

(iii) What is the current employee rights scenario in different areas of the world?

The study is qualitative in nature as it is largely involved in conceptual analysis of decent work indicators. Accordingly, the data were collected from various secondary sources. A good number of strategic papers, technical notes, background reports, discussion papers, research articles and statistical publications were reviewed in pursuit of the objectives of the paper. ILOSTAT (Official Statistical Database of ILO) serves the main sources of data in this study. Since data availability varies across

countries and time, latest available labor statistics were taken into account with the indication of years. Consistency of discussions was made throughout the paper. Following the principles of desk research, the collected data were scrutinized based on relevance and reliability.

3. Decent Work: Employee Rights Perspective

In the following section of this paper, discussions are carried out in terms of three critical indicators of decent work pertaining to employee rights: forced and child labor, discrimination at work and freedom of association. Although an employment right is a broad and complex phenomenon like human rights, discussions are mainly confined to ILO's list of indicators and sub-indicators of employee rights. Attempt is made to justify the accuracy and adequacy of such indicators along with the current status of employee rights across countries and regions.

3.1 Forced and Child Labor

Since the *ILO Convention on Forced Labor* adopted in 1930, lots of debates and discussions were taken places pertaining to the meaning and scope of forced labor. Today, forced labor takes multiple forms, such as slavery, prison, bonded and serfdom labor (Ghai, 2000). However, it can also take the form of labor done for educational and community affairs. These multiple forms of forced labor make it difficult to measure the actual status of such labor in a given society. Moreover, although some forms of labor are treated as 'forced' in some countries, they are considered common and acceptable in many countries. Thus, the issue of forced labor is subject to qualitative judgment. Despite *the Abolition of Forced Labour Convention, 1957* (No. 105) defined certain forms of labor as 'forced' and therefore 'prohibited', the definitions and scope of forced labor vary from country to country. In fact, the concept of forced labor is largely attributed to political, economic and religious ideologies. Accordingly, the number of indicators of forced labor is very limited (Ghai, 2000), and most of them are qualitative in nature (Kucera, 2001).

One of such forced labor is 'child labor' which has received a great deal of attention on the part of pressure groups, development organizations, policy makers and media since last few years. Although the minimum age for work was set at 14 years in *the Minimum Age Convention 1973* (No. 138), measuring the extent of child labor is extremely difficult because of varying policies adopted in many parts of the world. For example, a significant number of children participate in family firms and enterprises, especially in developing countries. In some countries, students not enrolled in secondary education are perceived as involved in labor activities. Thus, it is considered as the "as a complementary measure ofchildren's participation in the labor force" (Mehran, 2000; Kucera, 2001). More recently, ILO introduced a key indicator (Proportion of Children Engaged in Economic Activity) for measuring the degree of child labor activities in a given country.

Table I: Proportion of Children Engaged in Economic Activity (%) (5-17 years)

Country	Year	Male	Female	Total	Country	Year	Male	Female	Total
Albania	2010	3.4	2.1	2.8	Mongolia	2013	11.5	7.2	9.4
Bangladesh	2013	6.4	5.2	5.9	Nepal	2014	19.2	19.3	19.0
Bhutan	2010	1.6	1.7	1.7	Nigeria	2016	29.9	27.5	28.7
Brazil	2015	4.6	2.0	3.4	Peru	2014	13.3	13.3	13.3

Cameroon	2014	38.5	32.8	33.4	Senegal	2016	25.7	8.6	17.1
Georgia	2015	2.1	0.9	1.5	Serbia	2014	7.8	6.5	6.7
Ghana	2012	17.4	17.6	17.5	Tanzania	2014	23.4	21.0	22.3
India	2012	5.3	3.1	4.3	Tunisia	2011	2.4	1.1	1.8
Iraq	2010	5.1	2.7	3.9	Uganda	2012	15.6	14.2	15.2
Kyrgyzstan	2014	17.3	13.8	15.3	Vietnam	2014	11.9	12.5	12.1
Mexico	2015	5.3	2.3	3.8	Mongolia	2013	11.5	7.2	9.4

Source: ILO, 2019 (ILOSTAT)

As seen in table I, the proportion of children engaged in economic activity varies across countries. More than 33.4 per cent children in Cameroon are engaged in economic activity where the rate is only 1.8 per cent in Tunisia. The case is more deteriorating when gender perspective is considered. Male children are more involved in labor activities than those of female. Despite notable progress in human development, Bangladesh is still confronted to the challenge of child labor. Nearly 5.9 per cent of total children are involved in economic activity. African countries (e.g. Cameroon, Ghana, Nigeria and Tanzania) are facing more child labor problem than those of other regions of the world. The extent of child labor is less severe in Latin and South American countries. Although Nepal is heavily burdened with child labor, the degree of child labor is less in South Asian region. Whatever the case is, national and international organizations are facing complex problems in measuring both forced and child labor. Again, the nature, scope and risk of child labor vary across and within economic sectors. Thus, mere calculating the proportion of children engaged in economic activity is not sufficient to craft the actual scenario of child labor.

3.2 Discrimination at Work

One of the very fundamental rights of a worker is getting equal treatment both in access to labor market and non-discriminatory treatment when employed. Workers expect equal employment opportunities and working conditions disregarding age, sex, race, ethnicity and nationalities. Discrimination at work takes multiple forms. Out of many, most common forms of discrimination result from sex and age perspective (Schrader & Nazarov, 2016).

3.2.1 Discrimination by Gender

Although discrimination takes place in almost each and every segment of socio-economic structures, gender-based discrimination is ubiquitous. Furthermore, this is complexly rooted in social, cultural and religious structures. These discriminations at work and workplaces put women behind in economic empowerment. Although discrimination exists in every society, it is extremely difficult to measure the extent of such discrimination. One of the important reasons behind the difficulty of measurement and comparison is the data scarcity. Again, the available gender-based statistics are subject to different

cultural, racial and ethnical interpretations. However, ILO (2002) proposed four indicators to measure gender discrimination at work: labor force participation rate, unemployment rates, occupational gender segregation and gender wage gap.

As seen in table II, Labor force participation rate shows gender-based disparities in employment opportunities. However, the information presented in table II may produce misleading information. Women who work at home and from home are generally excluded from labor force statistics in many countries. In most of the developing economies, women participate in family forms and agricultural activities as the contributing family workers. As a result, their actual participation in labor force is difficult to trace out. In true sense, total volume of work done by women exceeds that of men (UNDP, 1995).Again, despite including all workers into consideration, labor force participation rate fails to produce actual number of working hours. In addition, mere participation in labor force does not justify equal employee rights. It is also important to know whether men and women get equal earrings from the work of equal value. Unfortunately, these conclusions cannot be drawn from the labor force participation rate statistics as noted in table 2. Thus, cross-country evaluation of gender-based employment rights become difficult based on this indicator.

Table II: Labor Force Participation Rate between Men and Women (Ages 15-64)

Country	Male		Female		Country	Male		Female	
	1990	2018	1990	2018		1990	2018	1990	2018
Afghanistan	88.46	88.57	15.30	20.32	Greece	76.79	75.69	43.36	60.63
Argentina	81.81	80.13	50.78	55.33	Hungary	71.81	77.50	57.54	64.27
Australia	85.07	88.48	61.90	71.95	India	86.61	81.76	36.78	28.48
Bangladesh	89.71	81.94	23.84	34.91	Italy	77.27	74.42	43.81	55.04
Belgium	71.27	72.33	46.23	63.37	Japan	82.95	85.55	57.06	68.70
Brazil	86.44	80.39	44.85	59.65	Malaysia	80.95	80.96	47.78	55.04
Bulgaria	71.44	73.30	65.84	65.44	Nepal	92.04	87.19	83.73	85.40
China	88.85	82.82	79.39	68.58	Pakistan	86.92	85.79	14.47	26.52
Cyprus	80.88	77.48	53.37	68.79	Sri Lanka	82.91	78.77	48.74	38.40
France	76.02	75.50	57.82	67.79	UK	86.72	82.48	66.09	72.36
Germany	82.19	82.39	57.78	75.98	USA	84.51	77.36	67.05	66.10

Source: ILO, 2018

As noted in table II, employment opportunities between men and women vary to a large extent across countries. Although women's participation in labor force has increased between 1990 and 2018, greater gender gaps are prevalent in all countries disregarding regional identify and level of economic development. Women's employment rights are therefore largely stumbled in access to labor market. Nearly 81.94 per cent men participate in national labor force in Bangladesh where the rate is only 34.91 per cent in case of women. Notably, women's participation in labor force is comparatively lower in South Asian countries compared to countries' of other regions in the world. Although a country's labor force participation is influenced by number factors such as educational policy, retirement tendency and childcare activities, labor force participation rate (lfpr) is still an important indicator to weigh the health

of labor economy. Likewise, it is widely used to make gender-based comparison in terms of employment opportunities.

Table III: Unemployment Rate between Men and Women (Ages 15-64) in 2018

Country	Male	Female	Country	Male	Female	Country	Male	Female
Afghanistan	8.05	12.42	Denmark	5.20	5.54	Indonesia	4.45	4.11
Argentina	7.50	9.12	Ethiopia	3.15	7.70	Iraq	7.34	11.76
Australia	5.39	5.57	Finland	8.48	8.00	Japan	2.56	2.30
Bangladesh	3.34	6.91	France	8.86	8.75	Kuwait	1.25	4.15
Belgium	6.49	6.43	Germany	4.09	3.31	Malaysia	3.04	3.86
Brazil	10.66	13.87	Greece	17.41	25.72	Pakistan	3.30	7.30
Canada	6.28	5.42	Ghana	2.23	2.63	UAE	1.29	4.62
China	5.00	4.35	Hungary	3.34	4.02	UK	4.09	3.88
Colombia	7.05	11.65	India	3.33	4.16	USA	4.07	3.99

Source: ILO, 2019

Unemployment rate is another important indicator to assess the status of employee rights between divergent groups. As seen in table III, women are more unemployed in almost all countries. And this gender disparity varies across countries. Nearly 9.2 per cent Australian women are unemployed compared to only 2.3 per cent Japanese women. Notably, unemployment rates are highly prevalent in Arab States. Despite consistent economic growth in last few years, female unemployment rate was increased from 2.92 per cent to 6.91 per cent between 1991 and 2018 in Bangladesh.

Thus, unemployment rate is standalone is not a sufficient indicator to justify employee rights. For example, unemployment rate in developing and less developed countries is lower than that of developed countries simply because it is difficult to afford the living expense by staying unemployed. Moreover, higher educated women in developed countries, especially in Arab States, less tend to look for work. Moreover, as the level of educational attainment advances, the rate of unemployment on the part of both men and women generally increases. This is largely happened because educated men and women tend to look for better wages and working conditions, and thus remain unemployed until and unless they get expected opportunities.

Table IV: Female Share of Employment in Managerial Positions (%)

Country	Year	Percentage	Country	Year	Percentage	Country	Year	Percentage
Argentina	2017	31.6	India	2012	12.9	Sri Lanka	2017	27.6
Australia	2016	36.6	Italy	2017	27.5	Slovakia	2017	32.8
Belgium	2017	33.6	Malaysia	2016	20.4	Spain	2017	30.6
Brazil	2011	36.1	Nigeria	2016	21.5	Thailand	2016	32.7
Egypt	2017	6.4	Pakistan	2016	2.9	UAE	2016	12.5
Greece	2017	29.8	Russia	2017	41.3	UK	2017	36.2
Hungary	2017	39.4	Saudi Arab	2015	5.8	USA	2017	40.5

Source: ILO, 2019

Another ground of gender discrimination at work arises in terms of occupational status. Although women's participation in labor force has increased in last few decades, women's status in employment still remains a concerning issue. As noted in table IV, female share of employment in managerial

positions is very insignificant throughout the world. In the United States, nearly 40.5 per cent women hold managerial positions in against of only 12.9 per cent Indian women. Women's participation in managerial and leadership positions is still a dream in Arab States (e.g. Egypt, Saudi Arab and UAE in table IV). Globally, the rate of female participation in prestigious occupationalposition falls below 50 per cent. However, the statistics of female share in managerial positions is very much conflicting because of sectoral and occupational differences. Women are largely involved in agricultural sector in developing countries. In contrast, women in developed countries tend to more participate in service sector. Again, the levels of occupational status vary from country to country. Therefore, making a homogeneous list of occupational status is very difficult.

Table V: Gender-Based Wage Equality for Similar Work

Country	Score	Rank	Country	Score	Rank	Country	Score	Rank
Australia	0.645	73	Nepal	0.591	96	Spain	0.501	129
Bangladesh	0.566	104	Nigeria	0.745	23	Sri Lanka	0.627	76
Belgium	0.638	76	Pakistan	0.546	115	Sweden	0.735	25
Bulgaria	0.540	116	Portugal	0.582	103	Switzerland	0.696	44
Greece	0.627	83	Russia	0.688	52	Thailand	0.749	20
Hungary	0.517	125	Singapore	0.819	2	UK	0.654	64
Malaysia	0.770	17	South Africa	0.535	117	United States	0.796	8

Source: World Economic Forum (Global Gender GAP Report 2017)

Gender wage gap is a common feature of employment across the globe. Women in every country are less paid in the job of equal value. Although the gender pay gap has narrowed over time, it is still persistent in all labor economies irrespective of developed, developing and emerging economies. As seen in table V, countries are still far behind in attaining gender parity in wages.

Although the extent is less in developed countries like USA and Singapore, the gap is more prevalent in developing counties like Bangladesh, Bulgaria and Spain. However, a number of internal and external factors influence gender wage gap. Individuals' preferences for certain jobs like voluntary choice for part-time and low-skill required jobs are largely responsible for the wider gender gap. In addition, various external factors such as gender differences in qualifications (Blau & Kahn, 2000), less willing to negotiate salaries (Patten, 2015), occupational segregation (Rachel &Barbara, 2017), motherhood (Kleven, 2018) and gender stereotypes (Bryant, 2012) widen gender pay gap. Notably, this existences and scope of these factors vary widely across countries. Therefore, it is complex to evaluate the gender pay gap statistics. Although ILO introduced 'pay equality for similar work' indicator, it is difficult to accurately compute the gap because of diverse ranges of works and different dimensions of formal and informal employment.

Table VI: Estimated Earned Income (PPP, US$)

Country	Male	Female	Rank	Country	Male	Female	Rank
Australia	59736	37263	71	Pakistan	8695	1610	139
Bangladesh	4776	2364	108	Russia	32721	19293	84
Belgium	57111	38175	48	Singapore	110596	77609	33
Bulgaria	24651	16241	51	South Africa	17160	9967	88
China	20586	12789	73	Sri Lanka	18599	6491	128
Greece	33308	22069	47	Spain	45971	30325	50
Hungary	35088	21780	74	Sweden	56255	44158	14
India	10428	2424	137	Switzerland	76283	53362	35
Indonesia	16495	8012	115	Thailand	20004	15837	12
Japan	30078	57103	103	Turkey	37283	16059	123
Malaysia	35108	23365	44	UAE	92374	24473	135
Nepal	3264	20133	56	United Kingdom	55887	30992	96
Nigeria	7081	4607	58	United States	72413	46919	60

Source: World Economic Forum (Global Gender GAP Report 2017)

As noted in table VI, gender disparities in earnings differ across countries. However, the extent of difference is less in developed countries. The average income of male workers, for instance, is 72413 USD in the United States while the amount is 46919 USD in case of women. The gender wage gap is acute in South Asian and Arabian countries. While men earn 10428 USD per year in India, women's average yearly income stands at only 2424 USD. Likewise, gender pay gap is widely persistent in UAE labor economy. Thus, women are deprived from equal employment rights in terms of earrings. However, the extent of gender pay gap is subject to vary according to level of economic development. As the country advances in economic growth, the gaps are expected to be closer. As stated earlier, women's preferences for certain occupations and jobs are also responsible for gender gaps. And accordingly, the extent of such gaps differs between developed and developing countries.

3.2.2 Discrimination by Age

Another ground of discrimination at work is the age-based employment disparities. Youths are paid less attention in development policies including labor affairs. They are generally less employed and less paid at work compared to adults. This age-based discrimination adversely affects employment rights of young workers. Considering the importance of youth development, the United Nations has emphasized for full and productive employment for both youth and adults in its Sustainable Development Goals (SDGs). Table VII shows the picture of gender disparities in youth labor force participation rate. Notably, youths are more employed in developing countries compared to those of developed countries. Male youth participation rate, for instance, is 55.57 per cent where the rate is only 40.96 in France.

In all countries, female youths are less employed compared to their male counter parts. Female youths are therefore deprived from equal employment opportunities. In sum, youths get less access to employment opportunities compared to adults.

Table VII: Labor Force Participation Rate for Ages 15-24 (Modeled ILO Estimate)

Country	Male		Female		Country	Male		Female	
	1991	2018	1991	2018		1991	2018	1991	2018
Afghanistan	76.85	77.38	17.42	22.91	France	47.73	40.96	41.31	34.64
Bangladesh	78.92	55.57	29.06	23.52	Greece	46.36	26.09	36.41	23.22
Bhutan	49.18	30.02	38.25	33.36	Japan	43.13	43.98	44.64	44.49
India	68.71	47.77	30.02	15.50	Malaysia	54.35	49.42	43.29	34.66
Australia	75.39	66.58	68.89	65.88	Nepal	83.90	74.10	79.00	77.18
Belgium	37.61	30.39	34.11	25.85	Pakistan	70.55	63.77	13.78	28.26
Brazil	79.18	61.58	44.96	48.15	Sri Lanka	60.19	38.36	45.16	19.50
China	77.43	46.86	79.28	44.58	UK	76.73	58.42	66.78	56.60
Cyprus	50.28	37.64	44.28	40.45	USA	68.59	51.99	60.09	49.67

Source: International Labor Organization, ILOSTAT Database. Data Retrieved in September 2018.

As noted in table VII, youth's participation in labor force declined in many countries between 1991 and 2018 resulting in under grading youth employee rights. Notably, this declining rate is acute on the part of female youth. However, as stated earlier, labor force participation rate sometimes produces misleading information. When comparison is made between youth and adult labor force participation rate, one should keep in mind that most of the youths are generally reluctant to participate in labor force at early stages of life due to higher study, economic backup by facilities and the absence of suitable employment opportunities. Various cultural and social factors are largely responsible for less female youth labor force participation rate. Therefore, labor force participation statistics of youth is subject to qualitative interpretations which make the comparative evaluation difficult. For example, male youth participation rate is 55.57 per cent in Bangladesh compared to 23.52 per cent in case of female youth. If one wants to make conclusion based on these two statistics, probably his/her conclusion will be incomplete to a large extent. Lots of factors and considerations are involved between these statistics of labor force participation.

Table VIII: Share of Informal Employment in Total Employment (%)

Region	Youth	Adults	Region	Youth	Adults
World	76.7	57.9	Asia and the Pacific	86.3	67.1
Northern Africa	87.5	63.7	Eastern Asia	70.3	49.5
Sub-Saharan Africa	95.8	86.6	Southern Asia	95.5	89.6
Western Africa	97.9	92.4	Europe and Central Asia	35.7	21.8
Northern America	12.8	19.5	Northern, Southern & Western Europe	24.7	13.4
Latin America and the Caribbean	62.4	52.5	Eastern Europe	44.2	31.6
South America	58.4	51.5	Central and WesternAsia	53.4	39.4

Source: ILO, 2018 (Women and Men in the Informal Economy: A Statistical Picture)

Youths not only face discrimination in access to labor market but also have the tendency to get more involved in informal economy than adults. The main reason of youths' higher involvement in informal economy is the easy entry. This involvement in informal sector results in lack of stable employment relationship, poor wages and irregular hours of work (Meier &Rauch, 2005). As a result, youths do not have access to basic employment rights and social protections (Beneria & Maria, 2006).

As seen in table VIII, youths are more employed in informal sector in all regions of the world. However, the rates are acute in African and Asian regions. Nearly 95.5 per cent youths are involved in informal employment in South Asian countries. It is important to note that sometimes youths get involved in informal employment to gain skills outside of a formal education or simply to attain experiences. Nonetheless, youths are the victims of the vicious cycle of informal employment. In reality, integrating the informal economy into the formal sector remains an important challenge for policy makers. Interestingly, mere comparison between youth and adult labor force participation rate is not enough simply because most of the youths are employed in informal sector.

3.3 Freedom of Associations

Freedom of Associations entails an individual's human right to join or leave an organization voluntarily. This right in is enshrined in *the Charter of the United Nations* and *the Universal Declaration of Human Rights*. With being concerned with workers' rights at work and workplaces, ILO has given special attention to the freedom of association in its Decent Work Agenda. Freedom of association is basically needed to defend workers' interest and protect from unlawful activities (ILO, 2000). In order to measure the existence and extent of freedom of association in a given labor economy, ILO has introduced a number of indicators. Among them, two indicators are very much notable and acceptable: civil liberty index and trade union density rate.

Table IX: Civil Liberty Index in Selected Countries

Country	Freedom Status	Civil Liberty Index	Country	Freedom Status	Civil Liberty Index
Afghanistan	Not Free	6	Japan	Free	1
Australia	Free	1	Italy	Free	1
Bangladesh	Partly Free	4	Malaysia	Partly Free	4
Belgium	Free	1	Maldives	Partly Free	5
Brazil	Free	2	Mexico	Partly Free	3

Canada	Free	1	Netherland	Free	1
Cameroon	Not Free	6	Nigeria	Partly Free	5
China	Not Free	6	Pakistan	Partly Free	5
Egypt	Not Free	6	Poland	Free	2
Germany	Free	1	Saudi Arabia	Not Free	7
Greece	Free	2	UK	Free	1
India	Free	3	United States	Free	1

Note: (i) Civil Liberty Index Explanation: 1 = Most Free and 7 = Least Free, (ii) Freedom status refers to overall freedom status including political rights.
Source: Freedom House, 2018

As seen in table IX, European and American peoples are free from government interventions in certain actions and speech. Although the scope of civil liberties varies between countries, people of developed countries like USA, UK, Canada and Germany enjoy more freedom concerning privacy, speech, assembly, equal treatment, right to life and justice than those in developing and underdeveloped countries. In most of the South Asian countries, people are partly free (i.e. limited freedom) to take actions or raise voice pertaining to their interests. Notably, civil liberty index is the combing result of several components like association and organization rights, freedom of expression and belief, rule of law and human rights and personal autonomy and economic rights. It goes beyond the right to freedom of association. In addition, most of the indicators are calculated based on subjective evaluation.

Therefore, civil liberty index is not a sufficient indicator for judging employee freedom of voice at work. Nonetheless, it signifies the general status of freedom of workers in a given society in protecting their rights at work. Considering the limitations of civil liberty index in justifying the state of freedom of associations, ILO uses trade union density rate to assess the workers' rights of forming associations.

Table X: Trade Union Density Rate

Country	Year	Density Rate	Country	Year	Density Rate
Australia	2014	27.7	Pakistan	2008	5.6
Brazil	2016	18.9	Poland	2016	12.1
Canada	2016	28.4	Russia	2015	30.5
China	2015	40.9	Singapore	2015	21.2
Cyprus	2014	47.4	South Africa	2016	28.1
France	2015	7.9	Sri Lanka	2016	15.3
Greece	2016	18.6	Turkey	2016	8.2
India	2011	12.8	United Kingdom	2016	23.5
Japan	2016	7.3	United States	2016	10.3
Malaysia	2016	8.8	Viet Nam	2011	14.6

Source: ILO, 2019 (ILOSTAT)

Theoretically, trade union density rate refers to the proportion of total employees who join trade union in a given country. A higher union density rate generally implies the existence of workers' voice and representation. Thus, workers are in a advantageous position to bargain with the employers and the government concerning their work and working conditions. Indeed, higher union density is critical to establishing employee rights at work. As noted in table X, trade union density rate varies across countries to a large extent. In addition, the statistics concerning trade union density rate is not available in many

countries. While 40.9 per cent Chinese workers join trade union, the rate is only 10.3 per cent in the United States. Notably, union density is extremely lower in Asian Countries like Japan, Malaysia, Pakistan and Sri Lanka.

Although trade union density rate shows the extent of workers' tendency to join association, it is not a direct reflection of freedom of association (Ghai, 2002). A number of factors (e.g. historical traditions, political systems, labor policies, economic structures and industrial relations) affect the existence and extent of trade unionism in a country (Jose, 2002). Countries that have equal rights of freedom of association, such as France, USA and UK have the lower union density rate. See table X. In fact, question arises in regard to whether this indicator is sufficient to reflect actual freedom of association in developing countries where most of the workers are employed in informal sector (ILO, 2002). Furthermore, a large number of external organizations work to defend workers' interests, such as pressure groups, development organizations, neighborhood associations and informal workers' groups (Baccaro, 2001). More interestingly, union density varies across and within occupations and economic sectors.

4. Findings and Policy Options

With the noble attempt of establishing peace and justice in the society, ILO introduced Decent Work Agenda in 1999. Undoubtedly, this decent work agenda is a landmark for at least establishing awareness concerning employee rights at work and workplace. This agenda now serves as the guidelines for labor policies in many countries. Even, the United Nations has incorporated many manifestos of ILO's decent Work Agenda into its Sustainable Development Goals (SDGs).Nonetheless, ILO's concept of decent work has largely been debated and discussed. This increasing criticism mainly results due to the ambiguousness of the meaning of the notion of decent work.

Certain questions therefore arise pertaining to the meaning and scope of decent work. For example: what does actually decent work mean? How can it be measured? Does it universally acceptable in all societies? How are different institutional frameworks integrated into decent work concepts? And finally, is the decent work really be quantitatively measured and evaluated?

The ongoing debates including theses questions pose a number of challenges to ILO in carrying out decent work initiative. In response to these debates, criticisms and real life circumstances, ILO has introduced different sets of indicators concerning various dimensions of decent work. Although many dimensions (such as employment, social security and social dialogue) can easily be estimated and interpreted, employee/workers' rights dimension remains very complex for measurement. Notably, an employee right is a vast and complex phenomenon deeply rooted in political, social and economic structures. Although ILO introduced several indicators such as forced and child labor, discrimination at work and freedom of association to explore a country's overall status of employee rights. However, a critical review of relevant documents and statistical facts has revealed a significant number of concerning issues pertaining to the applicability and acceptability of these indicators. Out of many, five most critical findings are stated below.

(i) Although ILO's employee rights (rights of workers) indicator serve as the general tools to measure the extent of workers' rights in a labor economy, countries with different institutional framework remain a concerning issue in this regard. Using the same indicator for different countries may produce misleading conclusion.

(ii) Countries' labor statistics requires a rigorous knowledge of interpretation because of different stages of economic development. For example, gender wage gap various at different stages of development.

(iii) Comparing the labor statistics (for example, forced labor) of different countries is subject to evaluating different national policies. In some countries, forced labor is acceptable in some cases like prison.

(iv) A country's policy in regard to labor affairs may differ with another country. For example, different countries consider different rages of age for youth.

(v) Several indicators like civil liberty are very difficult to measure quantitatively. Most of the employee rights indicators require subjective justifications. Thus, it becomes difficult to make cross-country evaluations.

In response of the above findings and discussions, several policy options are put forward below in order to make the measurement and evaluation of employee rights indicator of decent work more accurate, effective and acceptable. Accordingly, it will become easier for cross-country analysis.

(i) The ILO should take the first proactive action. It should consult with its member countries. Then, it should mutually set the indicator for measuring different dimensions of decent work.

(ii) ILO should convince its member countries regarding the importance of compliance to decent work agenda.

(iii) Institutional frameworks of various countries should be rigorously studied in order to find out the differences and similarities between countries. Then, attempt should be made to develop mostly acceptable indicators.

(iv) Make sure that every member country produce labor statistics on regular basis.

(v) Increase the collaboration between countries which help to develop knowledge-base.

(vi) Decent work is a great mechanism to poster ILO's traditional concern. So, efforts must be made in collaboration with other multinational organizations like World Bank and the United Nations to develop a single framework to view the different dimensions of decent work.

(vii) Employee rights are subjective phenomena to a large extent. Therefore, realistic qualitative indicators should be introduced along with the guidelines for accurate judgment.

(vii) Finally, social, political and cultural factors are deeply rooted in employment and working conditions which largely influence national institutions and policies. Initiatives should be taken to reduce social obstacles to a minimum level.

5. Conclusion

Like other aspects of human rights, workers across countries have been struggling to establish employment rights at work and workplaces. As an international leader in labor affairs, ILO introduced Decent Work Agenda in 1999 with a view to establishing equal employment opportunities, workers safety, productive employment and most importantly employee rights. However, since the inception, the notion of decent work has largely been criticized on several grounds. Out of many, the most debating issue is 'how decent work is to be measured'. In response to this increasing debate, ILO introduced several indicators to measure different dimensions of decent work including employee rights. Although a significant number of studies were conducted so far pertaining to the evaluation of decent work indicators, employee rights perspective remains unstudied to large extent.

Unlike the indicators of other dimensions of decent work, employee rights issues are more complex and comprehensive. In this study, a critical review of strategic papers, technical notes, background reports, research articles and statistical publications has revealed that ILO's employee rights indicators are insufficient to some extent. In addition, they are subject to criticism due to different institutional frameworks and cultural settings across countries. Moreover, it is difficult to measure some indicators in quantitative form. Accordingly, cross-country evaluation of labor statistics becomes complex and questionable. ILO's regular consultation with member countries, increasing collaboration between countries, working with multinational organizations like World Bank and the United Nations, and setting a singe framework for decent work are expected to reduce the problems associated with the measurement and evaluations of employee rights indicators.

6. Scope for Further Research

As noted earlier, employment rights are complex and comprehensive phenomena. In addition, ILO's decent work agenda is the ongoing debating issue. So, there is a lot of scope for further studies in this field. Most appealing area is the conceptual analysis of different facets of decent work. It is also interesting to investigate how a country's institutional frameworks affect the evaluation of employee rights indicators of decent work. Cross-country analysis is a good idea. Examining the readiness of employees of labor offices to work with the decent work initiative is a potential field of study. Labor rights in Bangladesh are always a researchable topic due to the increasing economic growth. It is thus critically important to investigate the actual status of employee rights based on ILO's proposed indicators. Last but not least, evaluating Bangladesh labor and macroeconomic policies from decent work perspective is badly needed.

References

Baccaro, L. (2001).*Civil Society, NGOs, and Decent Work Policies: Sorting Out the Issues*, Discussion Paper No. 127. Geneva, ILO.

Beneria, L., & Maria, S. F. (2006).*Labor Market Informalization, Gender and Social Protection: Reflections on Poor Urban Households in Bolivia, Ecuador and Thailand.* New York: Palgrave Macmillan.

Blau, F. D., & Kahn, L. (2000).Gender Differences in Pay. *Journal of Economic Perspectives, 14*(4), 75–100.

Bryant, M. (2012).*Gender Pay Gap*. Iowa: Iowa State University Digital Repository.

Deranty, J. P., &MacMillan, C. (2012). The ILO's Decent Work Initiative: Suggestions for an Extension of the Notion of "Decent Work". *Journal of Social Philosophy, 43*(4), 386–405.

Freedom House.(2018). *Freedom in the World 2018*. Washington DC: Freedom House.

Ghai, D. (2002). *Decent Work: Concepts, Models and Indicators*. Geneva: ILO.

Hughes, S. (2005). The International Labour Organisation. *New Political Economy, 10*(3), 413–25.

International Labour Organisation (ILO).(1999). *Decent Work. Report of the Director-General. International Labour Conference, 87th Session.* Geneva: ILO.

. (2000). *Your Voice at Work*. Geneva: ILO.

Jose, A.V. (2002). *Organized Labor in the 21st Century*. Geneva: ILO.

Kleven, H., Landais, C., & Søgaard, J. E. (2018).*Children and Gender Inequality: Evidence from Denmark.* NBER Working Paper No. 24219. Cambridge: NBER.

Kucera, D.(2001). *The Effects of Core Workers' Rights on Labor Costs and Foreign Direct Investment: Evaluating the "Conventional Wisdom".* Geneva: ILO.

Mehran, F. (2000).*ILO Labour Force Participation Rates for 10-14 Year Olds versus UNESCO School Enrolment Ratios.* Geneva: ILO.

Meier, G. M., &Rauch, J. E. (2005). *Leading Issues in Economic Development.* New York: Oxford University Press.

Patten, E. (2015). *On Equal Pay Day, Key Facts about the Gender Pay Gap.* Washington DC: Pew Research Center.

Rachel, N. L., & Barbara, P. (2017). Gender Gaps and the Rise of the Service Economy. *American Economic Journal: Macroeconomics, 9*(4), 1-44.

Rodgers, G., Lee, E., Swepston, L., &Van Daele, J. (2009).*The International Labor Organization and the Quest for Social Justice, 1919–2009.* Geneva: ILO.

Schrader, S. von, &Nazarov, Z. E. (2016).Trends and Patterns in Age Discrimination in Employment Act (ADEA) Charges. *Research on Aging, 38*(5), 580–601.

Sen, A. (2000). Work and Rights. *International Labour Review, 139*, 119–28.

Standing, G. (2002).*Beyond the New Paternalism: Basic Security as Equality.* London: Verso.

United Nations Development Programme (UNDP). (1995).*Human Development Report.*New York: Oxford University Press.

Effect of Modern Technological Tools on Business Students' Academic Performance: Evidence from Public Universities in Bangladesh

Surajit Kumar Mondal*

Bankim Chandra Sarker**

Abstract: *In an ever changing technological world, our lives have been made easier through the touch of modern technologies. At present, we cannot even think to do a single work without modern technological devices. Most university students use modern technological devices directly or indirectly. Modern technology increases university students' capabilities and this technology has evolved with the passage of time. The purpose of this study is to identify and analyze the technological devices that the public university students of Bangladesh use and to measure the effect of these on academic performance of university students. Research data have been collected from five reputed public universities in Bangladesh. A sample of 100 respondents had been selected based on non-probability convenience sampling for the study. Multiple regression analysis was conducted with the help of STATA. The study finds a high degree of positive correlation among the independent and dependent variables and hence, academic performance /CGPA is dependent on various technological factors like-projector usage, smartphone availability, sound system, laptop/desktop availability, lab availability, internet connection, usage of pendrive, digital watch /calculator and proper usage of technological devices.*

Keywords: Technological tools, University Students, Academic Performance, Bangladesh

Introduction

Technology has begun to change education, influencing how students learn the skill sets required for preparation of educational institutions and careers and how teachers integrate digital technological instructional strategies to teach (Delgado et al., 2015).In today's world, usage of modern technological devices has been kind of inevitable for us. Without these our lives seem to come to a standstill. The modern technological devices have simplified our works and made our life comfortable. But now our dependence on them is increasing so much that we are unable to do even a single work without them. A university student's life without modern technological devices sounds quite hard to live. According to Basri,et. al., (2018), "Students' academic performance refers to the enhancement of the students' current state of knowledge and skills reflected in their GPA and also in the formulation of their personality and

*Lecturer, Department of Management Studies, University of Barishal.
** Lecturer, Department of Marketing, University of Barishal.

academic growth from lower levels of study to higher levels". According to Islam (2016), technology is the collection of tools that make it easier to use, create, manage and exchange information. On the other hand, educational technology is a methodical and prearranged process of applying modern technology to improve the quality of education. It includes instructional materials, methods and organization of work and relationships, i.e. the behavior of all participants in the educational process. While thinking of technology, people remember the most used ones, which are computers, laptops, the Internet, mobile phones, tablet computers, televisions, game consoles and similar technological tools (Karal & Berigel, 2006).

Many countries have redesigned their school curriculum to establish technology as a prime learning area. Hence they emphasize the technological nature of society, increasing the opportunities and possibilities for developing higher skills, including creative thinking and problem solving (Banks & Chikasanda, 2015). In recent times, Bangladeshi higher institutions have been increasingly incorporating modern technologies with the aim of providing quality education.

There were times when each and every work was done with hands. Now the technology is growing so rapidly that we get most of the information with a touch of hand. The usage of technological devices has been increased in recent years in Bangladesh. The number of mobile subscribers was a little over 140.7 million by the end of September, 2017 against 120 million during the same period in 2016, marking an 18 percent growth .More than 140 million people, out of Bangladesh's population of 160 million, use mobile phones while around 80 million people have access to the internet. Around 5.2 million subscribe to different internet service providers to connect to the internet. The number of WiMAX users has increased to 90,000 over the same period (BTRC, 2017).

To keep pace with the modern world, the technological tools are very essential to the university students in Bangladesh. We can understand that a university student's life without modern technological devices will be hard to live and life will be comfortable with the usage of these modern devices. We use technology in different ways and sometimes the way we use various technologies that ends up harming our lives or the society we live in. The study is pursued to know about the effect of modern technological tools on the academic performance/CGPA of university students in Bangladesh

Objectives of the Study

The broad objective of the study is to identify and analyze the technological tools that the public university students of Bangladesh use and then to measure the effect of modern technological tools on academic performance of university students in Bangladesh.

Effect of Modern Technological Tools on Business Students' Academic Performance: Evidence from Public Universities in Bangladesh

More precisely the objectives are:

- To identify and analyze the technological tools that the public university students of Bangladesh use;
- To measure the effect of modern technological tool son academic performance of university students in Bangladesh; and
- To identify the importance of each factor that contributes to academic performance.

Research Problem: The research problem is to identify and analyze the technological tools that the public university students of Bangladesh use and then to measure the effect of modern technological tools on academic performance of university students in Bangladesh.

Literature review

Literature review suggests there are mixed conclusions from various studies regarding whether technological devices improve academic performance or not. Some studies state that technological devices improve academic performance. Others propose that academic performance has nothing to do with usage of technological devices.

The development of technology has produced many advantages as well as disadvantages. By doing research especially on the new generation, it is not very difficult to observe the good and bad effects of technology (Atal & Usluel, 2011). According to Yesilyurt et al.,(2014) found that the positive influence of using technological devices is greater than the negative influence. The development of new technologies such as cell phones, the internet and computers interact with students in several ways. For improvement of teaching and learning, technology is believed tohave great potential and efforts have been made to promote its use in educational institutions. In the past, the emphasis has been mainly on how much technology is used. Although students can reap benefit from usage of some technologies, if the quality of usage is not ensured, more technology usage may cause more harm than good (J. Lei, Y. Zhao, 2007).

Mao (2014) found that the rapid development of mobile phones, tablets and applications has been the reason for technology playing such a significant contribution to education. The smart phones and tablet computers can be used more easily and educationalists have turned this situation to their advantage and they have started to benefit from technology by using educational applications on these technological devices. Hossain and Ahmed (2016) showed that a vast majority of university students of Bangladesh used smart phones for academic purposes and on average they developed a positive perception

toward smartphones as academic tool. Zhao et al., (2018) found that there is a significant association between smart phone use for learning activities and student's cumulative Grade Point Average (CGPA).

Husey in Bicenand Ahmet Arnavut (2015) found that nearly all of the students thought that technological devices contribute to their education very much, they find most of their homework on the internet and they search on the Internet for the topics they do not understand and also instead of asking their teachers face-to-face, the students prefer asking them from through the Internet. Access to education can be improved with modern educational technology, including full degree programs (Ahmed, 2010). Interactions between students and instructors are more improved with the usage of modern technology. Students normally learn more in less time when they receive computer-based instruction and they like classes more and develop more positive attitudes toward computers in computer-based classes. Students can independently figure out their problems (Dalsgaard, 2013).

Usage of technology effectively involves multiple evidence-based strategies concurrently (e.g. adaptive content, frequent testing, immediate feedback, etc.), as do effective teachers. By using computers or other forms of technology, students can benefit from core contents and skills while the teachers are capable of working with others, conducting assessments, or accomplishing other activities (Ross et al., 2010).

A few studies suggest that use of technological device is a distraction to university students and negatively impacts academic performance. According to Branford et al.,(2000) argued that technology does not guarantee effective learning and improper usage of technology can even hinder it. Islam and Hasan (2010) found that the effect of information communication technologies on the academic performance of the students was very negligible and even, most of the students are in the dark about the potential contribution of these technologies in their academic life. Stakkestad and Stordal (2017) indicated no clear benefits of technology use on academic performance in upper secondary education as no statistically significant effects are found.

Young (2006) observed that the internet expands its reach to teenagers' school life. Young noted that students are more reliant on the internet to access information that is involved in school life as well as entertainment. Jeong (2005) noted that internet addiction is significantly and negatively related to students' academic performance, as well as emotional attributes. Seo (2004) corroborates Jeong's assertion when he opined that the negative influence of internet is only on excessive users and not on all users. Today's youth have become technology addicted and are quite introverted. Investigators determined that use of media, from texting to chatting on cell phones to posting status updates may lower grades for students (Nauert, 2007).

Effect of Modern Technological Tools on Business Students' Academic Performance: Evidence from Public Universities in Bangladesh

But faculties and students have realized the potential for using technological devices for interactions. With the tremendous development in technology infrastructure, teachers have increased the amount of instructional time that they incorporate technology in their practice (Stokes et al., 2003). Educational websites are designed to be compatible with devices and interactive with students and teachers. Teachers also can communicate with students and parents so they can see assignments, review lessons and post questions or messages to the teacher, speed in addition to dealing with their current work.

Technological Tools Used by University Students:

Now-a-days university students cannot be separated from technological devices. They believe it can help them to finish their work. In educational institutions, most commonly used technological devices are liquid crystal displays/digital light processing (DLP) projector, videoconferencing unit, interactive whiteboard, classroom response system, digital camera, MP3 player/iPod, document camera, handheld device, such as a Palm OS or a pocket PC either as needed or in the classroom every day (Gray et al., 2010).

Tsikal as et al., (2007) found that every type of computer usage increases success of students. For instance, if students can use desktop computer/ laptop in working like making a report, sending an email, and finding sources it will be easier to do the job. It is a great need that university students have to learn computers otherwise they will fall behind in their future search for professional jobs and career. Rahman et al., (2012) argued that computer lab is very much essential for the educational institutions. With the help of a lab, students can learn computer application practically. Besides, university labs play a pivotal role in supporting students and faculty in pursuing research.

In Bangladesh, the use of multimedia projector in classrooms at tertiary level is not new. It helps the teachers to gain attention, engage learners, explain difficult concepts interestingly, inspire creativity, and have fun. By using static or dynamic multimedia, students can visualize difficult concepts or procedures more easily (Mahmuda, 2016).

By adopting internet services, quality education is ensured. With the benefits of the internet services, especially mobile internet service like 3G and 4G, the worlds' information is on hand to everyone (Najmul Hasan, 2016). Internet can be used as a productivity tool and changes from the traditional methods of teaching and learning into a digital world can made possible through it (Valacich & Schneider, 2014). Subrahmanyam et al. (2001) found that the usage of the internet contributes to the student's development of cognitive and visual skills. The Internet has introduced improvements in

technology, communication and online entertainment, but it is also incredibly useful for education purposes as well.

The use of smart phones provides a powerful learning environment and can transform the learning and teaching process so that students can deal with knowledge in an active, self-directed and constructive way (Cheon, Lee, Crooks, & Song, 2012). At present, the smart phone can be used to sharpen students' skills for cooperation, communication, problem solving and lifelong learning (Gikas & Grant, 2013). Smartphone being a learning tool, has a huge potential for the business students in Bangladesh if the students are willing to accept and can use it for learning objectives apart from their daily life usage (Ahmed, 2018).University students use smartphones in browsing web, checking e-mail, sending text messages with other modern facilities conducive to education and learning. Smart phones are also used for effective teaching and learning these days.

When properly used, sound system in a classroom improves students' attention and thus their interactions increase (RM Education, 2015). In our country, audio technology can make students' learning better and interesting with pronunciation, fluency and accuracy. Most of all, they can have a very good support of developing listening skills. Proper usage of technological tools also helps improve the academic performance of university students. The use of the same technology can be positive or negative, to better say the quality of technology use. Usage of technology is the application of a technology function to solve practical problems (Zhao, 2003). Based on the above literature, the authors propose the following conceptual framework:
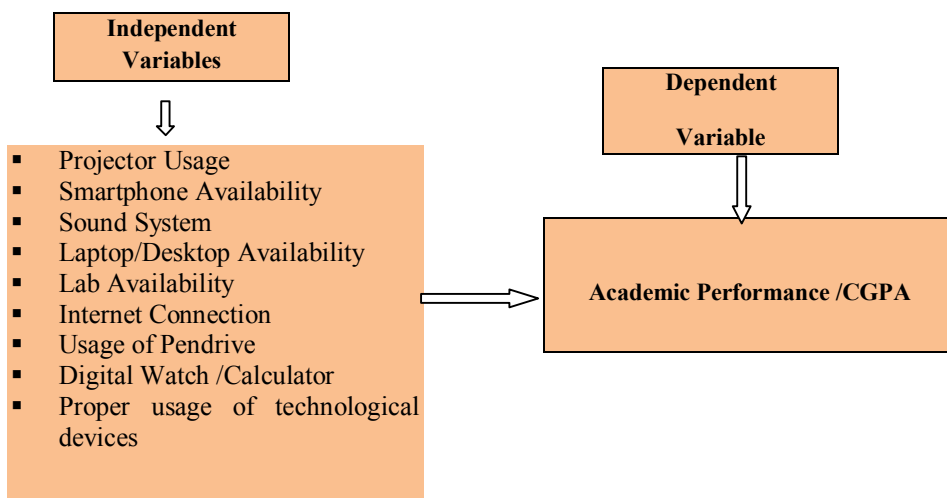

Figure 01: Authors' Constructed

Effect of Modern Technological Tools on Business Students' Academic Performance: Evidence from Public Universities in Bangladesh

Rationale of the study: So far the researchers know, very few studies have been conducted on this aspect in Bangladesh. That's why the researchers felt interested to work on this area. In this modern world, the technological factors are very essential to the university students to excel in their academic life. Therefore, the first task is to identify and analyze the technological devices that the public university students of Bangladesh use and then to measure the effect of modern technologies on academic performance of university students in Bangladesh.

Methodology of the Study

Methodology: Methodology of the study consists of the following things:

Nature of the study: This study is the output of both exploratory and descriptive research. At first, expert survey (exploratory research) has been conducted to identify the variables (technological tools) on academic performance/CGPA of public university students in Bangladesh. An attempt was made to measure the impact of the modern technological tools on academic performance of business students of public universities in Bangladesh (descriptive research).

Sample size and sample selection procedure: For conducting the study, convenience sampling technique of non-probability sampling technique was followed. This technique is to obtain a sample of convenient elements by the selection of sampling by the interviewer which means that respondents are selected because they are coincidently in the right place at the right time for the questionnaire. Determining the sample size is complex and involves various considerations. Considering the resource constraints, 100 respondents have been selected.

Table 01: Snapshot

1.	Target Population	Elements	Students majoring business discipline from Public Universities in Bangladesh
		Sampling Unit	Students
		Extent	5 Universities (Dhaka, Barishal, Rajshahi, Jahangirnagar, and Jagannath). 20 participants from each universitiyhave been selected for this study.
		Time	2018
2.	Sampling Frame	University Representatives helped select the samples.	
3.	Sampling Technique	Non-probability Convenience Sampling.	

4.	Scaling technique	5 point Likert Scale, which is a part of Non Comparative Scaling Technique
5.	Data Used	Primary and secondary
6.	Sample Size	100

Data collection procedure and research instruments: The study was conducted during the period from June 01, 2018 to August 31, 2018. For the study, data have been collected from both the primary and secondary sources. For the study, primary data have been collected through survey method under which the personal interviewing technique was adopted. A self-administered questionnaire was designed. Secondary data have been collected from the following sources: Documents (journals, newspaper, and magazine), archival records, and internet.

Scaling technique: For the research and data analysis purposes, 5 point Likert Scale was used, which is a part of Non- Comparative Scaling Technique.

Model specification: The regression model was as follows:

$$\text{Aca\_Per/CGPA} = D + \beta_1 PU + \beta_2 SA + \beta_3 SS + \beta_4 LDA + \beta_5 LA + + \beta_6 IC + \beta_7 UP + \beta_8 DWC + \beta_9 PU + e$$

Here,

Aca_Per/CGPA=Academic Performance/Cumulative Grade Point Average	
D = Multiple Regression Constant	IC=Internet Connection
PU = Projector Usage	UP=Usage of Pendrive
SA = Smartphone Availability	DWC=Digital Watch /Calculator
SS= Sound System	PU=Proper usage of technological devices
LDA = Laptop/Desktop Availability	ei = Error term
LA= Lab Availability	

Data Analysis and Findings:

Main Purpose: The purpose of this analysis is to measure the relative influence of each independent variable on the dependent variable. The relative significance of each of the independent variable on the

dependent variable can be measured from the associated coefficient. Hypotheses test is also possible from these equations. Here null and alternative hypothesis are:

Null Hypothesis, H_0: The coefficient of multiple determination in the population is zero.

Alternative Hypothesis, H_1: The coefficient of multiple determination in the population is not zero.

Variables: Independent and dependent variables of the study are as follows:

Dependent variable: Academic Performance/CGPA

Independent variables: Projector Usage, Smartphone Availability, Sound System, Laptop/Desktop Availability, Lab Availability, Internet Connection, Usage of Pendrive, Digital Watch /Calculator and Proper usage of technological devices.

Table 02: Regression Analyis

Source	SS	df	MS		
Model	4.66236177	9	.518040196		
Residual	.449514234	90	.004994603		
Total	5.111876	99	.051635111		

Number of obs = 100
F(9, 90) = 103.72
Prob > F = 0.0000
R-squared = 0.9121
Adj R-squared = 0.9033
Root MSE = .07067

Academicperformanc~A	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
projectorusage	.0127306	.018569	0.69	0.495	-.0241599	.049621
Smartphone	.0435188	.0186372	2.34	0.022	.0064928	.0805448
soundsystem	.0880393	.0153433	5.74	0.000	.0575571	.1185216
laptopdesktop	.0750388	.0212307	3.53	0.001	.0328604	.1172172
Lab	-.0199039	.0152092	-1.31	0.194	-.0501196	.0103117
InternetConnection	.068521	.0196729	3.48	0.001	.0294373	.1076046
Pendrive	.069703	.0175129	3.98	0.000	.0349106	.1044954
smartwatchcalculator	.0109201	.0169624	0.64	0.521	-.0227786	.0446188
UsageofTech	.0443517	.0188665	2.35	0.021	.0068702	.0818333
_cons	2.101118	.0979911	21.44	0.000	1.906442	2.295795

Comment on model fitting:

Here, the value of coefficient of multiple determination is, R^2 = 0.9121 or 91.21%. 91% variation in the dependent variables can be explained by the regression model.

Interpretation of Adjusted R^2:

Here, the value of adjusted R^2 is = 0.9033. Adjusted R^2 suggests that, addition of the other independent variables do not make a contribution in explaining the variation in the dependent variable.

Regression Equation:

Academic Performance/CGPA = (2.101118) + 0.0127306 (Projector Usage) + 0.0435188 (Smartphone Availability) + 0.0880393 (Sound System) + 0.070388(Laptop/Desktop Availability) + (-0.0199039) (Lab Availability) + 0.068521(Internet Connection) + 0.069703 (Usage of pendrive) + 0.0109201 (Digital watch/Calculator) + 0.0443517 (Proper Usage of technological devices)

Comment on Significance:

It can be said that, academic performance /CGPA of public university students in Bangladesh is dependent on various technological factors like -projector usage, smartphone availability, sound system, laptop/desktop availability, lab availability, internet connection, usage of pendrive, digital watch /calculator and proper usage of technological devices (Independent Variables). The probability value of sound system (0.000), pendrive (0.000), internet connection (0.001), laptop/desktop usage (0.001), proper usage of technology (0.021), and smartphone usage (0.022)< 0.05, which indicates the rejection of null hypothesis (so, there is effect of technological deviceson academic performance of public university students of Bangladesh). It is evident from the study that sound system (0.000), pendrive (0.000), internet connection (0.001), laptop/desktop usage (0.001), proper usage of technology (0.021), and smartphone usage (0.022) are highly significant.

Effect of Modern Technological Tools on Business Students' Academic Performance: Evidence from Public Universities in Bangladesh

A correlation matrix of the sample data is shown below:

Table 03: Correlation Matrix

	Academ~A	projec~e	Smartp~e	sounds~m	laptop~p	Lab	Intern~n	Pendrive	smartw~r	Usageo~h
Academicpe~A	1.0000									
projectoru~e	0.8283	1.0000								
Smartphone	0.6909	0.6003	1.0000							
soundsystem	0.8606	0.7822	0.5560	1.0000						
laptopdesk~p	0.7218	0.6001	0.5392	0.5761	1.0000					
Lab	0.2788	0.3477	0.2107	0.2684	0.2463	1.0000				
InternetCo~n	0.7615	0.6375	0.6679	0.6141	0.5535	0.2258	1.0000			
Pendrive	0.8291	0.8093	0.4986	0.7206	0.6370	0.3918	0.6011	1.0000		
smartwatch~r	0.7373	0.7372	0.4904	0.6887	0.5116	0.3634	0.5901	0.7675	1.0000	
UsageofTech	0.6359	0.5469	0.5013	0.5926	0.3737	0.1206	0.4945	0.4770	0.4074	1.0000

In this correlation matrix, one variable is explained. For example, the correlation between academic performance /CGPA and the need for internet connection is 0.7615 states that if the need for internet connection is high then academic performance/CGPA of the students is also high. Likewise, there exist other correlations between the variables.

Policy Recommendations:

After conducting the research, it is evident that universities should provide technological facilities to the students. Class rooms need to be adorned with technological tools like projectors, sound system, internet facility etc. Separate computer lab facility should be installed in the university and in the residential halls as well if possible. Another important thing also needs to be mentioned that the university authorities should ensure uninterrupted power supply in the university premises to ensure continuous use of modern technological devices. With the emphasis of the quality of technology usage on student learning, more focus should be placed on promoting technology uses that have positive impacts in universities.

It is recommended that further comprehensive studies be conducted to investigate university students' usage and attitudes towards modern technologies. Ways need to find out to support those students who are not using modern technological devices though there are many opportunities. Future studies are also in need to address how using modern technologies may contribute to the long-term acquisition, retention and dispersionof knowledge and skills.

Conclusions

This study extends our understanding of academic performance (CGPA) of public university students and various technological factors affecting it. University is considered the culmination educational institution in a country. To carry out the objectives, multiple regression analysis was conducted with the help of STATA. The study finds a high degree of positive correlation among the independent and dependent variables and hence, academic performance /CGPA is dependent on various technological factors like-projector usage, smartphone availability, sound system, laptop/desktop availability, lab availability, internet connection, usage of pendrive, digital watch /calculator and proper usage of technological devices.

References

- Ahmed, Mazharuddin Syed , Akramul, Kabir (2018). "The Acceptance of Smartphone As A Mobile Learning Tool: Students of Business Studies in Bangladesh", *Malaysian Online Journal of Educational Technology*, Vol. 6 ,No.2,pp:38-47.

- Ahmad, Zameer (November 16, 2010). "Virtual Education System (Current Myth & Future Reality in Pakistan)". Ssrn.com. SSRN 170987.

- Asemah, E.S and Edegoh, L.O.N. (2012). "Social Media and Insecurity in Nigeria: A Critical Appraisal". Being a paper presented at the 15th National Conference of African Council for Communication Education, which took place at the conference hall of Federal University of Technology, Minna, Nigeria.

- Atal, D., & Usluel, Y. K. (2011). _Ilkoğretimoğrencilerininokulicindevedıs_ında

- teknolojikullanımları. Hacettepe Universitesi Eğitim Fakultesi Dergisi, 41, 24–35.

- Banks, F., &Chikasanda, V. M. (2015). "Technology Education and Developing Countries. In P. J. Williams, A. Jones & C. Buntting (Eds.), *The Future of Technology Education,* pp. 217-238: Springer Singapore.

- Bangladesh Telecommunication Regulatory Commission (BTRC,2017) Accessed From: http://www.btrc.gov.bd/

- Beltran, D. (2008). "Home Computers and Educational Outcomes: Evidence from the NLSY97and CPS. Retrieved from Board of Governors of the Federal Reserve System Website: http://www.federalreserve.gov/pubs/ifdp/2008/958/ifdp958.pdf

- Cheon, J., Lee, S., Crooks, S. M., & Song, J. (2012). "An investigation of Mobile Learning Readiness in Higher Education Based on the Theory of Planned Behavior", *Computers& Education*, Vol.59, No.3, pp: 1054-1064.

- Dalsgaard, Christian. "Social software: E-learning beyond learning management systems". *eurodl.org*. University of Aarhus. Retrieved 31 March 2013.

Effect of Modern Technological Tools on Business Students' Academic Performance: Evidence from Public

Universities in Bangladesh

- Delgado-Hachey, Maria, et al. (2005). "Adolescent Computer Use and Academic Achievement", *Adolescence, Vol.40, No. 158,*pp. 307-318.

- Delgado, A. J., Wardlow, L., McKnight, K., & O'Malley, K. (2015). "Educational Technology: A Review of the Integration, Resources, and Effectiveness of Technology in K-12 Classrooms", *Journal of Information Technology Education: Research,* 14, pp:397-416.

- Epstein, Z. (2011). "IMS: Annual Smartphone Sales to Reach 1 billion units by 2016; Apple, Samsung winners so far. Retrieved from BGR Web site: http://www.bgr.com/2011/07/27/ims-annual-smartphone-sales-to-reach-1-billion-units-by-2016-apple-samsung-winners-so-far/

- Ferguson, S. (2005). "How Computers Make Our Kids Stupid", Retrieved from MacLeansWebsite:http://www.macleans.ca/education/universities/article.jsp?content=20050606 10630_106930.

- Gikas, J., & Grant, M. M. (2013). "Mobile Computing Devices in Higher Education: Student Perspectives on Learning with Cellphones, Smartphones & Social Media", *The Internet and Higher Education, 19*, pp:18-26.

- Gray, L., Thomas, N., & Lewis, L. (2010). "*Teachers' Use of educational technology in US public schools: 2009". First look.* NCES 2010-040. National Center for Education Statistics, Institute of Education Sci-ences, US Department of Education, Washington, DC.

- Griffin, E. (2000). *A first look at communication theory* (4th ed). Boston: McGraw Hill.

- Hossain, Emranand Ahmed, S.M. Zabed (2016). "Academic Use of Smartphones by University Students: a Developing Country Perspective", *The Electronic Library*, Vol. 34 No. 4, pp.651-665

- Huseyin Bicen Ahmet Arnavut (2015). "Determining the Effects of Technological Tool Use Habits on Social Lives", *Computers in Human Behavior*,48 ,pp:457–462.

- https://bdnews24.com/business/2017/11/14/mobile-phone-users-in-bangladesh-top-140-million

- http://www.bu.edu.bd/lab-facility/

- http://www.ewubd.edu/lab-facilities/

- Islam, Shamimul and Hasan, MahmudulFouji (2010). "The Impact of ICT on Students' Performance: A Case Study of ASA University Bangladesh", *ASA University Review*, Vol. 4 No. 2,pp:101-106.

- Jeong, T.G .(2005). "The Effect of Internet Addiction and Self-control on Achievement of Elementary School Children", *Korean Journal of Yeolin Education.* Vol.5, No.3.

- Johnson Steven. Everything Bad Is Good For You: How Today's Popular Culture Is Actually Making Us Smarter. New York: Riverhead; 2005.

- J. Bransford; A. Brown; R. R. Cocking, eds. (2000). "Technology to support learning". *How people learn: Brain, mind, experience*. Washington, DC: National Academies Press. pp. 206–230.

- J. Lei, Y. Zhao (2007). "Technology Uses and Student Achievement: A Longitudinal Study", *Computers and Education*, 49 pp.284–296.

- Mahmuda, Mansura (2016). "Teaching and Learning Through Technology in Bangladeshi Higher Education", *International Journal of Scientific & Engineering Research*, Vol.7, No. 4, p.257

- Mao, J. (2014). "Social Media for Learning: A Mixed Methods Study on High School Students' Technology Affordances and Perspectives", *Computers in Human Behavior*, 33, pp:213–223.

- McQuail, D. (2008). *Mass communication theory* (5th ed). California: Sage Publishers.

- Najmul Hasan Md. Mahfuz Ashraf ABM Abdullah Md. Wahid Murad (2016). " Introducing Mobile Internet as Learning Assistant for Secondary and Higher Secondary Students", *The Journal of Developing Areas*, Vol. 50 ,No. 5

- Nauert, R. (2013). "Social Media, Facebook and Twitter Use May Harm Grades of College Freshman". http://psychcentral.com/news/2013/04/12/social-media-use-may-harm-grades-of-collegefreshman/ 53711.html. Accessed 16/08/2013

- Rahman, Kazi Sonia, Paula, Jillur Rahaman and Hasan, M.K. (2012). "ICTs in the Field of Education in Bangladesh: Some Salient Features", *Educational Technology*, 47,pp: 8977-8985.

- Rather, A.A. (2013). "Overuse of Facebook and Academic grades: an Inverse Correlation", *IOSR Journal of Humanities and Social Science (IOSR-JHSS.),* Vo12, No.6. pp.68-72.

- RM Education (2015).*The Benefits of Classroom Audio, Available* from:https://edtechnology.co.uk/Article/the-benefits-of-classroom-audio/ (Accessed February 10, in 2019)

- Ross, S.; Morrison, G.; Lowther, D. (2010). "Educational technology research past and present: balancing rigor and relevance to impact learning" (PDF). *Contemporary Educational Technology*. **1** (1): 17.

- Seo, W.S (2004). "Internet Usage and Life Satisfaction of Youths", *Information Policy,*Vol.11, No.2

- Skierkowski, D., & Wood, R. M. (2012). "To Text or Not to Text? The Importance of Text Messaging Among College-aged Youth", *Computers in Human Behavior*, 28, pp: 744–756.

- Stakkestad, S., V. & Stordal, H., F. (2017). The Effects of Technology on Students' Academic Performance, Norwegian School of Economics Bergen.

Effect of Modern Technological Tools on Business Students' Academic Performance: Evidence from Public Universities in Bangladesh

- Stokes, D., Price, B., Russett, J., & Debuke, I. O. (2003). "Integrating Technology into Teaching: A New Paradigm shift?", *Technology and Teacher Education Annual, 2*, pp:1108-1111.

- Subrahmanyam, K. (2001). "The Impact of Computer Use on Children's and Adolescents' Development", Retrieved from Science Direct Web site: http://www.sciencedirect.com/science/article/pii/S0193397300000630.

- Subrahmanyam, K., Greenfield, P., Kraut, R. & Gross, E. (2001). "The Impact of Computer Use onChildren's and Adolescents' Development", *Applied Developmental Psychology*, Vol.22, pp:7-30.

- Termpaper Warehouse (2004). "Factors that Influence Academic Performance in Nigeria.Retrievedfrom.www.termpaperwarehouse.com/essay. Accessed 27/7/2013

- Tynjälä, P., Häkkinen, P., & Hämäläinen, R. (2014). "TEL@ Work: Toward Integration of Theory and Practice", *British Journal of Educational Technology,* Vol.45,No.6,pp: 990-1000.

- Tsikalas, K. E., Lee, J. & Newkirk, C. (2007). "Home Computing, Student Engagement andAcademic Achievement", The Council of Chief State School Officers (CCSSO) National Conference on Large Scale Assessment, Nashville, TN.

- Ufuophu, E and Agobami, O. (2012). "Usage of Information and Communication Technologies and Job MotivationAmong Newspaper Workers in Nigeria", *Journal of Communication and Media Research.* Vol.4.No.1

- Valacich, J., & Schneider, C. (2014). "Information Systems Today: Managing in the DigitalWorld with MyITLab". *Policy Statement*.

- www.green.edu.bd/wp-content/uploads/PDFs/Journals/Use-of-Technology-in-Legal-Education-of-Bangladesh_Challenges-and-Prospects.pdf

- Wael Sh. Basri,*et. al.,* (2018). "ICT Adoption Impact on Students' Academic Performance: Evidence from Saudi Universities", *Hindawi Education Research International Volume 2018.*

- Yang, D.G (2003). "The Difference of Adolescent's Activity and Satisfaction of Interpersonal Relationship According to the Internet Addiction Tendency", *Korean Journal of Youths Studies.* Vol.10,No.3

- Yesilyurt, M.E., Basturk, R., Yesilyurt, F., Kara, I.,(2014). "The Effect of Technological Devices on Student's Academic Success: Evidence from Denizli", *The Journal of Internet Applications and Management*, Vol.5, No.1, pp: 39-47.

- Zhao, Y. (2003). "What should teachers know about technology: Perspectives and practices", Greenwich, CT: Information Age Publishing.

▪ Zhao, J., Yuping, W., Maideenzan, I., Moe,K., Nasiruddin, A.M.A(2018). "The Relationship Between Smartphone Use and Academic Performance in a Sample Tertiary Students in Singapore: A Cross-sectional Study"*, I-manager's Journal of Educational Technology,* Vol. 14, No. 4,p-28.

Impact of Different Types of Educational Institutions on Literacy Rate of Bangladesh: AnUpazila Level Analysis

Sujan Chandra Paul*

Md. Shajul Islam**

Md. Asiqur Rahman***

Abstract

This study investigates the impact of number of educational institutions on literacy rate. Furthermore, it aims to determine which education institutions (primary schools, kindergarten schools, NGO schools, secondary schools, colleges, madrasahs and other educational institutions such as technical and vocational institutions, medical colleges, engineering colleges, agricultural and veterinary college, public or private universities) have a significant influence on increasing literacy rate. Data of 489 Upazilas (including City Corporations and Dhaka Metropolitan) were collected from Bangladesh Bureau of Statistics (BBS, District Statistics 2011). This research found that number of government primary schools, kindergarten schools, non-government secondary schools, schools & college (operating jointly), government college, non-government college and madrasah had positive impact on literacy rate. It was also found that number of registered primary schools, private primary schools, NGO schools, government secondary schools, kawmi madrasah, ebtedayee madrasah has no positive impact on Upazila literacy rate of Bangladesh.

Key words: Literacy rate, primary school, secondary school, madrasah, college, university.

1. Introduction

Literacy is considered to be an important key for socio-economic growth. Economic prosperity of a country entirely depends on the economic resources it has and human resources is an important part of economic resources. Ample education infrastructure helps to increase literacy rate which is one of the key components of Human Development indicators. Bangladesh ranks 142 out of 188 countries and territories in Human Development Index over the world (As per Human Development Report, 2015). Illiteracy has been termed as economic backwardness which is major cause of conflict (Do andIyer, 2009).

As per 'District Statistics 2011' of Bangladesh Bureau of Statistics, the total number of different types of educational institutions is given below:

Types of Educational Institutions	Number of Educational Institutions
Government Primary Schools	37,722
Registered Primary Schools	24,611
Private Primary Schools	5,389
Kindergarten Schools	16,980
NGO Schools	29,345
Government Secondary Schools	298

*Assistant Professor, Department of Accounting and Information Systems, University of Barishal.
** Assistant Professor, Department of Accounting and Information Systems, University of Barishal.
*** Lecturer, Department of Accounting and Information Systems, University of Barishal.

Non-government Secondary Schools	17,393
School & College (operating jointly)	1,027
Government College	258
Non-government College	2,663
Madrasah	9,804
Kawmi madrasah	6,038
Ebtedayee madrasah	7,054
Other educational institutions(technical and vocational institution, medical college, engineering college, agricultural and veterinary college, public or private university)	1,100

The socio economic level of a family has more to do with a child's literacy level and that literacy levels have to do with income. The higher the family income the more likely it is that the children would have a high literacy level, in other words, though illiteracy does not cause poverty, poverty does cause illiteracy (Street, 1995).

2. Review of the Literature

Noble Laurites Theodore Schultz and Gary Becker theorize that education helps people to earn higher wages in the labor markets. Moreover, labor productivity can be increased by investing in human capital via schooling. It is also argued that higher productivity of workers is a result of greater stock of human capital and is also an outcome of higher wages in the market (HDRSA, 1998).

According to Food and Agriculture Organization and World Food Programme (2010), lower literacy results into high level of undernourishment. As expressed in Human Development Report of South Asia (1998) "According to the World Bank, a farmer having four years of education is 9 percent more productive than his counterparts with zero education". In a cross country analysis Burchi (2006) studied the relationship between education, human development and food security. He found that 100 percent increase in younger children attendance at school can reduce about 22 percent food insecurity, but this relationship was observed only for basic education but not for higher education.

Schultz (1988) and Becker (1993) also supported the facts concerning investment in human capital through schooling which leads to attain higher wages and greater level of productivity in the market. Empirical evidence from Bangladesh strongly supported the hypothesis by investigating salary differences of high school educated women which had been found 7 times higher than the salaries of women with no education (World Bank 1993). In case of Pakistan, it was observed that with 10 percent increase in male literacy causes 2.7 percent rise in farm productivity while 10 percent enahancement in any other input augments half the level of output as compared to education (Rosegrant and Evenson 1993).

Surprisingly, educated neighbors have also positive impacts on the work efficiency compared to illiterate neighbors. This kind of observation was undertaken by Foster and Rosenzweig (1995) in India. They observed 4 percent higher profitability rate of the farmers having no schooling if their neighbors had primary school education completed as compared to illiterate ones. Investment in human capital not only helps to increase wages, profits and productivities but also fosters different rate of return in case of several numbers of years spent in the educational institutions. In a World Bank (1994) study, it was explored that Nepalese people received 100 percent return on investment on primary education, 29.1 and 15 percent on lower secondary and secondary education, and 2.17 percent return on Bachelors education,

respectively. In the same study, It was also delineated that rate of return had been far higher in case of girls education as compared to boys.

Lind (2008) reviews stakeholders' motivations for and against literacy and argues that "adult literacy has de facto been neglected in actual strategies and resource allocation". The language gap between official and unofficial languages causes a number of problems that often leave minority language speakers linguistically, educationally and socio-economically disadvantaged (Wagner, 2003).

3. Objectives

To measurethe impact of different types of educational institutions (primary institutions, kindergarten schools, NGO schools, secondary institutions, colleges, madrasahs and other educational institutions such as technical and vocational institutions, medical colleges, engineering colleges, agricultural and veterinary college, public or private universities) on literacy rates by using upazila level data of Bangladesh. This research had the objectives to examine the relationship between literacy rate and number of different types of educational institutions of Bangladesh.

4. Research Methodology

Data Collection:

Both quantitative and qualitative data are used which are collected from secondary source. This study gathers quantitative data in form of literacy rate, number of government primary school, number of Registered primary school, number of private (non-registered) primary school, number of kindergarten school (pre schooling), number of NGO school, number of government secondary school, number of non-government secondary school, number of school & college (operating jointly), number of government college, number of non-government college, number of madrasah, number of kawmi madrasah, number of ebtedayee madrasah, number of other educational institutions such as technical and vocational institution, medical college, engineering college, agricultural and veterinary college, public or private univerisity) of 489 Upazilas (including city corporations and Dhaka metropolitan) of Bangladesh from the website of Bangladesh Bureau of Statistics (District Statistics 2011). On the other hand, the qualitative data are collected from journal, and working paper.

Data Processing

After collecting the secondary data, the subsequent step is determining and defining variables. To estimate regression analysis, there are fifteen variables utilized in constructing the model. Literacy rate is used as dependent variable and others such as number of different types of educational institutions are used as independent variable.

This paper carried out regression analysis by utilizing ordinary least square method in order to see the relationship between literacy rates with the number of different types of educational institution. ANOVA table (F-test), t-test are also used for the study.

Hypotheses

Based on the analytical framework and previous studies, this study defines the following hypotheses:
   a.   Number of government primary school has a positive relationship with literacy rate.
   b.   Number of Registered primary school has a positive relationship with literacy rate.
   c.   Number of private (non-registered) primary school has a positive relationship with literacy rate.

    d.   Number of kindergarten school (pre schooling) has a positive relationship with literacy rate.

    e.   Number of NGO schools has a positive relationship with literacy rate.

    f.   Number of government secondary school has a positive relationship with literacy rate.

    g.   Number of non-government secondary school has a positive relationship with literacy rate.

    h.   Number of school & college (operating jointly) has a positive relationship with literacy rate.

    i.   Number of government colleges has a positive relationship with literacy rate.

    j.   Number of non-government colleges has a positive relationship with literacy rate.

    k.   Number of madrasahs has a positive relationship with literacy rate.

    l.   Number of kawmi madrasahs has a positive relationship with literacy rate.

    m.   Number of ebtedayee madrasahs has a positive relationship with literacy rate.

    n.   Number of other educational institutions (such as technical and vocational institution, medical college, engineering college, agricultural and veterinary college, public or private university) has a positive relationship with literacy rate.

Model Construction

This research simplifies the model by directly relating literacy rate and some independent variables such as number of different types of educational institutions. The hypothesized relationship can be expressed as the following regression model:

$$L = f\,(GPS,\ RPS,\ PPS,\ KGS, NGOS, GSS,\ NGSS, SCOJ,\ GC,\ NGC,\ M,\ KM,\ EM,\ OT\,)$$
……………………………..……………………….….……………………… (1)

Where, number of government primary school (GPS), number of Registered primary school (RPS), number of private (non-registered) primary school (PPS), number of kindergarten school (KGS), number of NGO school (NGOS), number of government secondary school (GSS), number of non-government secondary school (NGSS), number of school & college operating jointly (SCOJ), number of government college (GC), number of non-government college (NGC), number of madrasah (M), number of kawmi madrasah (KM), number of ebtedayee madrasah (EM), number of other educational institutions such as technical and vocational institution, medical college, engineering college, agricultural and veterinary college, public or private university (OTH).

After constructing the model, the next step is defining the equation. Since it is assumed that all types of educational institutions are helpful for increasing literacy rate, positive signs are used for the coefficients of all the number of educational institutions.

$$L = \beta_0 + \beta_1\ GPS + \beta_2\ RPS + \beta_3\ PPS + \beta_4\ KGS + \beta_5\ NGOS + \beta_6\ GSS + \beta_7\ NGSS + \beta_8\ SCOJ + \beta_9\ GC + \beta_{10}\ NGC + \beta_{11}\ M + \beta_{12}\ KM + \beta_{13}\ EM + \beta_{14}\ OTH + \mu$$…………………………. (2)

5. Findings and Results

Descriptive Statistics:

Table 1: Descriptive Statistics

	Mean	Median	Standard Deviation	Minimum	Maximum
LR	48.726	48.600	9.346	26.500	74.600
GPS	77.141	72.000	36.252	12.000	399.000
RPS	50.329	44.000	38.649	0.000	517.000
PPS	11.020	3.000	88.857	0.000	1932.000
KGS	34.724	16.000	113.897	0.000	2328.000
NGOS	60.010	36.000	77.720	0.000	523.000
GSS	0.609	0.000	0.943	0.000	8.000
NSS	35.569	31.000	23.105	1.000	242.000
SCOJ	2.100	1.000	12.069	0.000	251.000
GC	0.528	0.000	0.973	0.000	8.000
NGC	5.446	4.000	4.902	0.000	64.000
M	20.049	16.000	16.647	0.000	120.000
KM	12.348	6.000	22.773	0.000	381.000
EM	14.425	7.000	22.935	0.000	315.000
OTH	2.249	1.000	4.181	0.000	60.000

The mean of the literacy rate (dependent variable) is 48.726, where SD is 9.346, minimum is 26.5% (CompaniganjUpazila of SylhetDistict) and maximum is 74.6% (Dhaka Metropolitan of Dhaka District). The mean of the number of government primary schools (independent variable) is 77.141, median is 72, where SD is 36.252, minimum is 12 (MoanohardiUpazila of NarshingdiDistict) and maximum is 399 (Dhaka Metropolitan of Dhaka District). The mean of the number of registered primary schools (independent variable) is 50.329, median is 44, where SD is 38.649, minimum is 0 (RumaUpazila of BandarbanDistict and BelaboUpazila of NarshingdiDistict) and maximum is 517 (Dhaka Metropolitan of Dhaka District). The mean of the number of private primary schools (independent variable) is 11.020, median is 3, where SD is 88.857, minimum is 0 (83 Upazilas) and maximum is 1932 (Dhaka Metropolitan of Dhaka District). The mean of the number of kindergarten schools (independent variable) is 34.724, median is 16, where SD is 113.897, minimum is 0 (BelaiChhari, JuraiChhari and BarkalUpazilas of Rangamati District, Ruma and ThanchiUpazila of BandarbanDistict and GalachipaUpazila of Patuakhali District) and maximum is 2328 (Dhaka Metropolitan of Dhaka District). The mean of the number of NGO schools (independent variable) is 60.010, median is 36, where SD is 77.720, minimum is 0 (32 Upazilas) and maximum is 523 (UllahparaUpazila of Sirajganj District).

The mean of the number of government secondary schools (independent variable) is 0.609, median is 0, where SD is 0.943, minimum is 0 (310 Upazilas) and maximum is 8 (UllahparaUpazila of Sirajganj District). The mean of the number of non-government secondary schools (independent variable) is 35.359, median is 31, where SD is 23.105, minimum is 1 (CompaniganjUpazila of Sylhet District, BelaiChhari and JuraiChhariUpazilas of Rangamati District, ThanchiUpazila of Bandarban District) and maximum is 242 (Dhaka Metropolitan of Dhaka District). The mean of the number of school and college

operated jointly (independent variable) is 2.100, median is 1, where SD is 12.069, minimum is 0 (233 Upazilas) and maximum is 251 (KanaighatUpazila of Sylhet District).

The mean of the number of government colleges (independent variable) is 0.528, median is 0, where SD is 0.973, minimum is 0 (332 Upazilas) and maximum is 8 (Chittagong City Corporation of Chittagong District). The mean of the number of non-government colleges (independent variable) is 5.446, median is 4, where SD is 4.902, minimum is 0 (13 Upazilas) and maximum is 64 (Dhaka Metropolitan of Dhaka District).

The mean of the number of madrasah (independent variable) is 20.049, median is 16, where SD is 16.647, minimum is 0 (8 Upazilas) and maximum is 120 (DhamraiUpazila of Dhaka District). The mean of the number of kawmi madrasah (independent variable) is 12.348, median is 6, where SD is 22.773, minimum is 0 (67 Upazilas_Annexure-IX) and maximum is 381 (DhamraiUpazila of Dhaka District). The mean of the number of ebtedayee madrasah (independent variable) is 14.425, median is 7, where SD is 22.935, minimum is 0 (34 Upazilas) and maximum is 315 (AdarshaSadarUpazila of Comilla District).

The mean of the number of others educational institutions such as technical and vocational institution, medical college, engineering college, agricultural and veterinary college, public or private university (independent variable) is 2.249, median is 1, where SD is 4.181, minimum is 0 (165 Upazilas_Annexure-XI) and maximum is 60 (Dhaka Metropolitan of Dhaka District).

Relationship between literacy rate and number of educational institutions:

Table: 1-Regression Estimation

Regression Statistics					
Multiple R	0.551				
R Square	0.303				
Adjusted R Square	0.283				
Standard Error	7.916				
Observations	489				
ANOVA					
	Df	*SS*	*MS*	*F*	*Significance F*
Regression	14.000	12,921.642	922.974	14.730	0.000
Residual	474.000	29,700.649	62.660		
Total	488.000	42,622.291			
	Coefficients	*Standard Error*	*t Stat*	*P-value*	
Intercept	46.176	0.981	47.074	0.000	
GPS	0.014	0.015	0.922	0.357	
RPS	-0.061	0.014	-4.223	0.000	
PPS	-0.003	0.012	-0.260	0.795	

KGS	0.019	0.009	2.115	0.035
NGOS	-0.027	0.005	-5.462	0.000
GSS	-0.927	0.546	-1.699	0.090
NSS	0.099	0.031	3.159	0.002
SCOJ	0.006	0.033	0.175	0.861
GC	2.952	0.597	4.947	0.000
NGC	0.167	0.120	1.396	0.163
M	0.050	0.031	1.623	0.105
KM	-0.047	0.017	-2.721	0.007
EM	-0.010	0.018	-0.557	0.577
OTH	-0.075	0.155	-0.483	0.629

Table 1 exposes the regression estimation of literacy rate and the independent variables (number of different types of educational institutions). The model is a good fit because the R^2 is 0.551. The value of R^2 indicates that 55% the variance of estimator (number of different types of educational institutions) succeeds to explain the variance of literacy rate.

Because the *p value* of F is significant (0.0000), we can write down the regression estimation in the following way:

Literacy rate = 46.176 + 0.014 GPS - 0.061 RPS - 0.003 PPS + 0.019 KGS -0.027 NGOS - 0.927 GSS + 0.099 NGSS + 0.006 SCOJ + 2.952 GC + 0.167 NGC + 0.050 M - 0.047 KM - 0.010 EM-0.075 OTH……………………………………..…………………………….…. (3)

Hypothesis testing and interpretations:

Table 3: One-sided (left side) tail Hypothesis Test of number of different types of educational institutions affecting literacy rate.

Variables	Sign of regression coefficient	P-value	Description
GPS	Positive	0.357	Ho rejected
RPS	Negative	0.000	Ho failed to be rejected
PPS	Negative	0.795	Ho rejected
KGS	Positive	0.035	Ho failed to be rejected
NGOS	Negative	0.000	Ho failed to be rejected
GSS	Negative	0.090	Ho rejected
NSS	Positive	0.002	Ho failed to be rejected
SCOJ	Positive	0.861	Ho rejected
GC	Positive	0.000	Ho failed to be rejected
NGC	Positive	0.163	Ho rejected
M	Positive	0.105	Ho rejected
KM	Negative	0.007	Ho failed to be rejected
EM	Negative	0.577	Ho rejected
OTH	Negative	0.629	Ho rejected

Table 2 shows KGS, NSS and GChave significant *p value*s to reject Ho. It means that number of kindergarten schools, non-government secondary schools and government colleges has positive relationship with literacy rate. This table also shows RPS, NGOS and KMhave significant *p value*s to reject Ho. It means thatthe number of registered primary schools, NGO schools and Kawmi madrasahs

has not negative impact on literacy rate which was beyond the expectations of the author. The beta coefficients of the GPS, SCOJ, NGC and M have the positive values but *p value* of the *t* statistics was more than 5% which does not indicate that these data were statistically significant. Besides these, the beta coefficients of the PPS, GSS, EM, OTH have the negative values but *p value* of the *t* statistics was more than 5% which does not indicate that these data were statistically significant.

6. Conclusion:

It is concluded from the results of the study that different types of educational institutions have different impact on the literacy rate. It was found that number of government primary schools, kindergarten schools, non-government secondary schools, schools & college (operating jointly), government college, non-government college and madrasah had positive impact on literacy rate. It was also found that number of registered primary schools, private primary schools, NGO schools, government secondary schools, kawmi madrasah, ebtedayee madrasah has no positive impact on upazila literacy rate of Bangladesh. So, it is recommended that the government should take initiative to increase the number of those educational institutions who had a positive impact on upazila literacy rate.

7. References:

1. Burchi, F. (2006). Education, Human Development, and Food Security in Rural Areas: Assessing Causalities. Paper presented in International Conference of the Human Development and Capability Approach, Groningen, 29 August - 1 September, 2006.
2. Do, Q.T. &Iyer, L. (2009). Geography, poverty and Conflict in Nepal. Working Paper no. 07-065, Harvard Business School.
3. Foster, A. D.,&Rosenzweig, M. R. (1995). Learning by doing and learning from others: human capital and technological change in agriculture. Journal of Political Economy 103(6): 1176-1209.
4. Lind, A. (2008). Literacy for All: making difference. UNESCO.
5. HDRSA. (1998). HumanDevlopment Report South Asia: Published by Human development centre. Oxford University Press, Oxford.
6. Rosegrant, M. W.,&Evenson, R. (1993). Agricultural productivity growth in Pakistan and India: A comparative analysis.Mimeograph, Pakistan Institute of DevelopmentEconomics, Islamabad.
7. Street B.V. (1995). Social illiteracies. London and New York: Longman. pp. 9-15.
8. Schultz, T. P. (1988). Education, investments and returns. In H. B. Chenery and T. N.Srinivasan, (eds.), Handbook of Development Economics.Vols. 1 and 2.Amsterdam: North-Holland.
9. World Bank. (1993). Staff appraisal report on Female Secondary School Assistance". ReportNo. 15496-IN, 16 February 1993.
10. World Bank. (1994). Nepal: Critical issues in secondary education and options forreformReport No. 12243-NEE 26 August 1994.
11. World Food Programme & Food and Agriculture Organization. (2010). State of Food Insecurity in the World: Addressing Food Insecurity in Protracted Crisis". Food and Agriculture Organization of The United Nations, Rome 2010. ISBN 978-92-5-106610-2.
12. Wagner, D. A. (2003). Smaller, quicker, cheaper: alternative strategies for literacy assessment in the UN Literacy Decade. International Journal of Educational Research, 39: 293-309.

Corporate Social Responsibility and Customer Loyalty, How Corporate Social Responsibility lead to Firm Performance; A Study on textile sector in Southern Bangladesh.

Abdullah Al Masud*

Suniti Debi Mondal**

ABSTRACT. *Corporate social responsibility (CSR) is defined as the responsibility of enterprises for their impacts on society. Recently corporate social responsibility (CSR) has become a crucial construct in textile industries in Bangladesh. Solitary of the main reasons is due to the idea that CSR influence consumer loyalty. This paper presents a model of influence of CSR variables i.e. employees, customers, corporate image, customer's loyalty and overall collective organizational commitment and its influence organizational performance and also showing the direct and indirect effects among these constructs. We also find out that corporate image mediates the relationship between customer-oriented corporate social responsibility (CSR) and customer loyalty but not the employee-oriented CSR-collective organizational commitment linkage. Significantly and unexpectedly we find corporate image mediates the relationship between employee-oriented CSR and customer loyalty. We find positive and indirect relationships between customer-oriented CSR, customer loyalty and financial performance as well. In this study we have chosen some textile industry in Barishal region for this research because in the social economics contest for the present scenario and this sector is most potential sector in entire South Bengal. At the end of this paper some suggestion are made for this industries as well as concern stakeholders to build a profitable customer relationship and also improve our understanding of the mechanism by which CSR practices influences firm performance. Finally, managerial implications and limitations of our findings are discussed.*

Key words: Customer satisfaction; customer trust; RMG Textile industries; collective organizational commitment; corporate image; corporate social responsibility; customer loyalty; financial performance.

*Assistant Professor, Department of Management Studies, University of Barishal
** Lecturer, Department of Management Studies, University of Barishal.

INTRODUCTION

Corporate social responsibility (CSR) has been studied extensively in recent decades by management scholars and business professionals who vigorously debate stakeholder perspectives on the shift from normative and moral approaches toward a more strategic view (Aguilera et al., 2007; Foote et al., 2010; Mackey et al., 2007).The textile industry is one of the world's fastest growing sectors in southern Asia and playing an essential role in Clothing industry (De Grosbois, 2012).At present, the country (Bangladesh) generates about $5 billion worth of products each year by exporting garment. The industry provides employment to above 4 million workers of whom 90% are women and the result RMG sector is one of the most growing and diluvium sector in the economy of Bangladesh (BGMEA trade report 2016).So the development of this country depends on development of this sector and The Corporate Social Responsibility (CSR) could be helped to development process of this sector. The Corporate Social Responsibility (CSR) practices and standards are being implemented in Bangladesh Readymade Garment sector, because of global competitiveness and demand (Ferdous; 2017). The goal of corporate social responsibility (CSR) is to take responsibility for all the company's actions and to have a positive impact on its environment, communities, employees, consumers and all other stakeholders (Freeman et al., 2010).

Mackey et al. (2007) argues that companies should view CSR practices as an investment because they enhance the future market value of a company. A focus on CSR practices is important, even if they can result in a short-term reduction in company cash flow, since they may turn into profit in a near future (eg, Aguinis and Glavas, 2012; Berman et al., 1999; Orlitzky et al., 2003; Taneja et al., 2011). Maignan et al. (1999) find that CSR enhances employee commitment and customer loyalty, which then results in an improvement in business performance. Similarly, Surroca et al. (2010) test a mediating model involving intangible resources to explain the link between the practice of corporate responsibility and financial performance Chun et al. (2013). Prior research identifies constructs with the potential to mediate the CSR-performance relationship. Mediators potentially associating with CSR practices have been investigated as determinants of firm performance and include, corporate image (Roberts and Dowling, 2002), customer response (Dotson and Allenby, 2010; Gonzalez et al., 2009; Matsuoka, 2006; Smith and Wright, 2004; Westlund et al., 2005; Yee et al., 2010) and employee response (Dotson and Allenby, 2010; Yee et al., 2010).This provides some insight into the relationship between CSR and performance and to better understand this relationship, we were encouraged to conduct this study. Our study draws on the established importance of customer and employee responses to further examine the CSR–performance relationship by adding corporate image as an important mediator.

Corporate Social Responsibility and Customer Loyalty, How Corporate Social Responsibility lead to Firm Performance; A Study on Textile Sector in Southern Bangladesh.

Stakeholder orientation is fundamental to the discussion about the utility of CSR practices and the sustainability of companies (Zink, 2005). Our focus on employees and customers follows the rational that these are critical stakeholders as they are fundamental determinants of financial performance. The current study tries to contribute to the CSR literature in three important ways. First, we involve corporate image to bridge CSR and customers and employees' reactions. This perspective is rare in the prior studies (Lai et al., 2010). Next, we echo Barnett and Salomon's (2006) call to investigate the mediating mechanism underlying the relationship between CSR and firm performance. Final, the longitudinal research design enhances the causal relationship among the variables. This is a recognized limitation in the current literature that we overcome. This study focuses on employee oriented and customer-oriented CSR practices and investigates the relationship between CSR and firm performance via customer loyalty and collective organizational commitment. In our research we have chosen some textile and garments industry entire south Bengal. This industries has generated employment opportunity for more than 2,000 workers including the officials of different desks.

THEORETICAL BACKGROUND, HYPOTHESES AND CONCEPTUAL MODEL

The importance of CSR to corporate financial performance has been debated for over half acentury. Friedman (1970) notably argues that firms should only consider social responsibility if it is of major significance to their shareholders. This framed the argument that firms should only be concerned about maximizing profits. In contrast, most management scholars agree that CSR is beneficial not only to society, but to the firms themselves (Carroll, 1998; Porter and Kramer, 2002).The difficulties in establishing the natures of the relationship between CSR and corporate financial performance likely attributes to researchers overlooking important mediators in this relationship.

Though CSR is a relatively new concept in Bangladeshi corporate culture, awareness of corporate social reporting has rapidly increased. All companies need to consider their CSR for two basic reasons. Firstly, there is intensifying pressure from stakeholders to do so (Belal, 2001 cited Azim 2011).The existing practice of CSR in Bangladesh is more of a philanthropic and voluntary nature and not a systematic one. Moreover, weak enforcement of the regulatory framework, rule of law, accountability and lack of control of corruption- absence of these components of good governance in Bangladesh- are enabling business to be socially irresponsible (Azmat and Coghill 2005).

Mediating Effects of Customer Loyalty and Collective Organizational Commitment:

The relationship between CSR practices and corporate financial performance can be further interpreted from the perspectives of customer loyalty and collective organizational commitment. Satisfying

customers and employees is the major concern of most firms since they have a significant effect on financial outcomes (Berman et al., 1999; Maignan et al., 1999).In this study we focus on both customer-oriented CSR practices and employee-oriented CSR practices. Loyal customers generate considerable revenue and profit through both consumption and by attracting new customers. Loyal employees are often willing to invest additional time and effort to optimizing products and services while making efforts to prevent the firm from incurring unnecessary costs. Customer loyalty refers to the likelihood of previous customers continuing to buy products from a specific organization over time (Maignan et al., 1999). Customers tend to form strong psychological bonds with a firm, as obligation to repurchase, when a firm places a higher value on customer rights than on profitability and when it makes a sincere attempt to respond to customer complaints, opinions and needs (Mohr and Webb, 2005). Customers who are brand loyal tend to avoid switching brands; even when competing products are sold at lower prices. In the financial services industry customers tend to become loyal after observing displays of ethical behavior by the company (Roman, 2003). Corporate citizenship, as well as ethical behavior, significantly and positively associate with customer loyalty (Maignanet al., 1999).

H1: *Customer loyalty mediates the relationship between customer-oriented CSR practices and financial performance.*

There is a degree of consensus that CSR practices not only enhance customer satisfaction(Luo and Bhattacharya, 2006) but also attract a qualified workforce (Greening and Turban, 2000; Turban and Greening, 1997) and this is a critical antecedent of financial performance (Barnett and Salomon, 2006; McGuire et al., 1988; Orlitzky et al., 2003; Waddock and Graves, 1997). Organizational commitment refers to the level of an individual's identification with and involvement in the organization (Mowday et al., 1982). A growing number of studies conceptualize organizational commitment at the group level and organizational rather than individual level (Bionget al., 2010; Chun et al., 2013; Conway and Briner, 2012; Elorza et al., 2011; Gardneret al., 2011; Simons and Roberson, 2003).We argue there are two primary reasons that employee-oriented CSR practices increase collective organizational commitment. First, employees who perceive that their company is concerned about CSR tend to make additional efforts to increase the profitability of their company (Lin, 2010).Studies find that highly committed employees desire long-term success and exhibit extra-role behaviors that can contribute to positive outcomes for the firm (Chun et al., 2013; Conway and Briner, 2012; Elorza et al., 2011).Second, CSR practices increase collective organizational commitment because they build trust (Lin, 2010). Maignan et al. (1999) reports that corporate citizenship significantly associates with employee commitment. Therefore, we infer that employee-oriented CSR practices directly improve collective organizational commitment and indirectly improve financial performance.

H2: *Collective organizational commitment mediates the relationship between employee's oriented CSR practices and financial performance.*

Social identity theory attempts to explain group membership and behaviors in terms of how individuals perceive themselves and others while they interact within and among groups in the social environment (Hogg and Terry, 2000). Social identity theory perspective argues that individuals construct their self-images by categorizing, identifying and comparing their self-images with their images of others (Tajfel and Turner, 1979). That is, relationships with others improve self-knowledge. Social identity theory provides the basis for interpreting why corporate image can mediate the relationship between CSR practices and the constructs of customer loyalty and collective organizational commitment.

Consumers attempt to form connections with positive corporate images that develop from positive perceptions of the activities of the company. For example, by consistently satisfying its customers a firm develops a positive reputation over time because its corporate behavior fits stakeholder expectations (Turban and Greening, 1997). A good reputation acts as a signal that the firm treats stakeholders ethically and will fulfill its social responsibilities in the future. A positive corporate image not only improves customer relations but also acts to improve sales when customers use a specific brand to establish their self-identity. Specifically, customers may consume the products of companies to demonstrate their good judgment and taste as end users (Burnham et al., 2003; Ibanez et al., 2006; Hsieh et al., 2004; Boloemer and Ruyter, 1998; Nguyen and Leblanc, 2001; Wang, 2010; Zhang, 2009). A positive correlation between CSR and corporate image is also found (Lai et al., 2010).

H3: *Corporate image mediates the relationship between customer-oriented CSR practices and customer loyalty.*

A positive corporate image projected by a company that invests in employee-oriented CSR practices can instill pride in employees. It also reduces employees' intentions to switch firms even when employment opportunities arise elsewhere. Gatewood et al. (1993) demonstrate that corporate image predicts how employers are ranked by applicants and potential employees. This study therefore proposes that the need for identification is important for both customers and employees. Employees who identify positively with their firms form psychological bonds with their firms and hold a deep sense of commitment.

H4: *Corporate image mediates the relationship between employee-oriented CSR practices and collective organizational commitment.*
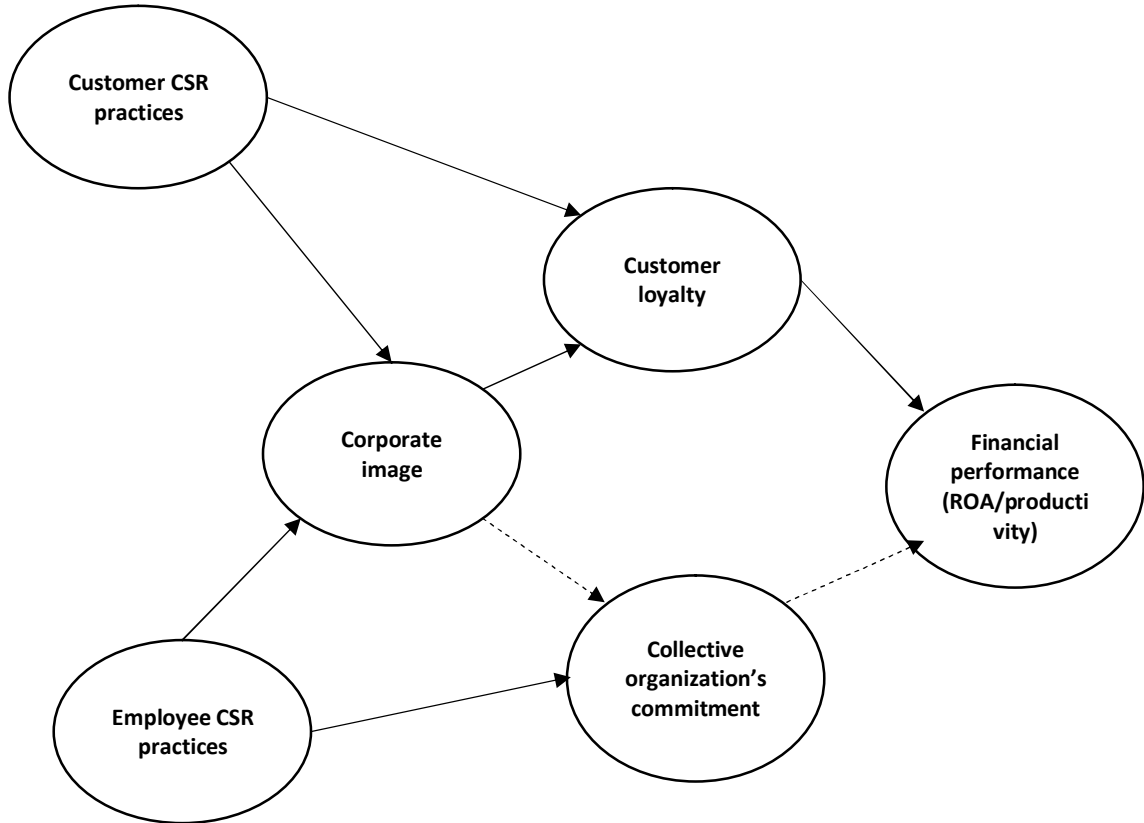
METHOD

Sample and Data Collection

The target population of this study was 500 textile employees and sample size was 100 employees in Barishal during the fiscal year 2017. The sample was deliberately designed to include a wide range of industries (textiles, oven garments, and 100% export oriented RMG industries) in order to maximize variation in responses between the variables and to increase the generalizability of the findings. Only firms with 5 or more employees were considered since CSR was assumed to be a minor consideration in small firms with limited resources and experience. Surveys were structured questionnaires. The majority of respondents were executives or officers, and line managers. Respondents were asked to provide data

related on all constructs except financial performance, which was measured objectively. Subsequent comparison of CSR and effectiveness ratings (ie, corporate image, customer loyalty and collective organizational commitment) was significantly different. This indicated the absence of respondent bias and so our analyses combined all respondent groups. We started by examining the data for non response bias. Results show that firm characteristics did not significantly differ between the respondent sample and the initial sample. The non-response bias test also reveals no statistically significant differences between early and late survey respondents in terms of firm characteristics and ratings for CSR practices.

Measures

CSR practices: Items related to customer-oriented and employee-oriented CSR practices were drawn from Aupperle et al. (1985) and Maignan et al. (1999). Respondents were asked to indicate their agreement with four statements regarding the extent to which their firms had systematically adopted four customer-oriented CSR practices and four employee-oriented CSR practices on a 9-point Likert-type scale (1 = strongly disagree to 9 = strongly agree). Sample items are 'my organization systematically conducts surveys to measure customer satisfaction and complaints' and 'my organization financially supports all employees who want to pursue further education'. The scale reliabilities for the customer-oriented CSR practices scale and employee-oriented CSR practices scales are 0.80 and 0.79, respectively.

Corporate image: Corporate image was measured using two items adapted from a Forerun et al. (2000). Respondents were asked to rate the extent to which each item reflected their organization on a 9-point Likert-type scale (1=strongly disagree to 9=strongly agree). A sample item is 'in general, our organization has a good reputation'. The(α) for this scale is 0.91.**Customer loyalty:** The Maignan et al. (1999) 3-item scale was adapted to measure customer loyalty. Respondents were asked to rate the extent to which each item reflected their organization on a 9-point Likert-type scale (1=strongly disagree to 9=strongly agree). A sample items 'customer loyalty is a major strength of our businesses. The scale reliability is 0.71.**Collective organizational commitment:** The three-item scale developed by Jaworski and Kohli (1993) was adapted to assess whether the employees of surveyed firms were interested in long-term employment with the firm. The responses were given on a 9-point Likert-type scale (1=strongly disagree to 9=strongly agree). A sample item is 'our employees often go above and beyond their regular responsibilities to ensure the organization's well-being'. The(α) for this scale is 0.79. **Financial performance:** We assessed two indicators of financial performance as return on assets (ROA) and productivity. The measure of ROA was computed as the ratio of operating income to total assets. Studies in business ethics typically adopt this as an outcome variable (Berman et al., 1999; McGuire et al., 1988). We measured productivity as average sales per employee. **Control variables:** Respondents were also

asked to provide information regarding organizational characteristics as control variables. Firm size, represented by the number of employees, was included as a control variable because larger firms tend to make a stronger public impression and have more resources for CSR practices as compared to smaller firms. Industrial sector was also included to control for variation across industries. Ownership type was not considered a control variable in this study due to its collinearity with firm size. This information is generally not available for privately-held small and medium enterprises which comprised a large proportion of the samples in this study.

Data Analysis:

Exploratory factor analysis was used to ascertain whether the survey questions loaded on the respective constructs in this study. Principal components analysis with a varimax rotation was used to analyze the items relating to CSR, corporate image, customer loyalty and collective organizational commitment. The 16 items yielded five factors with eigenvalues greater than 1 that explained 72.3 percent of the variance. Each item loaded strongly onto their respective factors. The Bartlett test of sphericity was significant ($\chi2=1471.64$, $p<0.000$). The Kaiser–Meyer–Olkin measure of sampling adequacy was computed to quantify the degree of inter correlations among the variables and the results indicate an index of 0.851 which showed that the use of factor analysis was appropriate. This issue was further examined by performing a confirmatory factor analysis (CFA) to test the distinctiveness of each of the measures. The hypothesized five-factor model produced an acceptable measurement model fit ($\chi2 =224.19$, RMSEA=0.08; GFI=0.87, CFI=0.91, NFI=0.85) and all items loaded on their respective factors at a statistically significant level. I also conducted additional CFAs using a theoretically unrelated 'marker variable' that consisted of a two-item personal job satisfaction and life satisfaction scale ($\alpha=0.79$). The model fit for the six-factor model was marginally different from the CFA model in which the items for the study's dependent and independent measures also loaded on to the unrelated variable (ΔCFI= 0.003). In addition, the correlations between the marker variable and substantive variables in this study range between (0.009 to 0.042) (all p values>0.05). Overall these results support discriminant validity and address concerns regarding common method bias. As the construct reliability of all scales exceed the suggested value of 0.70 this indicates acceptable internal consistency (Nunnally, 1978). Path analysis was used to test the hypothesis in this study and supported by the AMOS software.

RESULTS:

Table 1 presents the means, standard deviations, and correlations among the study variables. All models tested included the control variables. The first step was to construct two models (ie, one for each of the two outcome variables) that contained all the hypothesized relationships. Table 2 shows that the models

Corporate Social Responsibility and Customer Loyalty, How Corporate Social Responsibility lead to Firm Performance; A Study on Textile Sector in Southern Bangladesh.

(Model 1A for ROA and Model 1B for productivity) demonstrated a good overall fit to the data (Model 1A: $\chi2$=18.75, d.f.=12; GFI=0.96, CFI=0.97, RMSEA=0.07; Model 1B: $\chi2$=19.95, d.f.=12; GFI=0.96, CFI=0.96, RMSEA=0.08). In the next step four additional models were constructed to compare the hypothesized models with a baseline (ie, Models 1A and 1B). Table 2 reports the comparison results. The model fit indices for the competing models are acceptable. The $\chi2$ difference test, however, reveals non-significant differences between the two hypothesized models and the alternative models. Thus, the baseline models were retained for further analyses. Figure 1 also summarizes the hypothesized relationships.

We tested whether customer loyalty mediates the relationship between customer oriented CSR practices and financial performance (ie, H1). Results show that the indirect effect of customer-oriented CSR on financial performance is non-significant. Although Figure 1 shows positive relationships for customer-oriented CSR, customer loyalty, and ROA, the Baron and Kenny mediation test (1986) reveals no significant direct relationship between customer-oriented CSR practice and financial performance in terms of either ROA or productivity (β=0.125 and 0.04, p value>0.05). Subsequently, following Zhao et al.'s (2010) recommendation and using Preacher and Hayes' (2008) method, a 'bootstrapping' procedure was used to double check the significance of the mediation effect. The result shows that indirect effect of customer-oriented CSR on ROA was 0.159 with a 95 percent confidence interval including zero (−0.148 to 0.613). Therefore, there is no mediation effect. **H1** is unsupported.

H2 proposes that collective organizational commitment mediates the relationship between employee-orientated CSR practices and financial performance. This hypothesis is unsupported since collective organizational commitment does not directly associate with financial performance (β=−0.01 and 0.09, p value>0.05).

H3 predicts that corporate image mediates the relationship between customer-oriented CSR practices and customer loyalty. Figure 1 shows that customer-oriented CSR practices and corporate image significantly affects customer loyalty. Customer-oriented CSR practices also have a significant indirect effect on customer loyalty via corporate image (β=0.09, p<0.05). Furthermore, the bootstrapping analysis also shows the same result (indirect effect is 0.301, confidence interval 0.079–0.550; direct effect is 0.277, confidence interval −0.024–0.615), indicating full mediation. Thus, **H3** is supported.

H4 proposes that corporate image mediates the relationship between employee-oriented CSR practices and collective organizational commitment. Although employee-oriented CSR practices significantly relates to corporate image and collective organizational commitment the γ value of corporate image and collective organizational commitment does not support the second condition of the mediation test (γ=0.06, p>0.05). The indirect effect of employee-oriented CSR practices and collective organizational commitment through corporate image are, also not significant (t=0.02). Thus, **H4** is unsupported.
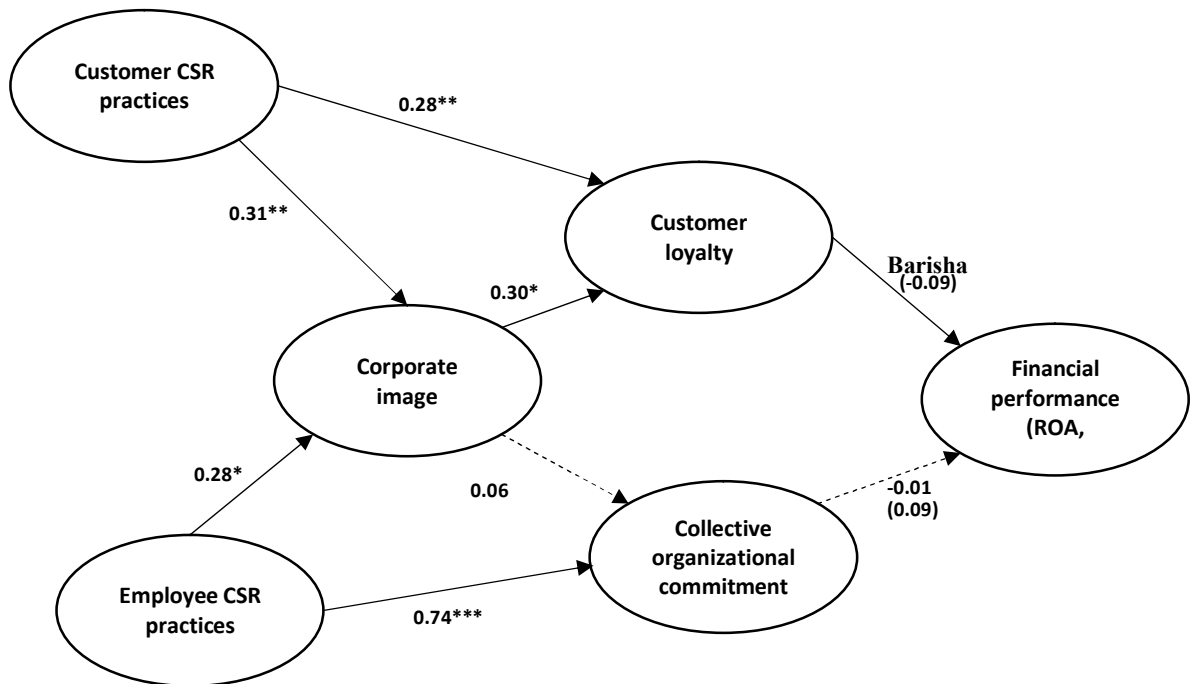
An unexpected, but interesting, mediating effect is also observed. Corporate image mediates the relationship between employee oriented CSR practices and customer loyalty. A Sobel test shows that the indirect effect is significantly larger than the direct effect. Application of the four-step Baron and Kenny test (1986) shows similar findings. Employee oriented CSR practices significantly relate to customer loyalty (β=0.31, p<0.01) and this meets the first condition of the mediation test. Both employee-oriented CSR practices and customer loyalty significantly relate to corporate image and this meets the second condition of the tests. Tests of the final condition, however, show that the positive relationship between employee-oriented CSR practices and customer loyalty (β=0.11, p>0.05) negate when corporate image acts as a predictor of customer loyalty. These results point toward full mediation of this relationship and we discuss this in the following section.

Corporate Social Responsibility and Customer Loyalty, How Corporate Social Responsibility lead to Firm Performance; A Study on Textile Sector in Southern Bangladesh.

DISCUSSION AND CONCLUSIONS

Corporate social responsibility (CSR) is defined as the responsibility of enterprises for their impacts on society. The goal of corporate social responsibility (CSR) is to take responsibility for all the company's actions and to have a positive impact on its environment, communities, employees, consumers and all other stakeholders. CSR has several functions and the activities can range from a strict stakeholder focus to charity and volunteering efforts. One of the most important stakeholder groups is the consumer.

This study examined the mediating effect of corporate image on the CSR–customer loyalty relationship and on the CSR–collective organizational commitment relationship. I also explored whether customer loyalty and collective organizational commitment mediate the relationship between CSR practices and financial performance. I found that corporate image mediates the relationship between customer-oriented CSR practices and customer loyalty. This finding improves the understanding of how customers' loyalty forms. This suggests that a positive corporate image can attract the type of customers who want to strengthen their identities by connecting with companies with an established positive image. In addition, trust derived from a positive image enables existing customers to have a sustainable relationship with a company. The research findings also suggest that corporate image is a psychological impression and can be developed by implementing CSR practices. Although this study finds that customer oriented CSR directly affects customer loyalty and that, in turn, positively affects financial performance (ROA) we do not find any direct correlation between customer oriented CSR and financial performance. Since we confirm the mediating effect of corporate image on the relationship between customer-oriented CSR and customer loyalty the relationship between customer loyalty and financial performance is mediated by unknown factors that require elucidation in future studies. This suggests that managers view corporate image as a strategic tool to improve customer loyalty. Since we do not find a direct relationship between collective organizational commitment and financial performance then the mediating effect of collective organizational commitment on the relationship between employee-oriented CSR and financial performance was not proven. Therefore, future researchers are encouraged identify and test alternative mediators of the relationship between CSR and financial performance.

The limitations of this study I was found that this research is an incomplete test of the role of CSR practices in building competitive advantage via corporate image. Specifically, only customer- and employee oriented CSR practices were tested as predictors of financial performance. Many different stakeholders, other than employees, contribute to achieving competitive advantage. Thus, future research should include various other stakeholders in the model and should even compare different stakeholders in

terms of effect size in the relationship between CSR and corporate image. Finally I would say several potentially important variables are not measured in this study. Future research should examine potential mediators between customer loyalty and financial performance, between collective organizational commitment and financial performance and between corporate and collective organizational commitment.

The customers do indeed expect socially responsible behavior from companies. More interestingly, customers are willing to reward this behavior. Thus, there is an emergence of reviewing the effect of the practice of corporate social responsibility on the customer loyalty. From the findings of this research it is found that the customers trust the organization most which is environmentally and socially conscious. Maximum customers also believe that environmentally and socially conscious firms are more likely to provide quality products. This conception and belief of the customer leads to the customer loyalty and retention. Finally the customer loyalty leads to a long-term profitable customer relationship.

Ending this study it can be concluded that the CSR activities positively affects customer loyalty. The customer loyalty consists of four elements; customer satisfaction, customer trust, product quality, and brand image. Thus all these elements are affected by the practice of CSR activities by the firm. It is a well-known fact that for companies, the costs of retaining existing customers are much lower than those of attracting new ones. Customer retention and loyalty are thus key issues on the management's agenda. By creating and maintaining customer loyalty, a company develops a long-term, mutually beneficial relationship with its customers. Hence, the organization should practice the CSR activities at the level to create and maintain customer loyalty.

In conclusion, this study connects strategic perspectives and identity theory to examine the complicated relationship between CSR and performance. Specifically, the structural model uses corporate image as a bridge between CSR practices and firm outcome in terms of customer loyalty, collective organizational commitment and financial performance. This study differs from previous work since it examines mediators of the relationship between CSR and firm performance. This study fills the research gap by involving corporate image as a mediator. In addition, using collective organizational commitment to be the construct instead of individual organizational commitment can offer a new approach for understanding the transformation process from firm-level behavior to outcome. This would not only let us certify the relationship between constructs but also help us figure out the different roles of customer-oriented and employee-oriented CSR practice on performance.

Corporate Social Responsibility and Customer Loyalty, How Corporate Social Responsibility lead to Firm Performance; A Study on Textile Sector in Southern Bangladesh.

REFERENCES:

Ali, I., Rehman, U. K., Yilmaz, K. A., Nazir, S. & Ali, F. J. (2010). Effects of CSR on Consumer Retention. *African Journal of Business Management.* Vol. 4, pp. 475-485.

Anderson, R.E. (1973). "Consumer dissatisfaction: The effect of disconfirmed expectancy on Perceived Product Performance", *Journal of Marketing Research,* 10 February: 38-44.

Aguilera, R.V., Rupp, D.E., Williams, C.A. and Ganapathi, J. (2007) 'Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations*', Academy of Management Review*, 32(3), 836–863.

AzmatFara and Coghill Ken (2005). Good governance and market-based reforms: a study of Bangladesh, *International Review of Administrative Sciences* Vol. 71 (4): 625-638.

Agle, B., Mitchell, R.K. and Sonnenfeld, J.A. (1999). 'Who matters to CEOs? An investigation of stakeholder attributes and salience, corporate performance, and CEO values', *Academy of Management Journal*, 42(5), 507–525.

Aupperle, K.E., Carroll, A.B. and Hatfield, J.D. (1985) 'An empirical examination of the relationship between corporate social responsibility and profitability', *Academy of Management Journal*, 28(2), 446–463.

Aguinis, H. and Glavas, A. (2012) 'what we know and don't know about corporate social responsibility: A review and research agenda', *Journal of Management,* 38(4), 932–968.

Belal, A.T. (2001). A study of corporate social disclosures in Bangladesh. *Management Auditing Journal* 16 (5), 274-289.

Ball, D., Coelho, P.S. and Machas, A. (2004) 'The role of communication and trust in explaining customer loyalty: An extension to the ECSI model', *European Journal of Marketing*, 38(9/10), 1272–1293.

Biel, L. A. (1992). How brand image drives brand equity. *Journal of Advertising Research.* Vol. 32, Issue: 6, pp. 6-12.

Blackwell, A. S., Szeinbach, L. S., Barnes, H. J., Garner, W. D. & Bush, V. (1999). The Antecedents of Customer Loyalty: An Empirical Investigation of the Role of Personal and Situational Aspects on Repurchase Decisions. *Journal of Service Research.* Vol. 1, No. 4, pp. 362-375.

Barnett, M.L. and Salomon, R.M. (2006) 'Beyond dichotomy: The curvilinear relationship between social responsibility and financial performance', *Strategic Management Journal*, 27(11), 1101–1122.

Bryman, A. & Bell, E. (2011). Business Research Methods. Oxford University Press: Oxford.

Baron, R.M. and Kenny, D.A. (1986) 'The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations', *Journal of Personality and Social Psychology*, 51(6), 1173–1182.

Buchholtz, A. K. & Carroll, A. B. (2012), Business and Society: Ethics and Stakeholder Management, Eight Edition Published. In: South-Western CENGAGE Learning.

Baron, R.M. and Kenny, D.A. (1986) 'The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations', *Journal of Personality and Social Psychology*, 51(6), 1173–1182.

Berman, S.L., Wicks, A.C., Kotha, S. and Jones, T.M. (1999) 'Does stakeholder orientation matter? The relationship between stakeholder management models and firm financial performance', *Academy of Management Journal*, 42(5), 488–506.

Biong, H., Nygaard, A. and Silkoset, R. (2010) 'The influence of retail management's use of social power on corporate ethical values, employee commitment, and performance', *Journal of Business Ethics,* 97(3), 341–363.

Boloemer, J. and Ruyter, K.D. (1998) 'On the relationship between store image, store satisfaction and store loyalty', *European Journal of Marketing*, 32(5/6), 499–513.

Carroll, Archie B. (1991).The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders. In: Published in Business Horizons. P. 39 – 48.

Carroll, B. A. (1979). A Three-Dimensional Conceptual Model of Corporate Performance. *The Academy of Management Review.* Vol. 4, No. 4, pp. 497-505.

Carroll, B. A. (1999). Corporate Social Responsibility: Evolution of a Definitional Construct. *Business Society*. Vol. 38, No. 3, pp. 268-295.

Castaldo, S., Perrini, F., Misani, N. and Tencati, A. (2009) 'The missing link between corporate social responsibility and consumer trust: The case of fair trade products', *Journal of Business Ethics*, 84(1), 1–15.

Chen, X.P. and Chen, C.C. (2004) 'On the intricacies of the Chinese guanxi: A process model of guanxi development', *Asia Pacific Journal of Management*, 21(3), 305–324.

Chinese Culture Connection (1987) 'Chinese values and the search for culture-free dimensions of culture'*, Journal of Cross-Cultural Psychology*, 18(2), 143–164.

Corporate Social Responsibility and Customer Loyalty, How Corporate Social Responsibility lead to Firm

Performance; A Study on Textile Sector in Southern Bangladesh.

Chaudha, A., Jain, R., Singh, A., & Mishra, P. (2011). Integration of Kano's Model into quality function deployment (QFD). *International Journal of Advanced Manufacturing Technology, 53* (5-8).

Chaudhuri, A. & Holbrook, M. (2001). The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty. *Journal of Marketing*. Vol. 65, No. 2, pp. 81-93.

Crane, A, Mcwilliams, A, Matten, D, Moon, J & Siegel, D (2008). 'Conclusion', in A Crane, A Mcwilliams, D Matten, J Moon & D Siegel (eds), The Oxford handbook of corporate social responsibility, Oxford University Press Inc, New York, pp. 568-75.

Crane, A. and Matten, D. (2007). Corporate social responsibility as a field of scholarship. In: Crane, A. and Matten, D. editors. Corporate social responsibility volume 1: theories and concepts of corporate social responsibility. London: Sage Publications.

Cochran, P.K. and Wood, R.A. (1984) 'Corporate social responsibility and financial performance', *Academy of Management Journal*, 27(1), 42–56.

Conway, N. and Briner, R.B. (2012) 'Investigating the effect of collective organizational commitment on unitlevel performance and absence', *Journal of Occupational and Organizational Psychology,* 85(3), 472–486.

Deutsch, M. (1958).Trust and Suspicion. *The Journal of Conflict Resolution,* 2 (4), 265-279.

Dichter, E. (1985). What's In An Image. *Journal of Consumer Marketing*. Vol. 2, No. 1, pp.75 – 81.

Dotson, J.P. and Allenby, G.M. (2010) 'Investigating the strategic influence of customer and employee satisfaction on firm financial performance', *Marketing Science*, 29(5), 895–908.

Dick, A. &Basu, K. (1994). Customer loyalty: Toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*. Vol. 22, pp. 99-113.

Dobni, D. &Zinkhan, M. G. (1990). In the search of brand image: *A foundation analysis. Advances in Consumer Research*. Vol. 17, pp. 110-119.

Domini, A. (1992). What is social investigating? Who are social investors? In The social Investment Almanac,Lydenberg and Domini Kinder, (Ed.). New York: Henry Holt and Company.

Elorza, U., Aritzeta, A. and Ayestaran, S. (2011) 'Exploring the black box in Spanish firms: The effect of the actual and perceived system on employees' commitment and organizational performance', *International Journal of Human Resource Management*, 22(7), 1401–1422.

Fombrun, C. and Shanley, M. (1990) 'What's in a name? Reputation building and corporate strategy', *Academy of Management Journal*, 33(2), 233–258.

Freeman, R. E., Harrison, S. J., Wicks, C. A., Parmar, L. B. & De Colle, S. (2010). Stakeholder theory: The state of the art. Cambridge University Press: UK.

Friedman, M. (1970). The Social Responsibility of Business is to Increase Its Profits. The New York Times Magazine. September, 13th.

Friedman, S.D. and Singh, H. (1989) 'CEO succession and stockholder reaction: The influence of organizational context and event content', *Academy of Management Journal*, 32(4), 718–744.

Gardner, T.M., Wright, P.M. and Moynihan, L.M. (2011) 'The impact of motivation, empowerment, and skill-enhancing practices on aggregate voluntary turnover: The mediating effect of collective affective commitment', *Personnel Psychology*, 64(2), 315–350.

Garbarino, E. & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*. Vol. 63, No. 2, pp. 70-87.

Garbarino, E. & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*. Vol. 63, No. 2, pp. 70-87.

García de los Salmones, M., HerreroCrespo, A. & Rodríguez del Bosque, I. (2005). Influence of Corporate Social Responsibility on Loyalty and Valuation of Services. *Journal of Business Ethics*. Vol. 61, No. 4, pp. 369-385.

Gonzalez, J.M.H., Camara, S.B. and Gonzalez, J.L. (2009) 'Exploring paths between web adoption and firm performance: The mediating effect of customer satisfaction, corporate image, market expansion and internal efficiency', *Total Quality Management*, 20(10), 1055–1075.

Greening, D.W. and Turban, D.B. (2000) 'Corporate social performance as a competitive advantage in attracting a quality workforce', *Business and Society*, 39(3), 254–280.

Hsieh, M.H., Pan, S.L. and Setiono, R. (2004) 'Product-, corporate-, and country-image dimensionsand purchase behavior: A multicountry analysis', *Journal of the Academy of Marketing Science*, 32(3), 251–270.

Hwang, K.K. (ed.) (1987). 'Face and favor: The Chinese power game', *The American Journal of Sociology*, 92(4), 944–974.

Hansemark, O. C. &Albinson, M., (2004), Customer Satisfaction and Retention: The Experiences of Individual Employees, *Managing Service Quality,* 14 (1), pp. 40- 57.

Heskett, L. J., Jones, O. T., Loveman, W. G., Sasser Jr. E. W. & Schlesinger, A. L. (1994). Putting the Service-Profit Chain to Work. *Harvard Business Review*. Vol. 72, No. 2, pp. 164-174.

Hwang, K.K. (2012) 'The deep structure of Confucianism', in, Foundations of Chinese Psychology: *Confucian Social Relations*, Springer, New York, pp. 99–131.

Corporate Social Responsibility and Customer Loyalty, How Corporate Social Responsibility lead to Firm Performance; A Study on Textile Sector in Southern Bangladesh.

Ibanez, V.A., Hartmann, P. and Calvo, P.Z. (2006) 'Antecedents of customer loyalty in residential energy markets: Service quality, satisfaction, trust and switching costs', *Service Industries Journal,* 26(6), 633–650.

Inoue, Y., Kent, A. and Lee, S. (2011) 'CSR and the bottom line: Analyzing the link between CSR and financial performance for professional teams', *Journal of Sport Management*, 25(6), 531–549.

Kabir E (2003). "Corporate social responsibility in Bangladesh", *The Financial Express of Bangladesh,* viewed on 4 February, 2019, http://www.scribd.com/doc/3503656/Ekram-Kabirs-articles-on-Corporate-Social-Responsibility-in-Bangladesh.

Kotler, P., (2000). Marketing Management. 10th ed., New Jersey, Prentice-Hall.

Lai, C.S., Chiu, C.J., Yang, C.F. and Pai, D.C. (2010) 'The effects of corporate social responsibility on brand performance: The mediating effect of industrial brand equity and corporate reputation', *Journal of Business Ethics*, 95(3), 457–469.

Lin, C.P. (2010) 'Modeling corporate citizenship, organizational trust, and work engagement based on attachment theory', *Journal of Business Ethics*, 94(4), 517–531.

Lindell, M.K. and Whitney, D.J. (2001) 'Accounting for common method variance in cross-sectional research designs', *Journal of Applied Psychology*, 86(1), 114–121.

Luo, X. and Bhattacharya, C.B. (2006) 'Corporate social responsibility, customer satisfaction, and market value', Journal of Marketing, 70(4), 1–18. Mackey, A., Mackey, T.B. and Barney, J.B. (2007) 'Corporate social responsibility and firm performance: Investor preferences and corporate strategies', *Academy of Management Review*, 32(3), 817–835.

Morgan, R. & Hunt, S., (1995). The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing*. Vol. 58, No. 3, pp. 20-39.

Mowday, R.T., Porter, L.W. and Steers, R.M. (1982) Employee-Organization Linkages: The Psychology of Commitment, Absenteeism, and Turnover, Academic Press, New York. Nguyen, N. and Leblanc, G. (2001) 'Corporate image and corporate reputation in consumers' retention decisions in services', *Journal of Retailing and Consumer Services*, 8(4), 227–236.

Nguyen, N. & Leblanc, G. (2001). Corporate image and corporate reputation in customers' retention decisions in services. *Journal of Retailing and Consumer Services*. Vol. 8, pp. 227-236.

Pan, Y., Sheng, S. &Xie, F., (2011). Antecedents of customer loyalty: An empirical synthesis and reexamination. *Journal of Retailing and Consumer Services*. Vol. 19, pp. 150-158.

Podsakoff, P.M., MacKenzie, S.B., Lee, J. and Podsakoff, N.P. (2003) 'Common method biases in behavioral research: A critical review of the literature and recommended remedies', *Journal of Applied Psychology*, 88(5), 879–903.

Porter, M.E. and Kramer, M.R. (2002) 'The competitive advantage of corporate philanthropy', *Harvard Business Review*, 80(12), 57–68.

Preacher, K.J. and Hayes, A.F. (2008) 'Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models', *Behavior Research Methods*, 40(3), 879–891.

R. Edward Freeman, "Managing for Stakeholders.*" In Ethical Theory and Business 8th Edition, edited by Tom L. Beauchamp*, Norman E. Bowie, and Denis G. Arnold (New Jersey: Pearson, 2009), 56.

Sen, S., Bhattacharya, C.B., and Korschun, D. (2006). The Role of Corporate Social Responsibility in Strengthening Multiple Stakeholder Relationships: A Field Experiment *Journal of Academy of Marketing Science,* 34(2), 158-166.

Siskos, Y., Grigoroudis, E., Zopounidis, G. &Saurais O. (1998). Measuring customer satisfaction using a collective preference disaggregation model. *Journal of Global Optimization.*Vol. 12, No. 2, pp. 175-195.

Sonargaon Textiles Ltd. (1985). Retrieved August 11, 2017, from Khansons Group: http://www.khansonsgroupbd.com/sonargaontextiles.html

Turban, D.B., and Greening, D.W. (1997). Corporate Social Performance and Organizational Attractiveness to prospective employees. *Academy of Management Journal, 40*(3), 658-672.

Waddock, S.E. and Graves, S. (1997) 'The corporate social performance-financial performance link', *Strategic Management Journal,* 18(4), 303–319.

Wang, C.Y. (2010) 'Service quality, perceived value, corporate image, and customer loyalty in the context of varying levels of switching costs', *Psychology and Marketing*, 27(3), 252–262.

Yoon, Y., Giirhan-Canli, Z. and Schwarz, N. (2006). The Effect of Corporate Social Responsibility (CSR) Activities on Companies with Bad Reputations. *Journal of Consumer Psychology,* vol. 16, no. 4, pp. 377-390.

Zeithaml, A. V. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. Journal of Marketing. Vol. 52, No. 3, pp. 2-22.

A comparative Analysis of Industrial Relations System: lessons for Bangladesh from Malaysian Perspective

Md. Abir Hossain*

Md. Morshed Bin Islam**

Abstract

The aim of this study is to analyze the characteristics of Bangladesh and Malaysian Industrial Relations especially, identifying the features of features of Malaysian Industrial Relations and Industrial Relations of Bangladesh. In Bangladesh, three parties (i.e. the employers, employees & Government) are directly associated in industrial relations. Unfortunately, IRs is an unpracticed phenomenon of tripartite relationship among employees, employers and the government for Bangladesh. On the other hand, Malaysia has developed sound ind

ustrial relations by practicing the functions of IRs. This study points out several sorts of findings on tripartite relationships of IRs on both Bangladesh and Malaysia. The research also suggests Bangladesh what is to do for sound IRs on basis of Malaysian philosophy. To obtain the data primarily, respondents' area were sub-divided by area A-B-C basis. In case of Bangladesh, the research forecasts an alarming conditions of extreme employee grievance over employers and government`s indifferences to settle disputes and other so many issues. In this field, Malaysia would be an acceptable example for Bangladesh as Malaysia could have established sound IRs and its practices. So many findings came up with as leanings for Bangladesh for practicing IRs.

Key words: Industrial relations, Labor-management relationship, Grievance, Trade union, Collective bargaining, Industrial disputes.

Introduction

One of the major functions of human resource management is to maintain smooth industrial relations (IRs). It can be viewed as the interaction between the various interested parties involved in employment. The employer and the employee are obvious parties. Harmonious relationship is necessary for both employers and employees to safeguard the interests of both parties of the production. The state, in ensuring a level playing field for both sides, provides the legal framework within which such relations may take place. Bangladesh needs to develop a positive attitude towards the labor-management relationship. Remarkable industrial disputes are common scenario at the time of its development. To keep

*Assistant Professor, Department of Management Studies, University of Barishal. Email: abirhossainmgt@gmail.com
** Independent Researcher. Department of Management Studies, University of Barishal. Email: mbinsifat1997@gmail.com

stability in case of economic growth, the government of Bangladesh has enacted labor law in 2006(Islam & Asaduzzaman, 2015)But in case of IRs, Bangladesh is not progressive. It is now compulsory to keep the sound industrial relations between workers and employers by the government of Bangladesh. This paper aims to identify factors that remain against sound industrial relationships between workers and employers in Bangladesh and also shows the leanings from Malaysia for industrial amity between workers and employers by the government of Bangladesh.

Objectives

The main objective of this study is to analysis the present scenario of industrial relations between Bangladesh and Malaysia and finds out the discrepancies between them. Besides this there have some specific objectives such as:

1. To understand the main viewpoint of industrial relations.
2. To find out the present features of industrial relations in Bangladesh and Malaysia.
3. To draw some prospective suggestions based on findings if any regarding sound industrial relations in Bangladesh from Malaysian perspectives.

Methodology

Bring to light the present scenario of the study; it has been used different secondary along with the primary data. The primary data was collected from different trade unions, workers, employers as well as different relevant organizations. The secondary data was collected from different books, research papers, journals, newspapers and websites. Descriptions of data and methods are as follows.

TotalRespondents-30 (Bangladesh)			
Areas	Net Employees- 15	Net Employers-10	Government Bodies-05
Area - A	Barisal - 05	Barisal - 04	Barisal - 03
Area- B	Dhaka - 05	Dhaka - 03	Dhaka - 01
Area- C	Khulna - 05	Khulna - 03	Khulna - 01

| Sources of Data			
Secondary data		**Primary data**	
Websites	✓ http://www.ilo.org/ ✓ http://mole.gov.bd ✓ http://www.blf-bd.org/ ✓ http://www.dife.gov.bd/ ✓ www.mohr.gov.my ✓ http://www.mp.gov.my/index.	Direct interviews	A sample of Frequently asked questions (FAQs) in face to face interactions with respondents.
		Questionnaires	a) Telephone questionnaire. b) Open question questionnaire.
		Observations	The research was conducted approximately eight months from June of 2017 to February of 2018. Settlement of disputes (local trade union leaders in Barisal region was observed.
Relevant books, journals and cases of IRs.			

Background of the study

Foundation of Bangladesh industrial relations Is deprived of three approaches (i.e. the *unitary approach, pluralistic approach Marxist approach)*(The Practice Of Industrial Relations In Indigenous Entrepreneurial, 2013). The *laissez-fair capitalism* led to inequalities and social injustices. Labors do not have strengths to negotiate with employers in terms of labor rights and industrial disputes. "Industrial relations deal with certain regulated or institutionalized relationships in an industrial unit"(Nikoloski & Dimitrova, 2014). Industrial relations should be governed through self-organizing associations of workers(Zheng & Deakin, 2016). Industrial relations aim to ensure sound industrial relations with avoiding industrial conflicts, regulating the democratic rights of workers. Industrial relations enhance the economic growth rate as well as equity in income, equal employment opportunity, life expectancy, poverty alleviation, literacy, etc. of a country. **Tradeunion** is to maintain a cordial relationship between the workers and the employers, Trade union for the welfare of the working class is low recognized organization (Mohammed, Mir Absar, 2012). The minimum number of 30 percent workers is engaged in the organization out of total workers. (The dailykalerkantho, 2012)Trade unions are sole powerful to

bargain with employers or their associations in terms of different employment-related issues without obstruction. The freedom of a trade union to negotiate with employers to try and conclude collective agreements is protected (Potobsky, 1998), "A union is such an organization which is created, voluntarily on the basis of collective strength to secure the interests of workers"(Deakin, 2013).Bangladesh trade union stands for their motto of unity is the strength and same work for same payment with security of their job. The purposes of the trade union are to expanding individual & collective welfare, achieving better economic return and securing power to influence government &Management(Burchielli, 2006)**Collective bargaining** Collective Bargaining Agent (CBA) who is an agent for negotiation with employers for the interests of workers generally a collective bargaining process consists of five sorts of activities, such as; first Distributive bargaining discusses the economic. Second, Integrative bargaining refers be more cooperative bargaining. Third, Attitudinal restructuring contains different attitudes of trustworthy or hostile behavior between workers & employers. Fourth, Productivity bargaining outlines the workers get. Fifth, Intra-organizational bargaining aims to resolve internal conflicts.(Todd & Peetz, 2001).**Industrial dispute** Industrial dispute means the anomalies of opinion and is connected with the employment or non-employment or terms of employment or with the conditions of labor(Goswami, 2004). However, industrial dispute is nothing but a discrepancy between employers and workers' representatives. **Grievance** "A grievance can be broadly defined as an employee's dissatisfaction or feelings of personal justice relating to his/her employment relationship"(Leggett, 2007) grievance can arise from legitimate, imagined & political perspectives(Arumugam & Balasundaram, 2010).Grievance is controlled through acknowledging the discontent of workers, defining the problem, finding the facts for discontent and analyzing the problems with decisions(Amerasinghe, 2009).

Industrial Relations in Bangladesh

Origination of Bangladeshi industrial relations is based on *British India and its factories Act* of 1881(Bhati & Ashokkumar, 2013). "Industrial relation act basically focuses on rules regarding employment relationship dealing with employers by unionized and non-unionized workers for increasing industrial performance with industrial peace.(Sivarethinamohan, 2010)Prior industrial relation of Bangladesh got started from Pakistani industrial law ordinance, 1969(Islam & Asaduzzaman, 2015). After the independence of 1971, Bangladeshi industrial policy got its own shape by adaptation of [*Bangladesh law Order*], (*president's ordinance no.48*) (Chowdhury, 2010).Industrial relations of Bangladesh are designed with Bangladesh labor code 2006.(Halima & Rahman, 2007). Basics of IRs of Bangladesh are

Government
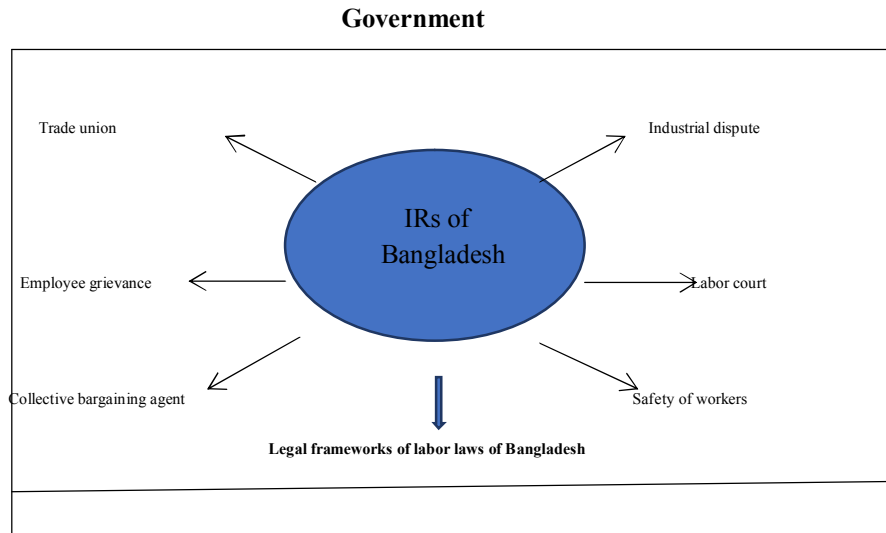
However, Enacted laws of Labor code 2006 do not ensure the formal sectors (20%) like EPZ workers, telecommunication works and informal sectors (80%) like farmers who involve in agriculture(The daily jugantor, 2017). As a result, a large part of the total labor force is being deprived of the benefits of labor law. Currently, "the number of workers in Bangladesh is about six crores meanwhile, the number of workers who are covered under labor law is approximately one and a half million. That means there is no legal protection for workers of 75 to 80 percent workers (Khosla, 2009).

Only seven labor courts in the country, including the labor appellate tribunal, there are 16008 cases pending in the court, besides; the order of 305 cases in the high court has been postponed (Mahmood, 2008). And at least 11872 cases were pending for more than six months (Bala, 2016). For this reason, judicial proceedings cannot be completed within 60 days. On the other hand, the provision of punishment is very minor in violation of a law. Its application is rare. For example, "punishment of child and adolescent penalty is only five thousand taka (Shahjahan, 2016). This is why IRs have bundle of barriers to enact properly.

Some of the key findings of unfair union activities are:

- Labor unions are getting involved in this filthy politics and are subdivided into different parts.
- Workers' internal conflict prohibits them to be united & stronger.
- Trade unions involved in irrelevant movements.
- Leaders of trade unions are autocratic and self-interest oriented.
- Workers have little knowledge over principles of trade union & labor laws.

- Union leaders strike for the interests of conspirators.
- No accurate procedures are fixed to bargain over employers.

Bangladesh has different types of workers in the industry such as skilled, semi-skilled and unskilled. Employers are also not well trained and if so most of the time they cannot implement their knowledge to the workers because of the inadequacy of education and proper tainting
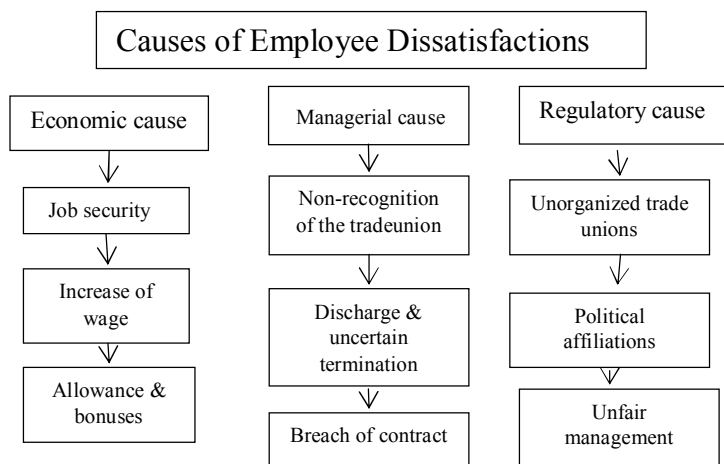
Bangladesh could not establish the sound and fair industrial relations even though 45 years of its independence. The rate of industrialization has increased rapidly, the relations between employers and employees have reacted bitterly (International Labor Office , 2016) so conflicts in our industry are a regular usable term. Workers' movement, strikes, and lockouts by employers are the common scenario in Bangladesh. In this regard, foreign buyers are taking advantages; they could buy products at a lower price by showing different errors. As a result, workers get lower than they deserve.

Table-1: different wages payments on the monthly basis in Asian countries.

Country	Monthly wages (dollar)	Country	Monthly wages (dollar)
Bangladesh	66.00	Malaysia	223.55
India	143.74	Indonesia	159.88
Myanmar	80.32	Vietnam	146.98
Pakistan	106.29	Philippian	202.20
Thailand	265.29	Japan	1698.85
China	234.53	South Korea	1360.85

A comparative Analysis of Industrial Relations System: lessons for Bangladesh from Malaysian Perspective

In Bangladesh, due to lower wages, labor grievances are increasing comparative to neighboring countries. This indiscrimination has a unbearable effects on the local and regional industries where workers are paid a little.

Table-2: daily basis wages of regular and irregular worker.

SL.	Location of Establishments	Rate of Per day's wages	Practice
01	Dhaka & Chittagong city corporation	500/-(regular skilled worker)	400 Tk
		475/-(irregular unskilled worker)	380 TK
02	Divisional cities & other city corporation	500/-(regular skilled worker)	320 TK
		450/-(irregular unskilled worker)	200 TK
03	District & Sub-district areas	450/-(regular skilled worker)	250 TK
		400/-(irregular unskilled worker)	100 TK

District level workers get $12 monthly where a worker from India, a neighboring country, gets $143.74("country study 2015," 2015). In this case, not only minimum wages but also fundamental rights of workers to be enacted. All the sections of the labor law are not as effective, and the law enforcement & monitoring agencies are very few in a number. A few departments of Inspection for Factories and Establishments exist in Bangladesh for a great number of workers

Table-3: Number of departments of Inspection for Factories and Establishments in Bangladesh.

SL	Types	Total Number
01	Head Office	01
02	Divisional Office	04
03	Regional Office	04
04	Branch Office	23
05	Total stuff	993

Law monitoring agencies are in total 993 for the 60 million workers. And government engages 7 labor courts across the country. These departments are responsible for registrar trade unions, echeloned and inspect sudden time in the industry.

Table-4: Location based labor courts in Bangladesh.

SL	Locations	Total Number
01	Dhaka	03
02	Chottogram	02
03	Rajshahi	01
04	Khulna	01
05	Total	07

Table-5: Wages discrimination by class in Bangladesh.

	Employers (blue colored)	Tailors (red colored)
Per pant	520 BDT	165BDT
Per shirt	420BDT	105BDT
Per cote	2000BDT	350BDT

It is a matter of concern that rickshaw pullers, van pullers, construction labors, transport labors, house servants, day laborers, boatmen, gardeners especially who are labors by profession out of labor law. They have no union as their professions are not enacted by law.

Philosophy of Malaysian industrial relations

Industrial relations are based on a tripartite system such as workers & their unions, employers & their associations and the Government(Project & Office, n.d.). Malaysian industrial law was incorporated in 1967 after 10 years later of its independence (Marsono, Alam, & Haven, 1993). Almost five major amendments were brought here with the passage of time in 1980 the first, 1989 the second, 1990 the third, 1999 the fourth and in 2007 the fifth(Kumar, Haji, Spr, & Yacob, 2012).These laws, such as updating, are very effective for the sound industrial relations of Malaysia which maintains & promote the Malaysian industrial harmony and the regulations of the relations among Workers & their unions, employers & their associations.
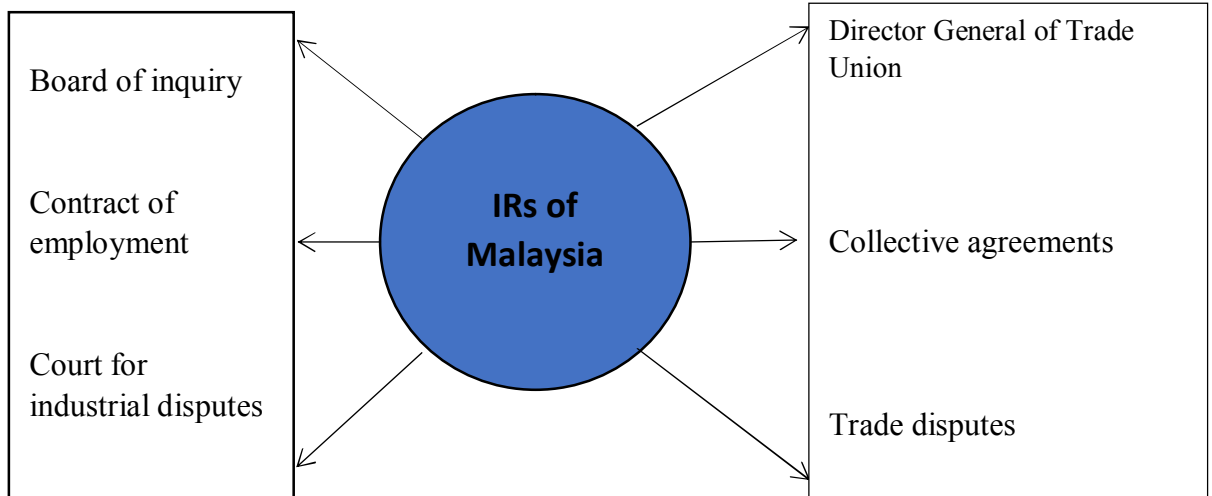
Table-6: Provisions of Malaysian Law in prospective of IRs

Provisions of Malaysian Law	Sections	Sub-sections
Prohibition regarding the workers & their unions in certain cases	7	a ,b, c
Complaint of industrial	8	1,2,3,4
Recognition claim	9	1,2,3,4,5
Prohibition of lockouts, strikes, picketing, and termination of services, recognition of a labor union	10	1,2,3
Trade union & its recognition and procedures	11-12	---------
Collective bargaining	13	1,2,3,4,5,6,7,8
conciliation & the conciliators and its proceeding	18	---------
Regulations of dismissal processes	20	1,2,3,4,5,6,7,8,9
Industrial court and its constitutions & divisions	21-33	-----------
Resolution and inquiry of trade disputes	31-37	-----------
Conspiracy in trade disputes, illegal lockouts & strikes and penalty for instigation	42,45,46,47	-----------
Officers for investigation with authority card & power	51	------------
Injuring of workmen	59	1,2,3,4,5

(Thavarajah & Low, 2014)

Malaysian collective bargaining is an essential section for settlement of Malaysian industrial disputes. Section 13 for CBA includes more than ten sub-sections which reflect recognition of CBA by both employers & employees, procedures of negotiation between workers & employers. CBA requires training

to enhance skills both employers and employees, performance-based rewards, the annual review of the wage system. The employees and employers in Malaysia are well skilled and trained The Malaysian economy is the 4th biggest in Southeast Asia and is the 35th biggest in the world. ASEAN, APEC, IOR, TPP, WTO trade organizations are active here.(Abdullah, 2013)

Particulars	Quantities & Sectors	
GDP	$0.816 trillion	
GDP growth	5.8%	
GDP per capita	$28,281	
GDP by sector	Agriculture	7.1%
	Industry	36.8%
	Services	56.2%
Inflation	3.6%	
Labor force	15.03 million	
Labor force by occupation	Agriculture	11.1%
	Industry	36%
	Services	53.5%

(*Source: Wikipedia.Org*)

Both of the labors and employers of Malaysia are primarily skilled as well as trained (Daud& Kedah, 2013). Labor organizations are properly associated and funded by their own(Joseph, 2005). Industrial disputes are resulted by submitting complaints about the department following three (i.e. *direct negotiation, Conciliation and Arbitration*)procedures (Marsono et al., 1993)(firstly; **direct negotiation** refers to collective agreement or existing company policies. Secondly, **Conciliation** includes disputes are reported to industrial relations office, if fail, forwarded to the minister of Human Resources, if fail, forwarded to the industrial court. Thirdly, **Arbitration** by the industrial court, the decision of the court is final. The regulatory framework for grievance procedure in Malaysia refers to the collective agreement, conducting of industrial harmony (Kesatuan, Kajian, & Sekerja, 2010). For Eradicating & preventing the sexual harassment in the workplace, employees of Malaysia arise from the negligence of workplaces. (Ali & Mohamed, 2004) For reducing employees' grievances, the Malaysian industrial relations follow as**; primary investigation**, function of investigation officers, role of union, decision by conflicting parties, **re-examination**, **cross-examination**, according to industrial court guidelines (Latornell, 2007)

A comparative Analysis of Industrial Relations System: lessons for Bangladesh from Malaysian Perspective

The Malaysian government has mysterious roles in case of sound industrial relations. The state is concerned to accelerate in maximizing manpower resources through accurate *Human resources planning*(HRP) and designing the youth unemployed with basic industrial leanings & skills by providing better training programs.(Saudi, Munir, & Mahmud, 2017)Malaysian IRs to be united & stronger from both public & private sectors and government sectors too. Malaysia is an export-oriented industrialization and brought feminization as its workforce.(Parasuraman & Schwimbersky, 2005)Female workers enter into the textiles, garments, & electronics in a large number (Ogawa & Jones, 1993). Women participation as labor forces have stabilized at 49.5% compared to half of total labor force in Malaysia. Women in the Malaysian industry, are presented as a major, malleable and relatively flexible (Kaur, 2000)State Intervention has a great significance on regulating IRs of Malaysia.

Lessons for Bangladesh from Malaysia

Bangladesh can accept as learning & design its industrial relations from Malaysian industrial policies.

1. Bangladesh will have to come out of the old tradition of selling labor at cheap prices. Owners must decide on workers' remuneration by their representative and it must be fair in ILO's standard as Malaysia.

2. In Malaysia, they are solving their industry-related dispute through three tire procedures such as direct negotiation, cancellation, and arbitration by the industrial court but in Bangladesh labor law also followed the same types of procedures but the law in practice in Malaysia much strict than us. We have laws but the implementation rate is much too low.

3. The employees and employers in Malaysia are well skilled and trained but in Bangladesh, we have different types of workers in the industry such as skilled, semi-skilled and unskilled in nature. Managers here also not well trained up and if so most of the time they cannot implement their knowledge to the workers because of the inadequacy of education and proper tainting.

4. For reducing employee grievance, Malaysia follows several constrictive steps such as primary investigation, function of investigation officers, role of union, decision by conflicting parties, re-examination, cross-examination, punishments, appeal and industrial court guidelines but in Bangladesh employers don't follow any hard and fast procedures for reducing grievance of their workers some workers in different factories don't know about the word grievance what it is.

5. As Malaysia, based on the criteria of work, a uniform but fair wage will be set so that no acceptance of discrimination in local and regional level workers

6. Malaysia decentralized the capital city for the sake of industrialization which Bangladesh can follow. For this, people will not be as city-oriented as the tide of progress expands in the marginal level.

7. A special law like Malaysia has to enforce to overcome the wage discrimination of women from men.

8. Only about 1000 staff 8 labor courts for 60 million workers. It is high time increased the number of departments of inspection for factories & establishments.

9. Industrial relations are kept away from political affiliation as Malaysia practices.

10. The selection process of collective bargaining agent must be fair and acceptable. In this case, Malaysian procedures for selecting CBA can be followed.

11. Malaysian industrial contracts between employers and employees are done in presences of representatives from government. As a result, no chance to breach contract

12. Malaysia does not permit any activity of an unorganized union. Bangladesh must fire these types of unorganized trade unions for unwanted industrial conflicts

13. Bilateral relations can be established between Bangladesh and Malaysia in case of industrial relations; such as training, skills improvements, knowledge sharing.

14. Industrial relations of Bangladesh are needed to design in tripartite system. Activities of IR are distributed to employers, employees, and government. Minister of government or representative from government may play as mediator.

15. Trade unions have to reject different ideologies and better to accept a single ideology. Trade unions cannot work with foreign organizations without informing state government. And regular trade union elections must be occurred as Malaysia

Conclusion

Without a sound industrialization, the country's development is not possible except upgrading employer-employee relations. Workers' movement, low wages, poor working conditions, lack of job security, political affiliation into the industry are the main obstacles to ensuring sound industrial relations. Unfair management by trade unions, communication barriers among them, faulty supervision, have much emphasis on rumor and autocratic attitude help reaching to the unsound s industrial relations. On the other hand, Malaysia builds strong industrial relations which ensure peaceful & sound industrial relations, no conflict, no political interruption influence their industry.. The government of Malaysia plays multiple roles in case of keeping IR sound. As a newborn country, Bangladesh has to face many challenges;

workforce diversity and adaption of international rules & regulations can create new complexity if pre-planned steps are not taken.

Reference:

Abdullah, A. J. (2013). Education and Economic Growth in Malaysia: The Issues of Education Data. *Procedia Economics and Finance*, 65-72.

Alam, J. (2016). Revisiting theRelationship between Human Rights and Bioethics: Supportive or Counteractive? *Dhaka University Law Journal*, 105-122.

Bala, A. C. (2016). *registration of labor Appellate Tribunal*. Dhaka: prothom alo publications.

Bhati & Ashokkumar, P. (2013). Provision Of Welfare Under Factories Act & Its Impact. *Journal of Business Management & Social Sciences Research (JBM&SSR)* , 57-69.

Burchielli, R. (2006). The Purpose of Trade Union Values: An Analysis of the ACTU1 Statement of Values. *Journal of Business Ethics*, 133–142.

Chowdhury, M. (2010). Constitutional Reform in Bangladesh: Exploring the Agenda. *The Northern University Journal of Law*, 39-50.

Deakin, S. (2013). Labor law and Inclusive development. *Centre for Business Research, University of Cambridge* , 01-24.

Goswami, V. (2004). Law relating to settlement of industrial disputes. *Labour and Industrial Law*, 67-137.

Halima, M. A., & Rahman, M. S. (2007). *The Bangladesh Labour Code, 2006*. Dhaka: CCB Foundation.

International Labor Office . (2016). *Global Wage Report 2016/17 ; Wage inequality in the workplace*. Geneva: International Labor Organization ILO.

Islam, F., & Asaduzzaman, M. (2015). Legal Framework for Trade Unionism in Bangladesh. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)* , 13-19.

Kaur, A. (2000). *Working on the global conveyor belt: Women workers in industrialising i9n Malaysia.* Kualalampur: crossref.

Khosla, N. (2009). The Ready-Made Garments Industry in Bangladesh : A Means to Reducing Gended-Based Social Exclusion of Women? *Journal of International Women"s Studies*, 289-303.

Leggett, C. (2007). From industrial relations to manpower planning: the transformations of Singapore's industrial relations. *The International Journal of Human Resource Management*, 642-664 .

Nikoloski, K., & Dimitrova, J. (2014). From Industrial Relations to Employment Relations with Focus on Employee Relations. *International Journal of Sciences:Basic and Applied Research (IJSBAR)*, 117-124.

Ogawa, G., & Jones, N. (1993). *Human Resources in Development along the Asia-Pasific rim.* Singapore: Oxford University press.

Potobsky, G. (1998). Freedom of association:The impact of convention No.87 and ILO action. *International Labor Review*, 137-195.

Shahjahan, M. B. (2016). Protecting Child Labor in Bangladesh under Domestic Laws. *Open Access Library Journal*, 01-10.

Sivarethinamohan, R. (2010). *Industrial Relations and Labor Welfare.* New Delhi: PHI Learning Private Limited.

Thavarajah, T., & Low, T. C. (2014). *Employment and Industrial Relations Law Malaysia.* Kuala Lumpur.

The daily jugantor. (2017). *amandments of labor law.* Dhaka: jugantor publications.

The dailykalerkantho. (2012). *How to form trade union.* Dhaka: kalerkantho.

Zheng, E., & Deakin, S. (2016). State and Knowlede Production:Industrial Relations Scholarship Under Chinese Capatalism. *Centre for Business Research, University of Cambridge*, 481-528.

Ali, A., & Mohamed, A. (2004). A Critical Appraisal of the Adjudication Process of Dismissal Under the Industrial Relations Act , 1967, (3), 19–68.

Amerasinghe, F. (2009). *The Current Status and Evolution of Industrial Relations in Sri Lanka The*

Current Status and Evolution of Industrial Relations in Sri Lanka.

Arumugam, S., & Balasundaram, N. (2010). DiFulvio(2011).pdf, *LXII*(1), 52–60.

country study 2015. (2015).

Daud, Z., & Kedah, S. (2013). The Relationship between Employees ' Need and the Formation of Trade Union: The Malaysian Manufacturing Company ' s Experience Human Resource Management Studies, *4*(13), 124–134.

Islam, F., & Asaduzzaman, M. (2015). Legal Framework for Trade Unionism in Bangladesh. *IOSR Journal Of Humanities And Social Science Ver. III*, *20* (11), 13–19.

Joseph, C. (2005). Strategic Choice And The Transformations of Singapore's Industrial Relations.

Kesatuan, K., Kajian, S., & Sekerja, K. (2010). Union Organisation and Effectiveness: An Empirical Study on In-House Union in Malaysia, *78* (Salamon 2000).

Kumar, R., Haji, M., Spr, C. R., & Yacob, P. (2012). The Impact of Employment of Foreign Workers: Local Employability and Trade Union Roles in Malaysia, *2*(10), 530–541.

Latornell, J. (2007). The Relationship between the Psychological Contract' and Employment Relations'. *Journal of Industrial Relations*, *49*(2), 277–286.

Mahmood, M. H. (2008). Sharing the Pie: Trade Unionism and Industrial Relations in Multinationals in Bangladesh Literature Review: Trade Unions and Industrial Relations Scenarios in, *2*(1), 28–45.

Marsono, H., Alam, S., & Haven, N. (1993). Retrenchment in Malaysia: Employer ' s Right?, *1*(4), 22–28.

Mohammed, Mir Absar, N. (2012). Industrial Relations in Bangladesh: A Comparative Scenario between Public & Private Sectors '. *The Indian Journal of Industrial Relations*, *48* (July), 19–27.

Parasuraman, B., & Schwimbersky, S. (2005). The present scenario of Malaysian industrial relations: accommodating or conflictual. *International Society for Labour and Social Security Law: 8th Asian Regional Congress Proceedings*, 295–312.

Project, R., & Office, R. (n.d.). *Building better industrial relations in an integrating ASEAN Building better industrial relations in an integrating ASEAN.*

Saudi, Munir, & Mahmud. (2017). International Journal of Advanced and Applied Sciences. *Nternational Journal of Advanced and Applied Sciences Journal*, *4*(12), 199–205.

Todd, P., & Peetz, D. (2001). Malaysian industrial relations at century's turn: Vision 2020 or a spectre of the past? *International Journal of Human Resource Management*, *12*(8), 1365–1382.

Yoon, Y. (2009). *A comparative study on industrial relations and collective bargaining in East Asian countries*.