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The Impact of Inflation and Banking Sector Development on Foreign Direct Investment in Bangladesh

Shahadat Hussain*

ABSTRACT

This study sets out to examine the impact of inflation and banking sector development on foreign direct investment in Bangladesh using data for the period of 1987 to 2016 employing Johansen co-integration test, VECM and Granger causality test. The empirical analysis shows that there is one co-integrating vector which indicates the existence of long run relationship between inflation and domestic credit to the private sector by banks to FDI inflows. It has also been found that banking sector development exerts significant positive but inflation exerts insignificant negative influence on FDI inflows. Finally, a unidirectional causality was discovered between banking sector development to FDI inflows. The study suggests that concerned authority should take prompt steps to develop banking sector and manage inflation to accelerate the FDI inflows in Bangladesh.

Keywords: FDI, Inflation, Banking sector, Causal relationship.

1. Introduction:

The development of banking sector is a precondition for the foreign direct investment (FDI) to speed up the economic growth of a country (Alfaro and others 2004, 2010, Hermes and Lensink 2003). The smooth and well-functioning financial sector or market liberalization can help to urge economic growth (Bekaert and others 2005, Levine and others 2000, Levine and Zervos 1998).There is a positive relationship between FDI and inflation in Pakistan (Salemand others

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2012). The main focusing point of this paper is to analyze the impact of inflation and banking sector development on foreign direct investment in Bangladesh.

Actually, the financial services are heavily dependent on the development of the financial sectors especially on banking sector. As a developing country, the financial sectors in Bangladesh are on average shallow and poorly developed. On the other hand, the capability of absorbing the internal and external macroeconomic shocks is very weak. Additionally, the country is heavily dependent on FDI inflows for economic prosperity. In the same way inflation is a common scenario for the developing countries. So, it is imperative to identify the linkage between inflation and banking sector development to FDI inflows in Bangladesh.

The findings in this study could have important policy implications for concerned authorities of Bangladesh. Identification of the relationship could help to improve the quality of local banking sector to make them more efficient and attractive for any MNCs to invest in respective markets.

The rest of this paper is organized as follows. In addition to the introduction section 2 presented objectives of the study. Section 3 presented literature review while section 4 discussed description of the data and methodology. Empirical results of the study are explained in section 5. Finally, concluding remarks are drawn in section 6.

2. Objectives of the Study:

The objective of this study is to analyze the impact of inflation and banking sector development on foreign direct investment (FDI) in Bangladesh.

3. Literature Review:

Aqeel and others (2004) verified that how different variables are reflecting trade, fiscal and financial sector liberalization to attract FDI in Pakistan using co-integration and error-correction techniques. The study included the variables i.e., tariff rate, exchange rate, tax rate, credit to private sector and index of general share price to explain the FDI. In the study, banking sector was represented by the size of credit to the private sector. All variables were statistically significant except wage rate and share price index and playing significant role in attracting FDI and determining its growth in both short and long run in Pakistan. Kariuki (2015) argued that FDI inflows are also important for African nations. The results of Least Squares Dummy Variable model indicated that a high economic risk has a negative and significant effect, both political risk and financial risk have a negative but insignificant impact, and the good performance of stock markets and an increase in the infrastructure of a country have a positive and significant impact on FDI inflows. Suleimanaand others (2015) examined the determinants of FDI in Southern Africa Custom Union (SACU) countries using panel data from the period 1990–2010 employing Pooled OLS as the main estimation method. The findings revealed that market size, natural resource availability and trade openness are positive and significant determinants of FDI. Therefore, SACU member countries should emphasize on agreements in trade partnership and should reform investment policy to attract more foreign inflows in the long run.

A study has been conducted by Hermes and Lensink (2003) to detecta link between FDI, financial development and economic growth. Based on data analysis of 37 countries those had developed financial system, the researchers argued that financial development is a prerequisite for FDI to accelerate the economic growth. But the study did not find any impact for other 30least developed countries. Therefore, there was a clear indication that FDI have a positive

impact on the economic growth only if least developed countries achieve a significant development in the financial sectors. In a study Zakaria (2007) revealed the causal relationship between FDI and the level of financial development using data from 37 developing countries employing a multivariate framework. The tests results confirmed that FDI has no impact on the development of the domestic banking sector and vice-versa. But, the development of the domestic stock markets was strongly affected by FDI inflows in the developing countries and vice versa. Saibu (2012) investigated the causal relationship between FDI, exchange rate and financial market development using quarterly data from Nigeria adopting vector error correction mechanism. The results showed that FDI has no significant causal effect while exchange rate has bidirectional causal effect on financial market development. Extending the analysis one step, the researcher proved that both FDI and exchange rate have negative effects on financial market development. Therefore, the results concluded that FDI and macroeconomic instability adversely affect the development and provision of financial services in Nigeria. Al Nasser and Gomez (2009) explored a link between FDI, and the degree of development of the stock market and the banking system for15 Latin American countries. The study revealed that FDI is positively correlated with the stock market and significantly positively correlated with the banking sector. The study concluded that FDI is attracted those countries which are financially developed and institutionally strong.

Using a system of regression equations, Barro (1995) found that a high inflation negatively affects economic growth considering data formore than 100 countries for the period of1960 to 1990. The similar result was also found by Bruno and Easterly (1995). Mallik and Chowdhury (2001) found positive relationship for India, Bangladesh, Pakistan and Sri Lanka using co integration and error correction model. Khan and Senhadji (2001) gave their support to the same

results analyzing separately for both developed and developing countries using panel data set from a total of 140 countries for the period of 1960 to 1998.Mehmet (2011) investigated the link between growth, FDI, trade and inflation in Turkey. Annual time series data for the period of 1970 to 2008 have been analyzed through Johansen co-integration test. The test results confirmed that inflation and FDI are positively related to growth. To link between corruption, FDI and growth Akinlabi and others (2011) conducted an study using annual time series data over the period 1990 to 2009 in Nigeria. The Johansen co-integration approach revealed that low and stable inflation attracts FDI into the developing countries to incite economic growth. But the Granger causality test showed that there is no presence of any directional causality between inflation and FDI in Nigeria. Guland others (2012) explored the relationship of FDI and trade on the growth in Pakistan using annual time series data from 1990 to 2008. The Simple Least Square Method dictated a positive but statistically insignificant association between inflation and FDI. Employing co-integration test and error correction model, Nazirand others (2012)found similar findings taking a step further to study the impact of capital inflows on domestic inflation in Pakistan for the period of 1980 to 2010. But contradictory result was found by Djokoto (2012) in the investigation of the effect of investment promotion on FDI inflow in Ghanadata covering the period of 1970 to 2009.Girmaand others (2008) examined a link between increased levels of inward FDI and innovation activity by Chinese domestic enterprises using firm-level data set for 1999–2005 paying particular attention to the importance of domestic access to finance. The results confirmed that FDI inflows have positive impact on Chinese firms onlythose had access to domestic finance. But a unidirectional causal relationship exists between FDI inflows to domestic credit finance provided by banks for the state-owned firms.

Therefore, there is no uniform result about the impact of inflation and banking sector development on foreign direct investment. To the best of my knowledge, this is the first attempt to understand the variables in respect of Bangladesh. This literature gap inspires the author to continue work in this field.

4. Data and Methodology:

The main aim of this study is to analyze the impact of inflation and banking sector development on foreign direct investment in Bangladesh. For this purpose,FDI net inflows (% of GDP), domestic credit to private sector by banks (% of GDP) and Inflation, consumer prices (annual %) are used as a proxies for FDI inflows, banking sector development and inflation respectively. In this study the annual time series data has been taken for the period of 1987 to 2016 from the website of World Bank. In this paper change in foreign direct investment inflows (FDI) is taken as dependent variable while change in domestic credit to private sector by banks (DC) and change in inflation (INF) are taken as independent variables. So, the model could be written as, FDI =*f*(DC, INF). The econometric form of the model is as follows:

$$\Delta FDI = \alpha + \beta_1 DC + \beta_2 INF + €$$

Where,

α= the constant term

β_1 = the parameter estimate of DC

β_2= the parameter estimate of INF

€= the white noise error term

We have to know that how dependent variable that is foreign direct investment is affected by independent variables that is inflation and domestic credit to private sector by banks. The first attempt is to verify the statistical properties of the data series. Then co-integrating relationship

has been checked by Johansen co-integration test. If there existat least one co-integrating relationship between the variables then vector error correction model is performed to recognize long run and short run coefficients of the explanatory variables. Finally, Granger causality test has beenapplied to verify the causality between inflation, banking sector development and FDI inflows. In this study, statistical software package E-Views 9 has been used to analyze the data series.

5. Empirical Results:

StationarityTest

Co-integration test typically deserves each variable should be integrated of the same order. Hence, first step is to ascertain whether mean reversion is characteristic ofeach variable using Phillips-perrontest and Ng-perrontest. The tests results of the series areas follows, with no trend and trend respectively, on the levels and first difference form.

Table 1: Stationarity test of variables - Phillips-Perron (PP) Test

Variable	No Trend	Trend	Remarks
	Level		
FDI	-0.363898	-2.12529	Non-Stationary
DC	0.573567	-2.00294	Non-Stationary
INF	-3.884663	-4.09149	Non-Stationary
	First Difference		
D(FDI)	-4.665335*	-6.062469*	Stationary
D(DC)	-5.123587*	-5.322186*	Stationary
D(INF)	-10.78337*	-10.77853*	Stationary

Note: * denotes 5% level of significance.

Table 2: Stationarity test of variables - Ng-Perron Test

Variable	Ng-Perron Test				
	MZa	**MZt**	**MSB**	**MPT**	**Remarks**
	Level				
FDI	-0.93095	-0.41848	0.44952	14.1171	Non-Stationary
DC	1.39153	1.50528	1.08174	86.1071	Non-Stationary
INF	-12.7399	-2.51468	0.19739	1.95827	Non-Stationary
	First Difference				
D(FDI)	-13.9963*	-2.27849*	0.16279*	3.04337*	Stationary
D(DC)	-13.9954*	-2.63899*	0.18856*	1.77449*	Stationary
D(INF)	-13.5157*	-2.59941*	0.19233*	1.81339*	Stationary

Note: * denotes 5% level of significance.

Tables 1 and 2 reportthe results of Phillips-Perron and Ng-Perron tests. Both tests clearly indicated that the data series in the level form are non-stationary but after first differencingall the variables turn into stationary. So, the null hypothesis of non-stationarity has been rejected and all the variables also integrated of the same order i.e., I(1).

Johansen Co-integration Testing Procedure

Johansen co-integration test has been applied to verify the co-integrating relationship between the variables. So, it requires determining optimal order of lags. The results of Akaike Information Criterion (AIC) and the Schwartz-Information Criterion (SIC) have been showed that the optimal order of lagis 2. Both trace statistics and maximum eigen statistics are as follows.

Tables 3: Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.624990	35.77854	29.79707	0.0091
At most 1	0.263868	10.27764	15.49471	0.2600
At most 2	0.085106	2.312629	3.841466	0.1283

Trace test indicates 1 cointegratingeqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Tables 4: Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.624990	25.50090	21.13162	0.0114
At most 1	0.263868	7.965009	14.26460	0.3823
At most 2	0.085106	2.312629	3.841466	0.1283

Max-eigenvalue test indicates 1 cointegratingeqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Tables 3 and 4 have been reported that there is a one co-integrating vectorfor the variables. Both trace statistics and maximum eigen statistics reveal that*P*-values are highly significant. The null hypothesis of no significant long run relationship existing between the variables is rejected at 5% level of significance. So, the result confirms that there is a long run relationship between inflation and domestic credit to the private sector by banks to FDI inflows.

Vector Error Correction Model

As three variables are co-integrated, Vector error correction model has been performed to know the long run and short run coefficient of explanatory variables. The test results are reported as follows.

Table 5: Vector Error Correction Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CointEq1	-0.874493	0.165022	-5.299238*	0.0000
D(FDI(-1))	-0.029298	0.188152	-0.155714	0.8780
D(FDI(-2))	0.071057	0.185799	0.382439	0.7066
D(DC(-1))	1.46E+08	41524733	3.506291*	0.0025
D(DC(-2))	1.34E+08	44728976	2.986622*	0.0079
D(INF(-1))	-6935951.	20035359	-0.346186	0.7332
D(INF(-2))	-19002355	19752802	-0.962008	0.3488
C	-3.72E+08	92769836	-4.009014*	0.0008
R-squared	0.832254	Mean dependent var		-71714741
Adjusted R-squared	0.689241	S.D. dependent var		3.33E+08
S.E. of regression	2.38E+08	Akaike info criterion		41.66397
Sum squared resid	1.02E+18	Schwarz criterion		42.05108

Log likelihood	-533.6316	Hannan-Quinn criter.	41.77544
Durbin-Watson stat	1.920381		
Note: * denotes 5% level of significance.			

Table 5 reports that the coefficient of co-integration equation 1 is negative [--0.874493]and*t*-value [-5.299238] is statistically significant which represents there is a long run causality from domestic credit to the private sector by banks and inflation to foreign direct investment. Similarly *t*-values of domestic credit to the private sector by banks for lag 1 [3.506291] and lag 2 [-2.986622] also positively statistically significant. On the other hand*t*-values of Inflation for lag 1 [-0.346186] and lag 2 [-0.962008] are negative but not statistically significant. The resultalso confirms that there is ashort-run causality from domestic credit to the private sector by banks and inflation to foreign direct investment.

Granger Causality Test

Granger causality test has been applied to identify the directional causality among domestic credit to the private sector by banks, FDI and inflation. The test results are reported as follows.

Table 6. Granger Causality Test

Null Hypothesis:	**Obs**	**F-Statistic**	**Prob.**
DC does not Granger Cause FDI	27	7.57833*	0.0031
FDI does not Granger Cause DC		0.22795	0.7980
INF does not Granger Cause FDI	27	0.66440	0.5246
FDI does not Granger Cause INF		0.40442	0.6722
INF does not Granger Cause DC	27	1.04141	0.3697
DC does not Granger Cause INF		1.59773	0.2250
Note: * denotes 5% level of significance.			

Table 6 shows the results of Granger causality test for all the variables. The *F*-value is statistically significant for domestic credit to the private sector by banks to FDI inflows. So, the null hypothesis is rejected at5% level of significance. Therefore, domestic credit to the private

sector by banks does granger cause FDI. But Inflation does not granger cause FDI and vice-versa. Therefore, a unidirectional causality is found between banking sector development to foreign direct investment.

6. Concluding Remarks:

This paper investigates the effect of inflation and banking sector development on foreign direct investment in Bangladesh using annual data for the period of 1987 to 2016. The data series are non-stationary at level but stationary at first difference for all the variables. The Johansen co-integration test showsthat there is one co-integrating vector which indicates the existence of a long-run relationship of inflation and domestic credit to the private sector by banks to FDI inflows. The vector error correction modelreports that there is a long-run causality from domestic credit to the private sector by banks and inflation to FDI inflows. In the short run, the results show that domestic credit to the private sector by banks is positive and statistically significant which represents the significant positive impact of banking sector development on FDI inflows. On the other hand, inflation has negative but not statistically significant impact on FDI inflows. The Granger causality test reveals that domestic credit to the private sector by banks does granger cause FDI inflows. The study concludes that banking sector development has significant positive and inflation has insignificant negative impact on FDI inflows (Abzari et al. 2011). So, the concerned authority should take steps to develop local banking sector and strictly control inflation to speed up the FDI inflows in Bangladesh. However, the study has only been drawn the relationship of inflation, banking sector development and FDI inflows. This study undoubtedly requires further investigation based on the key elements that could be improved to develop the local banking sector and how to control the inflation to increase speed of FDI inflows in Bangladesh.

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Forecasting of selected stock price index of Chittagong Stock Exchange (CSE): An Application of SARIMA Model

Md. Saif Uddin Rashed*

ABSTRACT

Stock markets have become an integral part of the economy and any fluctuation in the market influences our personal and corporate financial lives and the economic health of a country. Prediction of the stock market has been a challenging task for its highly volatile behaviour. Among the numerous forecasting methods, Box-Jenkins (1976)'s ARIMA model is one of the most commonly used for modelling. Seasonal fluctuations in data may make it difficult to analyze with accuracy. The Seasonal ARIMA (SARIMA) model is the most appropriate model for forecasting when seasonal variation exit. The purpose of the present study was to build an appropriate model to forecast the indexes of Chittagong Stock Exchange (CSE). This strategy was performed using the Augmented Dickey-Fuller, Phillip– Perron, autocorrelation function, partial autocorrelation function, ordinary least square method, Jarque-Bera test, Ljung-Box test.Finally, models are used to forecasting the monthly index values for the upcoming two years and compare to actual value and found low forecast error which can be to help decision makers to establish priorities in terms of further analysis.

Keywords Box–Jenkins modelling strategy, Correlogram, Unit root test, Forecasting accuracy.

1 Introduction

Forecasting means understanding which variables lead to predicting other variables (Mcnelis, 2005). Nowadays, stock markets have become an integral part of the global economy and any fluctuation in the market influences our personal and corporate financial lives and the economic health of a country (Hasan and Nath, 2005).Since the stock market is dynamic, non- linear, and

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chaotic in nature it is very difficult to understand and forecasting stock exchange rates is receiving increasing attention for effective investment and significant profit (Guresen, Kayakutlu and Daim, 2011).

On the stock market, many scientific attempts, as well as many financial corporations, have been in trying to model the behave our of stock movements (Devadoss, Antony and Ligori, 2013). Mainly, stock market forecasters focus on developing approaches to successfully forecast/predict index values or stock prices, aiming at high profits using well-defined trading strategies with using the minimum required input data and the least complex stock market model (Atsalakis and Valavanis, 2009).Accurate forecasting of future events in an economy or more specifically financial markets constitute a fascinating challenge for theoretical researchers and practitioners (Radhwan *et al.*, 2015)and no method has been successful to accurately predict the stock price movement till now (Devadoss, Antony and Ligori, 2013).

Among the numerous forecasting methods proposed, Box-Jenkins (1976)'s Auto-Regressive Integrated Moving Average (ARIMA) model is one of the most commonly used modeling and forecasting techniques which is generally assumes that changes of time series data are related to its own past value and creates an autocorrelation regression mode, usually estimated in-sample and then extended for out-of-sample forecasting (Box, Jenkins and Reinsel, 1994).

Seasonal adjustment is essential for time series data because seasonal is the part of the variations in a time series and seasonal fluctuations in data make it difficult to analyze with accuracy (Samina, Rashed and Islam,2017). Frequently, monthly time series data suffer from seasonal variation and in this circumstances' ARIMA model is not effective. In case of seasonal fluctuations in time series data, the seasonal autoregressive integrated moving average (SARIMA) model is most suitable for the univariate time series model.

This research focuses on applications of seasonal autoregressive integrated moving average (SARIMA) techniques to forecast stock market indexes.

The main objective of this study is to develop an appropriate model for forecasting economic time series of Chittagong Stock Exchange (CSE) indexes and also analyze the different characteristics of the time series model. Finally, predict the future values of the series.

The remainder of this paper is organized as follows: Section 2 presents a review of existing approaches for research efforts that have been focused. The Data and the proposed method for forecasting presented in section 3. Section 4 provides the results and discussion of the research. Finally, we summarize our main results and recommendation in the conclusion section.

2 Related works

Though the financial time series models expressed by financial theories have been the basis for forecasting a series of data but these theories are not directly applicable to predict the market values which have the external impact (Guresen, Kayakutlu and Daim, 2011). Gooijer and Hyndman (2006) reviewed the papers about time series forecasting from 1982 to 2005 which include exponential smoothing, ARIMA, seasonality, state space and structural models, nonlinear models, long memory models, ARCH-GARCH. Gooijer and Hyndman (2006) compiled the reported advantages and disadvantages of each methodology and pointed out the potential future research fields. They also denoted the existence of many outstanding issues associated with seasonal ARIMA model.

Stevenson (2007) re-examines the use of ARIMA models in the context of rent forecasting using data for the British office market and provides the effectiveness of the approach for forecasting purposes.

Guresen, Kayakutlu and Daim (2011) evaluates the effectiveness of neural network models which are known to be dynamic and effective in stock-market predictions and finally compare the each model in two view of points: Mean Square Error (MSE) and Mean Absolute Deviate (MAD) using real exchange daily rate values of NASDAQ Stock Exchange index.

Zhang and Li (2010)present information about volatility forecasting in financial markets and reflects the importance of volatility in investment, security valuation, risk management and monetary policymaking.

Atsalakis and Valavanis (2009) discuss the stock market model uncertainty, soft computing techniques and this paper surveys more than 100 related published articles that focus on neural and neuro-fuzzy techniques derived and applied to forecast stock markets. Hyup Roh, (2007) compares financial time series models and data mining techniques with neural network and time series models for forecasting the volatility of stock price index in two viewpoints: deviation and direction.

Shahin, Ali and Ali (2014)represent the Seasonal ARIMA model to forecast the monthly maximum temperature. Though this model performed for temperature data this paper gives the systematic overview of the SARIMA model.

3Materials and methods

3.1 Data

The dataset of the study was collected from Chittagong Stock Exchange website over period March 2004 to November 2017 including year wise monthly average three index value. For estimating and measuring the forecast accuracy we split the entire data into two parts as training dataset over the period March 2004 to November 2015 and test dataset over the period December 2015 to November 2017. Afterwards, we estimate the parameters of the model using the training set and use the test data as an out-of-sample trial run to analyze how well the model predicts future unknown data. Finally, we use the popular software **R** and EViews 9 to achieve the objectives of the study.

3.2 Testing Stationarity of the Time Series

A time-invariant time series i.e. the mean, variance, and auto covariance cannot change over time is called stationary. Since there are several tests for stationarity, only three tests: (1) graphical analysis (line graph), (2) correlogram test, and (3) unit root (Augmented Dickey-Fuller [ADF], Phillip– Perron [PP] test are considered. An initial clue about the nature of the data can be derived from the time series plot (line graph). If the line graph shows any trend (upward or downward), indicates of non-stationary of the time series but sometimes the time series is non-stationary without showing any trend. Autocorrelation function (ACF), or partial autocorrelation function (PACF) plot against lags showed by the correlogram is also useful for testing time series stationarity as well as choosing order of general ARIMA models. If the mean of a series is stationary, then the spikes of correlogram will tend to decay quickly toward 0. The ADF (Dickey and Fuller 1979) and Phillip–Perron (Phillips and Perron 1988) tests are used for testing unit root. In econometrics, a time series that has unit root called random walk model that

are non-stationary. The null hypothesis of the ADF and Phillip–Perron (PP) both tests are same as the given time series is stationary. If the *p*-value of the test is less the 5% level of significance then we can say the time series are stationary.

3.3 Box–Jenkins Modeling Strategy

Two statisticians, George Box and Gwilym Jenkins described the SARIMA processes in the Box–Jenkins (BJ) approach in 1970 which involved an iterative three-stage process of model selection, parameter estimation, and model checking. Recent explanations of the process (Makridakis et al. 1998) often add a preliminary stage of data preparation and a final stage of model application (or forecasting). The complete modelling procedure involved four stages described below:

3.3.1 Identification of Order for the SARIMA Structure

Identification means to find out the appropriate values of p, d, q, P, D, and Q of the order of general SARIMA model, i.e., the SARIMA(p, d, q)(P, D, Q)s model, where *p* = non-seasonal AR order, *d* = non-seasonal differencing, *q* = non-seasonal MA order, *P* = seasonal AR order, *D* = seasonal differencing, *Q* = seasonal MA order, and *S* = time span of repeating seasonal pattern.

$$\Phi(A^s)\phi(A)\nabla_s^D\nabla^d x_t = c + \Theta(A^s)\theta(A)w_t \quad (1)$$

The non-seasonal MA(q) polynomial is $\theta(A) = 1 + \theta_1 A + \cdots + \theta_q A^q$

The seasonal MA(Q) polynomial is $\Theta(A^s) = 1 + \Theta_1 A^S + \cdots + \Theta_Q A^{QS}$

The non-seasonal AR(p) polynomial is $\phi(A) = 1 - \phi_1 A - \cdots - \phi_p A^p$

The seasonal AR(1) polynomial is $\Phi(A^s) = 1 - \Phi_1 A^s - \cdots - \Phi_P A^P$

The non-seasonal differencing polynomial is $\nabla^d = (1 - A)^d$

The seasonal differencing polynomial is $\nabla_s^D = (1 - A)^D$

C is constant, x_t is any time series, s is the number of seasons, and w_t is usual Gaussian noise process.

3.3.2 Parameter Estimation of the SARIMA Model

By the model selection criteria named Akaike information criterion (AIC), Corrected AIC (AICc) or Bayesian information criterion (BIC) the best model is obtained. The lower value indicates the better model.In our study, we used the statistical software R to fit SARIMA models toindex data using the auto. arima() function in 'forecast' package proposed by Hyndman and Khandakar (2008). These algorithms are suitable for both seasonal and non-seasonal data.After getting the appropriate values of p, d, q, P, D, and Q, the next stage is to estimate the parameters c, Φ, ϕ, Θ, and θ of Eq. (1) of the SARIMA(p, d, q) (P,D,Q)s model. The ordinary least squares (OLS) method is used to estimate these parameters.

3.3.3 Diagnostic Checking of the Fitted Model

The Diagnostic test is applied to understand whether the estimated parameters and residuals satisfy the model's assumptions such as no serial correlation, no heteroscedasticity and normality. Ljung-Box (Ljung and Box, 1978) test can be used to check autocorrelation among the residuals and Jarque-Bera normality test, (Jarqueand Bera 1987) are applied to the residuals of a SARIMA model.

3.3.4 Forecasting of the Study Variable

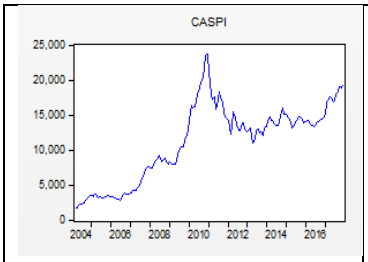
Before performing growth analysis it is necessary to estimate the model that best fits the time series. There are many summary statistics available in the literature for evaluating the forecast errors of any model, time series or econometric such as ME, RMSE, MAE, MPE etc. In many

cases, the forecasts obtained by Box–Jenkins modelling strategy are more reliable than those obtained from the traditional econometric modelling, particularly for short-term forecasts(Gujarati, 2004) that's why it has been used in this study.

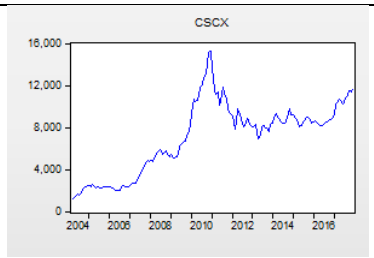
4 Results and Discussion

4.1 Testing Stationary status of CSE index

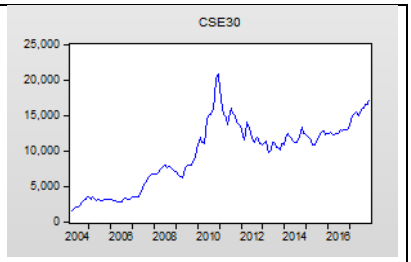
Three methods such as line graph, correlogram, and formal test are considered to observe the stationarity status of index data. The time series plot (line graph) of three indexes is presented in Fig. 4.1. This figure shows a slight upward trend, seasonal variation, cyclical variation, and random variation over time. For the remove of non-stationarity, use the first difference of the data and the resulted time series is plotted in Fig. 4.2 which supports the pattern of stationarity. The data, presented in Fig. 4.2, is used for the next analysis of modelling and forecasting.



Line diagram of CASPI

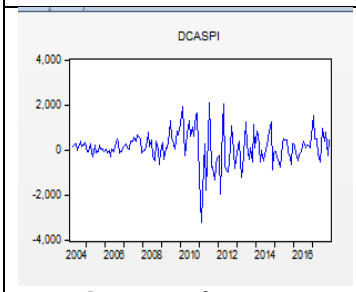


Line diagram of CSC

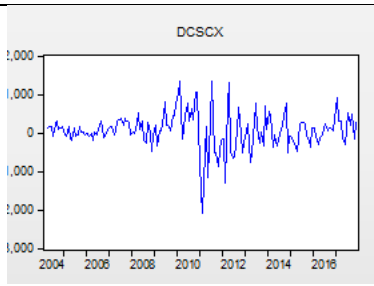


Line diagram of CSE30

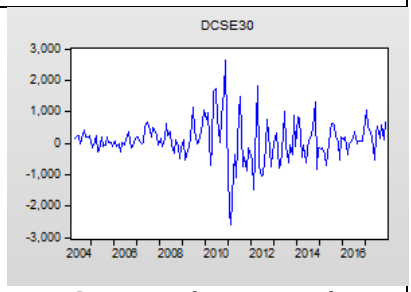
Fig. 4.1 Time series plots for three index data



Line diagram of CASPI at first difference



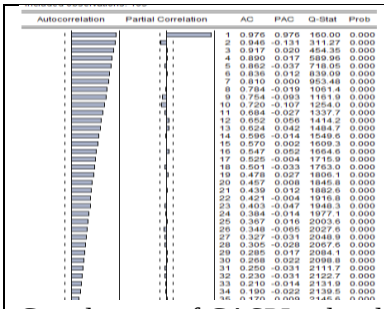
Line diagram of CSCX at first difference



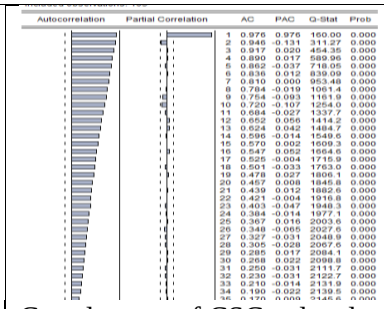
Line diagram of CSE30 at first difference

Fig. 4.2 Time series plots for three index data

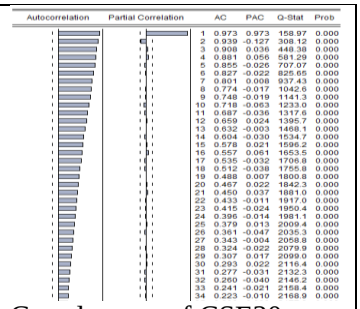
Time series data is suggesting stationary when the spikes of correlogram against the ACF or PACF converge to 0 very quickly(Shahin, Ali and Ali, 2014).The stationarity test based on correlogram is presented in Figs. 4.3 and 4.4. Here, the spikes of the ACF and PACF (Fig. 4.3) not converge to 0 very quickly at the level so the data is non-stationary. The spikes of the ACF and PACF (Fig. 4.4) converge to 0 very quickly. Therefore, the index data can be considered as stationary and modelled considering with seasonal effect.



Correlogram of CASPI at level

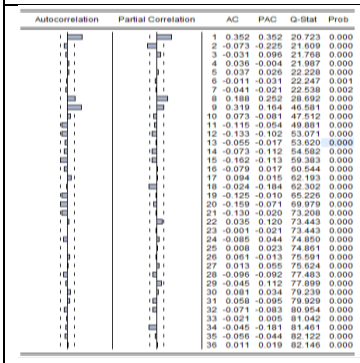


Correlogram of CSC at level

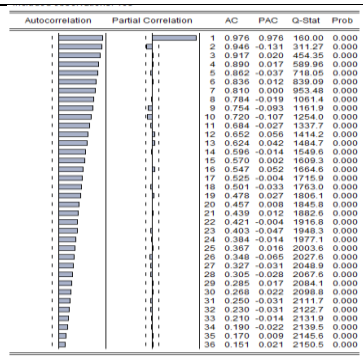


Correlogram of CSE30 at level

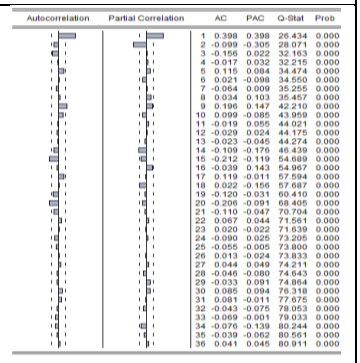
Fig. 4.3 Correlogram plots for index data at the level



Correlogram of CASPI at first difference



Correlogram of CSCX at first difference



Correlogram of CSE30 at first difference

Fig. 4.4 Correlogram plots for index data at first difference

Unit root test is widely popular over the past several years to test for stationarity (or non-stationarity).The Augmented Dicky Fuller (ADF) test at the level in the three options(trend and intercept, intercept, none) for index data are presented in Table 4.1. The calculated probabilities values of the test statistics for the ADF test are more than 0.05,this implies that the null hypothesis of non-stationary will be rejected so the data may be considered as non-stationary at level.

Table 4.1 Unit root test at Level

Variable name	P-values			Commence
	Trend and intercept	Intercept	None	
CASPI	0.7076	0.7656	0.9099	Non stationary
CSCX	0.6567	0.7766	0.8848	Non stationary
CSE30	.7534	.7218	0.9250	Non stationary

At the first difference Augmented Dickey-Fuller and Philips-Perron test for the index data are presented in Table 4.2. The calculated probability values for the two tests are less than 0.05 and 0.01, which implies the data are stationary.

Table 4.2 Unit root test at first difference

Variable name	P-values		Commence
	Augmented Dickey-Fuller test	Phillips-Perron	
CASPI	0.00	0.00	stationary
CSCX	0.00	0.00	stationary
CSE30	0.00	0.00	stationary

4.3.2 Model Building and Forecasting

4.3.2.1 Identification of Parameters Value of the SARIMA Structure

For the identification of parameter value of the SARIMA model,we used the auto.arima() function in 'forecast' package proposed by Hyndman and Khandakar (2008) in the statistical software R.

Table 4.3 The best -fitted SARIMA models along with different model selection criteria

Variables	Model	AIC	AICc	BIC
CASPI	SARIMA(0,1,1)(0,0,1)[12]	2274.86	2275.03	2283.94
CSCX	SARIMA(0,1,1)(0,0,1)[12]	2407.1	2407.26	2416.17
CSE30	SARIMA(0,1,1)(0,0,0)[12]	2366.83	2366.92	2372.88

The best-fit models with lowest AIC, AICc, and BIC for CASPI, CSCX and CSE30 index are presented in Table 4.3. The best-fit models for CASPI, CSCX, and CSEXare: SARIMA (0,1,1)(0,0,1)[12], SARIMA (0,1,1)(0,0,1)[12], SARIMA (0,1,1)(0,0,0)[12]respectively.

4.3.2.2 Estimation of Parameters for Selected SARIMA Models

The SARIMA(p,d,q)(P,D,Q) model mathematically written as

$$\Phi(A^s)\phi(A)\nabla_s^D\nabla^d x_t = c + \Theta(A^s)\theta(A)w_t$$

The best fitted model for the CASPI index is SARIMA(0,1,1)(0,0,1)[12]

The model includes a non-seasonal MA(1) term, a seasonal MA(1) term, First differencing, noseasonal AR terms and the seasonal period is S = 12.So putting values of different terms in the Eq.(1) we get,

The non-seasonal MA(1) polynomial is$\theta(A) = 1 + \theta_1 A$
The seasonal MA(1) polynomial is$\Theta(A^s) = 1 + \Theta_1 A^{12}$,
The non-seasonal AR(0) polynomial is$\phi(A) = 1$
The seasonal AR(1) polynomial is$\Phi(A^s) = 1$,
The non-seasonal differencing polynomial is$\nabla^d = (1 - A)$,
The seasonal differencing polynomial is$\nabla_s^D = 1$,

Now,

$$\Phi(A^s)\phi(A)\nabla_s^D\nabla^d x_t = c + \Theta(A^s)\theta(A)w_t$$

$$=> \ 1.1.1.(1 - A)x_t = c + (1 + \Theta_1 A^{12})(1 + \theta_1 A)w_t$$

$$=> (1 - A)x_t = c + (1 + \theta_1 A + \Theta_1 A^{12} + \Theta_1\theta_1 A_{13})w_t$$

$$=> x_t = c + x_{t-1} + w_t + \theta_1 w_{t-1} + \Theta_1 w_{t-12} + \theta_1\Theta_1 w_{t-13} \quad (2)$$

Similarly, We get the model for CSCX as

$$x_t = c + x_{t-1} + w_t + \theta_1 w_{t-1} + \Theta_1 w_{t-12} + \theta_1 \Theta_1 w_{t-13} \quad (3)$$

And also for CSE30,

$$x_t = c + x_{t-1} + \theta_1 w_{t-1} + w_t \quad (4)$$

Now putting the coefficient of the models we get

CASPI: $x_t = c + x_{t-1} + w_t + 0.4812 w_{t-1} - o.1339 w_{t-12} - 0.0644 w_{t-13}$

CSCX: $x_t = c + x_{t-1} + w_t + 0.4967 w_{t-1} - 0.1218 w_{t-12} - 0.0649 w_{t-13}$

CSE30: $x_t = c + x_{t-1} + 0.5486 w_{t-1} + w_t$

Table 4.4 The best fitted SARIMA models at multiplicative model estimated parameter

Model	Estimated Parameter with probability(in parenthesis)					
SARIMA(2,2,2)(1,0,1)[12]	ar1	ar2	ma1	ma2	sar1	sma1
	-0.2715 (0.2373)	-0.0102 (0.1403)	-0.3319 (0.2241)	-0.5764 (0.2262)	0.2115 (0.3434)	-0.3383 (0.3266)
ARIMA(2,2,2)(1,0,1)[12]	ar1	ar2	ma1	ma2	sar1	sma1
	-0.2388 (0.2224)	0.0077 (0.1423)	-0.3225 (0.2073)	-0.5820 (0.2104)	0.2395 (0.3928)	-0.3388 (0.3765)
ARIMA(0,1,1)(0,0,0)[12]	ma1					
	0.5486 0.0677					

The OLS method is used to estimate the parameters of the tentative models. The model with lowest AIC, AICc, BIC is considered as the best model which is represented in Table 4.3.By the coefficients of the fitted model, we get the equations for the different index values. But when after fitting the model we diagnose the residuals and we did not get satisfactory results;

considered the multiplicative model and refit the models represented in Table 4.4. The model presented Table 4.4 satisfies all the criteria of the residuals diagnosis.

4.3.2.3 Diagnostic Checking for Estimated SARIMA Models

The diagnostic checking of the models SARIMA(2,2,2)(1,0,1)[12] ,SARIMA(2,2,2)(1,0,1)[12] and SARIMA(0,1,1)(0,0,0)[12] have been completed by actual-fitted-residual plot, Box-Ljung test, Jarque Bera test standardized residuals plot, and actual-forecast plot. The actual, fitted, and residual plot (Fig. 4.5) shows that the fitted values are very close to the actual value and the residuals are very small implying the model is well fitted. The Box-Ljung test conducted to check the autocorrelation effect. Since the *p*-values of Box-Ljung test are more than 0.05, so there are no autocorrelation effects in the residuals. In addition, the Jargue-Bera test considered to diagnose the residuals' normality assumption and for first two model named SARIMA(2,2,2)(1,0,1)[12] and SARIMA(2,2,2)(1,0,1)[12] have more than 0.05 p-value which implies that the residual follows normality assumption.

Table 4.5 Box-Ljung and Jarque-Bera test for resduals series of SARIMA model

Model	Box-Ljung test	*p*-value	JarqueBera test	*p*-value
SARIMA(2,2,2)(1,0,1)[12]	11.259	0.33	2.5796	0.2753
SARIMA(2,2,2)(1,0,1)[12]	27.573	0.11	3.077	0.2147
SARIMA(0,1,1)(0,0,0)[12]	27.797	0.11	20.677	0.000

4.3.2.4 Forecasting of Index Value Using Selected SARIMA Models

The selected SARIMA(2,2,1)(1,0,1)[12] and SARIMA(2,2,1)(1,0,1)[12] models have been successfully passed the three stages: identification, parameter estimation, and diagnostic checking. Thus, the models would be used for forecasting purpose. Overall forecasting

performance of the selected model is shown in Table 4.6 and the forecasted values are shown in Fig. 4.7,4.8 and 4.9.

Table 4.6 Summary of overall forecasting performance of SARIMA models

Error Measure	SARIMA(2,2,2)(1,0,1)[12] For CASPI index	SARIMA(2,2,2)(1,0,1)[12] for CSCX index	SARIMA(0,1,1)(0,0,1)[12] for CSE30 index
ME	-0.006	0.000	48.03
RMSE	0.055	0.006	571.97
MAE	0.0419	0.004	404.90
MPE	-0.077	-0.036	0.8343
MAPE	0.488	0.211	4.510
MASE	0.175	0.169	0.202
ACE1	-0.0124	-0.01	0.000

From the table, we can see the values of error measure for first two models are very low (for example the RMSE value for CASPI and CASCX are 0.05 and 0.006 respectively) which implies that the actual value is very close to its forecast value. On the other hand, the values of error measure for the model of the CSEX30 index is quite high which suggest that forecast values are very far from the actual value. In essence, we can say that the first two models are appropriate for forecasting but the third model is not suitable for forecasting.

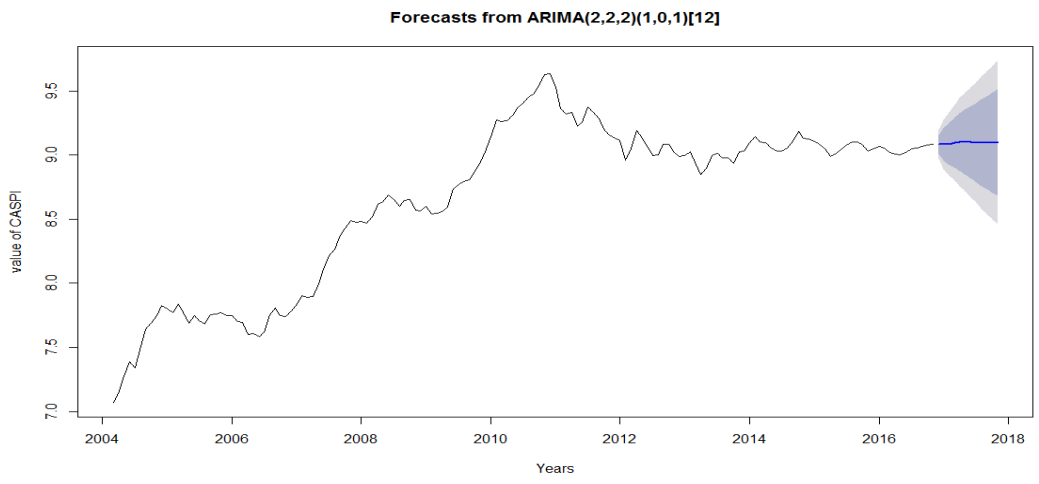


Fig. 4.7 Graph for forecast of SARIMA(2,2,2)(1,0,1)[12]

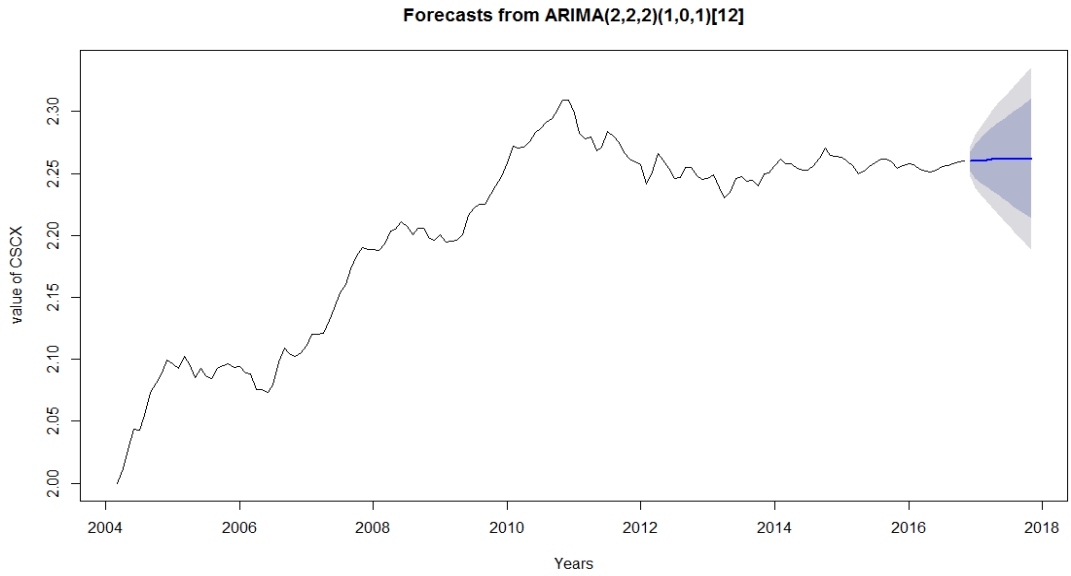


Fig. 4.7 Graph for forecast of SARIMA(2,2,2)(1,0,1)[12]

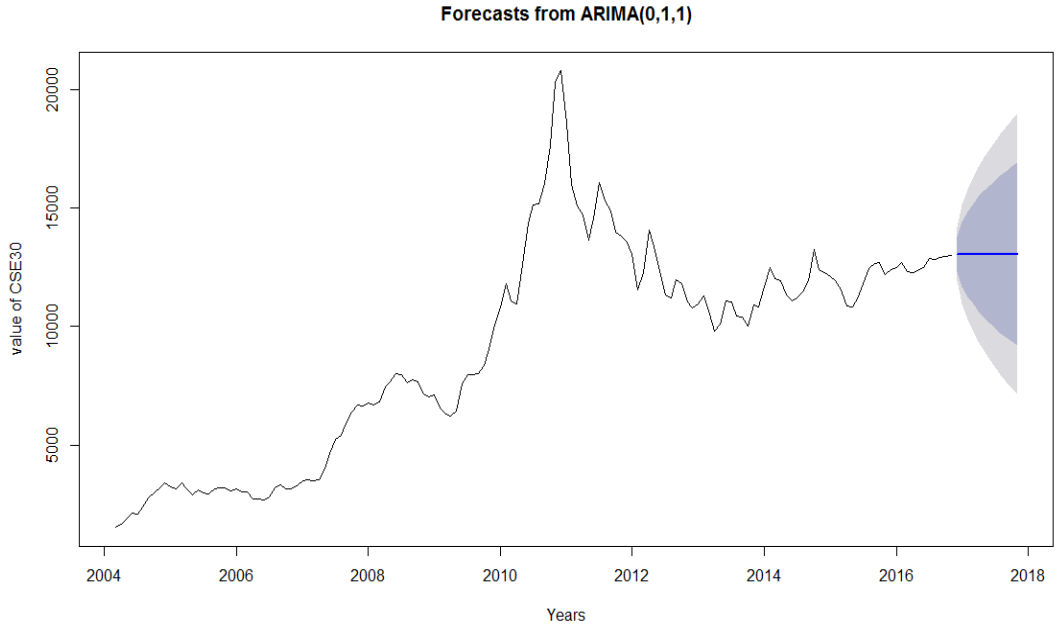


Fig. 4.7 Graph for forecast of SARIMA(0,1,1)(0,0,0)[12]

5 Conclusions

The prediction of index parameters is essential for investment, maintaining and decision making in the capital market.For the forecast of time series, it needs to satisfy the underlying assumption of the series must be stationary. Three methods named graphical method, correlogram, and finally ADF test are used to check the stationarity of the series.The original time series of index value selected for this study are stationary at 5 percent level of significance. After that, this paper identifies ARIMA(2,2,2)(1,0,1)[12],ARIMA(2,2,2)(1,0,1)[12],ARIMA(0,1,1)(0,0,1)[12] model are found to be suitable models for CASPI,CSCX,CSE30 index respectively. These models are selected on the basis of model selection criteria like lowest AIC, AICC and BIC value. Also, the CASPI and CSCX models are found to be free from the problem of outliers, autocorrelation and normality and the estimated residuals follow the usual assumptions of the principle of least

square.Jarque-Bera test is used to check the normality assumption of the error and Ljung-Box test is used to check the autocorrelation of the fitted model. In this paper, these models are used to forecasting the monthly index value for the upcoming two years and compare to actual value and found low forecast error.From the graphical comparison, a very small fluctuated it is observed between the forecasted series and the original series which shows the fitted series has the same manner of the original series for index value considered in this study.Therefore, the forecasted series (CASPI, CSCX) are really a better representation of the original series and can be used to forecasting the monthly index value for the upcoming years to help decision makers to establish priorities in terms of further analysis.

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A thematic analysis of Chairman's Statement of the Commercial Banks of Bangladesh

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ABSTRACT

The purpose of this research paper is to explore and evaluate the existence of hedonic bias in the chairman's statement. Thematic analysis was used to identify common themes on chairman's statements of 16 banks of Bangladesh. Themes identified by the authors included focusing more on macroeconomic variables; focusing more on management efficiency, avoiding performance comparison with previous years and avoiding loan recovery information that revealed the presence of hedonic bias in chairman's statements. The findings are in line with expectations that banks show a preference to emphasize the positive aspects of their performance while blaming the external environment for bad news thus impression management techniques were evident. This paper will add value to the field of impression management and accounting narratives research from a developing country perspective. Moreover, it will be helpful for the users and investors who rely on the chairman's statement on decision making.

Keywords: *Hedonic bias, Impression management, Annual reports, Chairman's statements,*

1.0 Introduction

Accounting narratives have drawn the attention of the researchers as the regulators are imposing more importance on various mandatory and voluntary disclosures. Chairman's statements provide an overview of the financial and strategic performance of the company, and that is why the investors give these statements importance. These statements include the future strategic plans of the company to convince investors and regulators about the growth prospects of the company.

Management has an inherent tendency to manipulate, and this statement has become

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applicable to the accounting narratives also (Clatworthy & Jones, 2006). Brennan, Guillamon, and Pierce (2009) stated that the existence of impression management is severe in less regulated accounting narratives disclosures as these narratives are primarily the interpretation of the financial outcomes. Chairman's statement consists of the interpretation and reasoning of financial performance and goals achievement of the company.

The financial sector of Bangladesh has undergone in a very critical situation. Among the eight state-owned banks, 40 privately-owned banks and nine foreign-owned banks, nonperforming loans (NPLs) stood at Taka 80,397 crore as of September 2017 which was 10.67 percent of all outstanding loans (Jamal, 2018). This recent crisis induces us to make the study whether the chairman statement focused on this crisis. So the main research question of this paper is whether hedonic bias is present in the chairman's statements of Bangladeshi banking companies. This paper will add value to the field of impression management and accounting narratives research from a developing country perspective. Moreover, it will be helpful for the users and investors who rely on the chairman's statement on decision making.

The remaining paper is organized as follows. Section 2 reviewed previous literature and identified the research gap. Section 3 outlines the theoretical framework of the study. Section 4 outlined the research design. Section 5 discusses our findings. Finally, the last section presents our conclusions.

2.0 Literature Review

Chairman's statements include information regarding organizational outcomes and prospects (Smith & Taffler, 2000). Through narratives, chairman addresses the cause and effect relationship between organizational outcomes and internal and external issues (Keusch, Bollen, & Hassink, 2012). The management and the board interpret the financial performance by saving their position. They tend to focus on interpreting the good financial outcomes and avoiding the adverse outcomes (Li, 2010).

Some researchers have found self-serving bias in the chairman's statements, and some have concluded that the narratives replicate the actual scenario of the companies. Keusch et al. (2012) have found that the organizations reported similar positive news in both the crisis and non-crisis years. The research indicates that managers use numerous statements to build impression among the readers using economic crisis events that lead to more misleading information. Construction of narratives is seen as the effects of the financial performance of the companies by many researchers. Clatworthy & Jones (2006) have found that managers are reluctant to show negative performances in the narratives. They show less quantitative information in the narratives and overshadow the negative news with descriptive qualitative information. Less profitable companies tend to focus on the future and interested to provide a longer chairman's statement than usual (Clatworthy & Jones, 2006). Smith & Taffler (2000) have found that the unaudited disclosures of the chairman's statement represent the financial condition of the company.

However, there is a flip side also. Oliveira, Azevedo, and Borges (2016) did not find a relationship between impression management strategies and organizational outcomes. Bayerlein & Davidson (2011) have found no evidence of such a thing that the negative

performances are buried by using complex sentences and positive performances are highlighted by using simple and easy to understand sentences. Authors have revealed that the companies try to overshadow the negative news that was previously unknown by the users by using vast comprehension.

Most of the literatures are based on the developed country perspectives. There is a huge scope to do content and discourse analysis on developing country perspectives of annual report narratives or chairman's statements.

3.0 Theoretical framework:

Signaling theory and agency theory are used to disclose the information in the chairman's statement. A firm's information disclosure can be considered a signal to stakeholders. It directed to reduce information asymmetry between management and stakeholders. Signaling theory holds that voluntary information disclosure in corporate annual reports can be used as a signal in order to improve the corporate image, attract new investors, lower capital costs and also help to improve its relationships with the relevant stakeholders (Alvarez, Sanchez, & Domınguez, 2008).

The agency theory is generally concerned with the principal-agent relationship between the principals (for example, owners) and agents (for example, the managers). According to Lambert (2001) conflicts of interest exist between principals and agents, for this reason, firms are more likely to be transparent when agency conflicts between insiders and outsiders are more significant since these conflicts lead to higher levels of information asymmetry. Chairman discloses to the shareholders and other principal (for example, Creditors) through his/her messages in the annual reports.

One of the most significant theories in information disclosures through annual reports is impression management theory. Impression management theory focused on the process through which people's perception is attempted to influence. As a social concept, impression management is "the conscious or unconscious attempt to control images that are real or imagined in social interactions" (Schlenker, 1980:6). Many researchers used this theory to describe most of the literature on the chairman's statements. Keusch et al. (2012) have researched on Europe's most highly capitalized companies from the impression management perspective. Critical theorists describe annual report narratives as an impression management tool for managers. Some companies may tend to signal their success to the market and conceal their adverse incidents, and this obfuscation hypothesis is generated from signaling and agency theory. Bayerlein & Davidson (2011) and Smith & Taffler (2000) have analyzed the Australian and UK companies' chairman statements from signaling and agency theory respectively. Merkl-Davies, Brennan, and McLeay, (2011) and Oliveira et al. (2016) have drawn attention towards a psychological method of impression management theory and investigated the chairman's statements of UK and Portuguese companies respectively.

3.0 Methodologies of the study:

3.1 Sample selection

Sixteen commercial banks have been selected based on convenient sampling for the study. We analyzed their 2016 annual reports. Two of them are state-owned commercial banks, and 14 of them are private commercial banks of the country. Narratives of the chairman's statement were analyzed from the annual reports of these companies. Annual reports were collected from their respective websites.

3.2 Research design:

3.2.1 Thematic content analysis: Thematic analysis technique was used to analyze the language of chairman's statements for this study. It helped to closely engage with the narratives provided in the chairman's statements. The focus of the study was to examine and critically evaluate the interpretation of the company performance through the chairman's statements. Text analysis has been done to explore the hidden agenda of the narratives.

3.2.2 Developing themes and codes: Authors carefully read the texts and through sorting and resorting identified significant themes from the text of the chairman's statement in annual reports. To begin the coding process, two authors separately and independently code the theme from the chairman's statement of annual reports. After the coding, a comparison was made to determine the level of agreement and to test the reliability. Reliability test has been done through Intra-class correlation using SPSS 24.0. Inter-rater reliability result showed that there is a high degree of correlation observed between these two codlings. No theme was considered for this study whose agreement was less than 60 percent. Authors finally selected four themes. These themes have been familiar to most of the samples regarding constructing chairman's statements.

SL	Themes	Definition
1	Focusing on Macro Economic Environment	The texts are related to hiding the moderate or average performance through initiating the conversation or statement by drawing a negative picture of the industry.
2	Focusing on management efficiency for favourable performance	Management tried to focus on their strategic choices and justify their selections based on financial outcomes.
3	Avoiding profitability & loan recovery information	The companies often try to hide the unfavourable profitability& loan recovery information in the chairman's statement.
4	Avoiding performance comparison with previous years	The banks tend to avoid comparison with the previous year results if there is any downward performance.

Table 1: Themes and definition of the themes

4 .0 Research findings

4.1 Managing initial impression through poor macro environmental information

One of the major themes identified by the authors is focusing on poor macroeconomic performance. The preparers of the report try to hide the moderate or average performance through initiating the conversation or statement by drawing a negative picture of the industry. As stated in the report of Jamuna bank:

"The year 2016 has been a bumpy ride for the financial sector as a whole. The economy had its sheer ups and downs. Today I feel overwhelmed to report that Jamuna Bank Limited has touched a commendable milestone of performance in 2016 excelling in all aspects of financial indicators (Jamuna Bank, 2016, p. 71)."

Some of the statements focused into market liquidity for the liquidity crisis of the bank. For examples, the following statement draws a volatile picture of the macro environment for the liquidity crisis of the bank.

"Despite the on-going geopolitical instabilities and economic crises affecting the banking sector and market liquidity all around the globe, we have been steadily steering the bank in the right direction in the fourth year of establishment (Farmers Bank, 2016, p. 04)."

So, a substantial number of chairman's statements (07 out of 16 sample banks) focus on poor macroeconomic or industry performance to build an initial impression in readers' mind to accept the poor performance or average performance of the companies.

4.2 Focusing on management efficiency for favorable performance

Another theme identified in some texts is focusing on management efficiency for favorable performances. A common tendency of the management to focus on their strategic choices and justify their selections based on financial outcomes. The following statement is related to focusing on management efficiency for favourable performance.

"All of us know that due to some unavoidable circumstances, the business in the year 2016 was not good enough for any of the banks and financial institutions in the country. Despite that, we have achieved all business targets for the year 2016. The Bank took a strategy of quality growth of its assets by adhering to compliance in all spheres of operation particularly in respect of Shari'ah and regulatory laws and guidelines. As a continued policy, the Bank remained focused in all the key areas covering capital adequacy, good asset quality, sound management, good earnings and strong liquidity (Al Arafa Islami Bank, 2016, p. 21)."

Here, the bank has summed up their internal management efficiency through highlighting the strategies and initiatives taken. Before that, it has drawn the attention of the readers by depicting a negative industry picture. The company is legitimizing the poor performance

So, chairman's statements contain the tendency of focusing on management efficiency and internal efforts as the reasons behind favourable performance in the period. 11 out of 16 sample banks reflect the theme as mentioned above. These companies tried to make readers believe that the management and the board of the companies are competent and their initiated strategies are the reasons behind the financial success of the companies. So the presence of hedonic bias in the chairman's statements of the sample companies is evident.

4.3 Avoiding profitability & loan recovery information

Another commonly used theme is banks tried to avoid the loan recovery information. The companies often try to hide the unfavourable financial information in the chairman's statement. In the following statement, the bank's profitability information has been ignored by the chairman. The actual picture is that the bank has achieved only 2.67% increase in net profits compared with 2015 net profits where even the inflation rate was 5.52% in 2016.

"Despite the challenges faced in 2016, the bank was able to increase the shareholders' equity 1.41% Percentage of classified loans stood at 5.19% while the industry average was 9.23% Total assets of the bank increased to 31484 crores from 28501 crore BDT registering an increase of 10.47% (AB Bank, 2016, p. 07)."

In another example, of the Chairman statement of Uttara bank, it was found that bank technically avoids both profitability and loan recovery texts in the chairman's statement. For example, the following first statement does not include profitability information. The reason might be the decrease in the following profit before tax of 2016 has been decreased by 19.45% compared to 2015. Moreover, the statement has no information regarding the loan recovery, default loans percentage and amount of surplus fund.

"At the end of the year Bank's Deposits and Loans & Advances stood at Tk.134,951.61 million and Tk. 83,311.09 million which is 10.25% and 9.90% respectively higher than that of the year-end position of 2015. The Earning per Share (EPS) for the year 2016 was Tk. 3.86 (consolidated) which is considered praiseworthy as against the industry average at the moment. Capital to Risk Weighted Assets Ratio (CRAR) of the Bank stood at 13.58% (consolidated) against the regulatory requirement of 10.625% including conservation buffer (Uttara Bank,

2016, p. 19)."

So, the chairman's statements of banks contain the technique of avoiding profitability and loan recovery information. Four out of sixteen sample banks reflect the theme mentioned above. The shareholders and the investors might be looking for the profitability and the status of classified loans of the companies into the chairman's statements to assess the strengths and prospects of the companies. However, adverse outcomes or performance might force the companies to hide the profitability and classified loans' information. This impression management technique has let the companies present only the favorable outcomes and avoid negative outcomes that might have questioned the efficiency of management.

4.4Avoiding performance comparison with previous years

The banks tend to avoid comparison with the previous year results if there is any downward performance. It merely states the current year outcomes and highlights the increased or improved areas. For example, we identified the avoiding performance comparison tendency from following

> "Bank's consolidated operating profit for the year 2016 was Tk. 6.91 billion. After setting aside provisions for loans and advances, tax and other required provisions, your Bank attained consolidated net profit of Tk. 1.64 billion, and after maintenance of necessary reserves, the consolidated distributable profit stood at Tk. 0.99 billion (Bank Asia, 2016, p. 41)"

In the above statement, the company avoided the previous year profits which should have reflected the true picture of the financial outcomes. The company's profit has decreased by 35% in 2016 comparing to 2015 profits. That is why the statement has technically avoided the information which can be an indication of using the statement as an impression management tool.

Authors identified eight out of sixteen sample banks reflect the above-mentioned theme. Hiding the decreasing trend of performance might be the motivation behind following this technique. This is a clear indication of distorting the readers' mind. Investors might get distorted with the number of profits, but the comparison would have drawn the real picture.

5. Conclusion

Investors rely on chairman statements as there present explanations of the good and bad performance of the companies in recent years. That is why these statements got more attention from the researchers to explore the narratives used in these statements. The purpose of the study was to evaluate the narratives used in these statements critically and to examine whether the narratives contain hedonic or self-serving bias or not. The study has found that all the sample banks have used at least one theme identified by the study as a technique of constructing narratives to impress the readers. The tendency of using impression management techniques and hedonic bias is evident in the research findings of this study. The companies are more interested or motivated in constructing accounting narratives through hedonic bias and impression management techniques when they experience unfavorable outcomes. They spend more words on rationalizing own performance with industry performance. They tend to draw a competitive and difficult picture of the industry to make the readers understand that the poor performance of the bank was obvious. The narratives might show self-serving bias subconsciously or without any intention. This may result in the wrong interpretation of self-serving bias in the chairman's statements. The regulatory authority might think of imposing some mandatory disclosures in the chairman's statements to ensure that management cannot distort the readers' perceptions.

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Impact of Democracy Scores on GDP Growth Rate: A Cross Country Study

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ABSTRACT

This study investigates the impact of democracy scores on GDP growth rate. Data of 109 countries were collected from the website of The Economist Intelligence Unit and The World Bank. This research found that economy scores had significant positive impact on GDP growth rate. Political system scores, environment scores, gender equality scores had positive impact on GDP growth rate. It is also found that health scores, knowledge scores, gender comprehensive scores had not positive impact on GDP growth rate.

Key words: GDP growth rate, political system scores, economy scores, environment scores, gender equality scores, health scores, knowledge scores, gender comprehensive scores.

Introduction

Income distribution is often more equal in democracies than in non-democracies and it actuallyimproves when a society switches from dictatorship to democracy. This emphasizes the redistributive effect of democracy (Acemoglu and Robinson, 2006).The redistributive effect of democracy leads to policies that reallocate national income from investment to consumption—thereby slowing down economic growth (Huntington and Dominguez, 1975) and (Prezsworski and Limongi, 1993).

Chua (2002) stated that The empowerment of the impoverished majorities unleashes ethnic conflict, confiscation and sometimes genocide in market dominant minorities.Bardhan(1993) stated that Political pluralism and competition in democracy can sharpen parochial and primordial loyalties such as strengthening of the caste system in India; this can create difficulties in adopting growth-oriented policies. Siegal, et al

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(2004) stated that The sharing of information provides the public a chance to monitor the behaviour of their elected representatives; openness and free media reduces the scope of corruption among the government officials in adopting policies that are based on purely rent seeking objectives. They added that An authoritarian ruler often turns political monopoly into economic monopoly; preferential treatment to individuals and businesses that provide support to the autocrat reduces economic efficiency in a dictatorship. A democratic leader has the incentive to improve the well-being of the majority to ensure his re-election in contrast to a dictator who relies on narrow-clan and patronage-based support for sustainability of his power. Democracies render political stability by providing a clear cut mechanism of succession without the use of any extralegal or coercive measure to attain power while the use of such extralegal destabilizing methods to gain power is prevalent in autocracies.

While corruption may increase efficiency of the economy by increasing the ease of transactions and hence become a positive source for growth on the other hand corruption may significantly reduce growth due to the presence of a large shadow economy and less prudent macroeconomic policies Acemoglu and Verdier (1998), Mauro (1995); Mo (2001). Economic growth is primarily due to economic production inputs such as investment and it is the pro-growth governmental policies that matter more than the regime type that prevails in a country. Kurzman, et al. (2002) and Comeau (2003).

2. Objectives

The study focused on an examination of the relationship of political system scores, economy scores, environment scores, gender equality scores, health scores, knowledge scores, gender comprehensive scores with GDP growth rate. This research had the objectives to examine the relationship between political system scores, economy scores, environment scores, gender equality scores, health scores, knowledge scores, gender comprehensive scores and GDP growth rate.

3. Review of the Literature

Studies & Year	Areas of Research
Keech (1995) and Comeau (2003)	It is believed that the policies in democratic regimes are relatively more redistributive and pro-poor than in autocracies
Comeau (2003)	Democratic governments make myopic decisions designed to increase their vote shares which make the democratic form of governance more susceptible to demands of interest groups.
Buchnan and Wagner (1977)]	There will be anunending growth of government in a democratic regime which will adversely affect the economy
Fidrmuc (2000)].	An authoritarian regime can carry out the liberalization reforms more effectively at least in the initial stages when massive layoffs and cuts in entitlements follow liberalization.
Zakaria (2003)	Democracy can also lead to poor economic outcomes through producing political instability and ethnic conflict.
Wittman (1989) Olson (1993)	The competition between the interest groups leads to adoption of policies with positive net social benefits or the inefficiencies will at least be less than autocracies.
Wittman (1989)	Democratic governments are marked by greater transparency of policy and policy-making processes.
Olson (1993)	Democracies have greater property rights security because the long-term survival of democracy depends on the provision and protection of civil liberty including economic freedom.
North (1993)	Civil and political liberties are necessary to protect citizens from the predatory behaviour of government and provision of secure property rights.
De Haan and Sturm (2003)	Democratization may limit rent seeking due to its system of checks and balances.
Pastor and	Empirical evidence of strong correlation between higher rates of

Sung (1995)	investment and democratic government.
Lundstrom (2002)	An autocratic government may suppress conflict in the short run but provide no mechanism for its solution.
Sah (1991)	Autocratic polities exhibit a larger variance in economic performance as compared to democracies.
[Clague, et al. (1996), Pettersson (2004)]	It is the time horizon of the individual autocrat that determines property and contract rights whereas in democracies it is the durability of the regime that determines these rights.
Alesina and Perotti (1994)	It is the uncertainty and instability that deter investments and growth rather than the type of polity that prevails in a country
Cheung (1998)	Autocracies may outperform democracies due to less corruption in the former form of governance.

4. Materials and Methods

The main purpose of the study was to examine the relationship of GDP growth rate and Democracy scores i.e. political system scores, economy scores, environment scores, gender equality scores, health scores, knowledge scores, gender comprehensive scores. To achieve the objectives of the study, data were extracted from *the website of The Economist Intelligence Unit and The World Bank*. Different independent variables (i.e. political system scores, economy scores, environment scores, gender equality scores, health scores, knowledge scores, gender comprehensive scores) and a dependent variable (GDP growth rate) of 109 countieswere selectedto fulfill the research objectives. Semi log econometric model was employed to achieve the best results of the study. In this regard, Excel was utilized for data analysis purposes. The followingeconometric model was selected to express the results and relationships between variables of interests.

$y = \beta 0 + Ln\ \beta 1\ X1 + Ln\ \beta 2\ X2 + Ln\ \beta 3\ X3 + Ln\ \beta 4\ X4 + \beta 5\ X5 + \beta 6\ X6 + \beta 7\ X7 + \mu$

Where,

y = GDP growth rate of 109 Counties.

X1= Political System Scores (PS)of 109 Counties.

X2= Economy Scores (EC)of 109 Counties.

X3= Environment Scores (EN)of 109 Counties.

X4= Gender Equality Scores (GE)of 109 Counties.

X5= Health Scores (H)of 109 Counties.

X6= Knowledge Scores (K)of 109 Counties.

X7= Gender Comprehensive Scores (GC)of 109 Counties.

5. Results and Discussion

Descriptive Statistics:

Table 1 shows the descriptive statistics of one dependent variable and seven independent variables. As shown in Table 1, the median value of political system score (PS) is 61.625, environmental score (EN) is 67.718, gender equity score (GE) is 65.798, health score (H) is 63.350, gender comprehensive score (GC) is 63.308, Economic Score (EC) is 45.988, Knowledge score (K) is 31.409 and the median value of GDP growth rate is 3.163.

Table 1 also shows the mean value of political system score (PS) is 61.292, environmental score (EN) is 67.549, gender equity score (GE) is 63.363, health score (H) is 60.020, gender comprehensive score (GC) is 62.775, Economic Score (EC) is 48.220, Knowledge score (K) is 35.985 and the median value of GDP growth rate is 3.163.

Table 1: Descriptive Statistics

	Mean	Median	Std. Dev.	Minimum	Maximum
GDP Growth Rate	3.189	3.163	2.665	(6.553)	8.534
PS	61.292	61.626	19.734	10.215	99.676
EC	48.220	45.988	13.483	20.490	90.545
EN	67.549	67.718	12.311	29.748	99.236
GE	63.363	65.798	14.402	20.881	86.553
H	60.020	63.350	19.787	12.808	100.000
K	35.985	31.409	18.572	4.483	75.238
GC	62.775	63.308	15.437	14.369	92.367

Regression Analysis:

Regression analysis was conducted to find out whether political system scores, economy scores, environment scores, gender equality scores, health scores, knowledge scores, gender comprehensive scores have an impact on GDP growth rates. Major findings of regression analysis in shape of the estimated relationships are shown in the Table 2. Table 2 presents 'beta' value for each variable as well as its standard error in parenthesis. Level of significance was also expressed by using 'asterisk' symbol. In order to estimate the relationship, GDP growth rate was regressed on the political system scores, economy scores, environment scores, gender equality scores, health scores, knowledge scores, gender comprehensive scores. The results illustrate that there is a positive and significant impact of economic system scores of democracy score on GDP growth rate ($\beta = 0.064$, p 0.05). This statistically significant result supports the hypothesis of the study that there is a positive relationship between GDP growth rate and economic scores of democracy score. Similarly, there is positive relationship between political system scores ($\beta = 0.076$), environmental scores ($\beta = 0.020$), gender equity scores ($\beta = 0.054$) and GDP growth rate, but these are not statistically significant (p 0.05). Health scores, knowledge scores and gender comprehensive scores have negative relationship with the GDP growth rate which was not estimated by the author.

Table 2: Regression Results

	GDP Growth Rate
C	2.152 (1.923)
PS	0.076 (0.102)
EC	0.064 (0.028)***
EN	0.020 (0.020)
GE	0.054 (0.118)
H	-0.035 (0.028)
K	-0.077 (0.029)***
GC	-0.104 (0.197)
R-squared	0.306
Adj. R-squared	0.258
Standard Error	2.295
F-Statistic	6.370 (0.000)

*** Significant at 5 percent level.

6. Conclusion:

The aim of the current study was to examine the impact ofdemocracy scores (such as political system scores, economy scores, environment scores, gender equality scores, health scores, knowledge scores, gender comprehensive scores) on GDP growth rate. For this purpose, 109 countries' data were analyzed. The results of the study demonstrate that there exists a positive relationship between economy scores and GDP growth rates. Moreover, the results also showed that there exists a positive relationship between political system scores, environmental scores, gender equity scores and GDP growth rate, however, the relationships are not significant. Lastly, the relationships of health scores, knowledge scores, gender comprehensive scores of democracy score and GDP growth rate were found negative which was not as per expectations of the author.

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8. Appendices:

1. **GDP growth rate data used**

SL	Country	GDP Growth Rate (Year 2014)
1	Albania	1.80
2	Argentina	(2.51)
3	Armenia	3.60
4	Australia	2.50
5	Austria	0.64
6	Bahrain	4.35
7	Bangladesh	6.06
8	Belgium	1.65
9	Benin	6.36
10	Bolivia	5.46
11	Bosnia and Herzegovina	1.08
12	Botswana	3.20
13	Brazil	0.50
14	Bulgaria	1.33
15	Burkina Faso	4.03
16	Canada	2.57
17	Chile	1.88
18	China	7.30
19	Colombia	4.39
20	Costa Rica	2.98
21	Cote d'Ivoire	8.49
22	Croatia	(0.36)
23	Cyprus	(1.53)
24	Czech Republic	2.72
25	Denmark	1.68
26	Dominican Republic	7.61
27	Ecuador	3.99
28	Egypt, Arab Rep.	2.23

29	El Salvador	1.43
30	Estonia	2.82
31	Finland	(0.63)
32	France	0.64
33	Georgia	4.62
34	Germany	1.60
35	Ghana	3.99
36	Greece	0.35
37	Guatemala	4.17
38	Guinea	0.40
39	Haiti	2.80
40	Honduras	3.09
41	Hong Kong SAR, China	2.68
42	Hungary	4.05
43	India	7.18
44	Indonesia	5.02
45	Ireland	8.46
46	Israel	3.16
47	Italy	0.09
48	Jamaica	0.69
49	Japan	0.34
50	Kenya	5.33
51	Korea, Rep.	3.34
52	Kuwait	0.50
53	Kyrgyz Republic	4.02
54	Latvia	2.10
55	Lebanon	1.80
56	Lesotho	4.54
57	Liberia	0.70
58	Libya	-
59	Lithuania	3.50
60	Macedonia, FYR	3.54
61	Madagascar	3.32
62	Malawi	5.70

63	Malaysia	6.01
64	Mali	7.04
65	Mauritius	3.74
66	Mexico	2.25
67	Moldova	4.80
68	Mongolia	7.89
69	Morocco	2.55
70	Mozambique	7.44
71	Namibia	6.46
72	Nepal	5.99
73	Netherlands	1.42
74	New Zealand	3.58
75	Nicaragua	4.57
76	Niger	7.05
77	Nigeria	6.31
78	Norway	1.92
79	Pakistan	4.67
80	Panama	6.05
81	Papua New Guinea	8.53
82	Paraguay	4.72
83	Peru	2.35
84	Philippines	6.22
85	Poland	3.28
86	Portugal	0.89
87	Romania	3.08
88	Russian Federation	0.73
89	Senegal	4.31
90	Serbia	(1.83)
91	Sierra Leone	4.56
92	Singapore	3.26
93	Slovak Republic	2.57
94	Slovenia	3.11
95	South Africa	1.63
96	Sri Lanka	4.88

97	Sweden	2.60
98	Tanzania	6.97
99	Timor-Leste	5.86
100	Togo	5.87
101	Trinidad and Tobago	(0.58)
102	Tunisia	2.87
103	Turkey	3.02
104	Ukraine	(6.55)
105	United States	2.37
106	Uruguay	3.24
107	Venezuela, RB	(3.89)
108	Yemen, Rep.	(0.19)
109	Zambia	4.70

2. **Democracy Score Data Used (Year 2014-15)**

SL	Country	PS	EC	EN	GE	H	K	GC
1	Albania	58.48	35.99	64.02	65.85	68.38	42.16	63.31
2	Argentina	67.41	46.40	66.45	73.65	68.50	47.38	73.47
3	Armenia	41.52	31.95	60.03	61.07	63.79	35.05	51.26
4	Australia	87.64	69.79	59.87	83.57	83.60	69.97	84.76
5	Austria	85.46	69.09	66.38	80.23	86.59	69.05	81.99
6	Bahrain	18.18	71.53	50.74	64.43	66.91	41.95	39.62
7	Bangladesh	46.99	40.41	74.37	60.15	51.72	19.64	55.11
8	Belgium	90.54	61.46	55.54	81.28	83.96	67.99	85.05
9	Benin	63.28	44.03	62.20	47.28	26.55	20.12	54.93
10	Bolivia	61.59	44.75	62.61	66.01	48.19	24.27	65.71
11	Bosnia and Herzegovina	49.48	20.49	56.08	53.35	69.86	28.24	53.50
12	Botswana	64.62	43.58	72.99	53.87	40.72	28.31	60.18
13	Brazil	66.86	45.99	71.18	69.59	64.16	39.42	69.65
14	Bulgaria	70.39	49.74	58.55	71.74	70.38	41.49	72.71
15	Burkina Faso	46.20	41.84	91.84	47.25	25.53	15.92	46.04

16	Canada	89.68	68.27	56.34	81.99	82.03	62.03	84.86
17	Chile	81.35	51.18	67.30	76.89	76.82	41.42	78.38
18	China	21.90	47.73	53.94	67.94	65.99	38.33	45.51
19	Colombia	57.96	46.29	78.98	65.90	61.85	30.26	63.71
20	Costa Rica	80.20	44.74	79.01	70.09	73.09	34.50	74.86
21	Cote d'Ivoire	40.43	42.32	69.78	33.45	13.34	19.70	35.46
22	Croatia	73.64	39.08	72.18	69.91	73.14	47.80	72.75
23	Cyprus	77.05	46.17	67.14	72.98	76.51	43.28	74.47
24	Czech Republic	79.35	60.54	57.19	74.93	76.06	54.54	76.43
25	Denmark	94.26	69.53	78.06	82.81	81.44	67.61	87.26
26	Dominican Republic	61.31	37.79	70.86	56.51	58.26	29.09	59.88
27	Ecuador	55.00	45.80	70.81	69.99	66.20	26.89	65.43
28	Egypt, Arab Rep.	24.84	32.74	70.56	45.26	55.55	29.20	34.20
29	El Salvador	63.95	47.06	75.59	63.11	58.97	22.86	64.17
30	Estonia	84.84	60.46	31.75	79.71	72.28	56.51	81.19
31	Finland	99.68	63.68	60.56	84.73	82.06	70.20	92.37
32	France	85.24	59.20	69.83	78.15	86.32	62.61	82.03
33	Georgia	58.68	40.90	68.86	65.80	66.28	28.81	61.91
34	Germany	90.22	71.14	60.55	78.03	85.34	67.16	83.94
35	Ghana	71.57	41.87	76.44	53.06	31.93	16.86	62.20
36	Greece	68.10	32.87	66.25	69.45	84.26	60.27	69.88
37	Guatemala	48.20	50.83	66.05	58.13	57.09	17.03	54.33
38	Guinea	35.23	41.55	92.12	41.33	25.95	17.20	38.01
39	Haiti	36.43	36.26	67.64	57.04	39.28	7.94	46.50
40	Honduras	44.35	42.63	67.66	58.01	61.92	25.20	52.60
41	Hong Kong SAR, China	60.89	77.20	91.41	80.03	100.00	54.07	71.49
42	Hungary	67.94	52.10	60.05	70.99	71.05	46.00	69.20
43	India	63.58	46.59	68.59	50.93	45.89	18.09	57.47
44	Indonesia	56.68	47.37	72.88	57.52	47.71	25.82	57.74
45	Ireland	91.47	63.18	71.92	75.78	79.41	61.52	84.20
46	Israel	72.84	60.90	65.01	78.23	81.36	69.26	74.70
47	Italy	75.43	48.72	72.90	73.76	83.98	54.84	75.59
48	Jamaica	69.02	35.01	62.48	61.58	65.84	29.62	64.81
49	Japan	79.80	57.10	63.82	81.99	87.65	65.77	78.78

50	Kenya	49.42	35.93	71.86	53.40	34.75	20.61	53.50
51	Korea, Rep.	69.09	62.77	57.38	78.58	82.42	75.24	72.47
52	Kuwait	36.09	85.81	48.18	64.34	63.35	36.88	49.59
53	Kyrgyz Republic	39.06	37.31	50.96	64.74	56.33	24.87	53.06
54	Latvia	78.76	53.76	71.65	76.22	66.27	44.30	78.40
55	Lebanon	32.77	45.14	48.58	57.89	74.33	39.63	45.58
56	Lesotho	62.55	24.29	76.30	26.25	13.11	16.37	45.51
57	Liberia	50.30	39.64	91.25	44.86	33.59	13.03	48.06
58	Libya	15.85	32.22	57.11	45.05	58.23	23.40	29.64
59	Lithuania	81.18	55.05	70.78	76.12	67.97	49.13	78.60
60	Macedonia, FYR	53.38	27.15	66.67	53.83	67.28	31.41	54.61
61	Madagascar	50.42	40.46	87.36	57.23	38.89	4.48	55.67
62	Malawi	57.43	33.92	96.09	52.48	38.69	12.72	56.45
63	Malaysia	41.06	60.39	61.44	69.30	62.28	45.22	53.66
64	Mali	36.80	38.52	99.24	33.76	23.75	16.06	33.75
65	Mauritius	73.26	50.75	75.32	62.47	64.15	31.64	67.15
66	Mexico	55.57	49.95	71.09	65.11	67.14	25.84	62.32
67	Moldova	57.92	47.86	61.50	63.32	62.55	31.43	63.03
68	Mongolia	72.76	45.69	37.86	68.67	55.64	25.93	72.35
69	Morocco	35.13	42.96	69.45	48.74	59.01	29.64	40.59
70	Mozambique	53.54	23.27	65.19	35.43	20.87	12.23	47.27
71	Namibia	68.88	37.94	73.95	52.01	44.36	19.16	63.57
72	Nepal	45.47	46.87	61.38	67.02	54.62	14.19	56.55
73	Netherlands	93.63	69.75	59.32	81.93	84.86	68.67	86.55
74	New Zealand	92.22	63.26	66.29	82.83	81.28	59.12	86.79
75	Nicaragua	55.54	41.79	71.69	67.26	62.85	18.48	64.04
76	Niger	49.41	39.97	72.08	33.32	32.52	7.18	39.58
77	Nigeria	41.40	46.34	73.60	34.46	13.93	17.74	37.97
78	Norway	99.19	84.72	59.94	84.69	84.26	61.37	92.12
79	Pakistan	32.43	41.52	61.55	34.62	38.85	10.66	31.70
80	Panama	71.70	53.18	75.89	67.74	69.68	28.29	72.49
81	Papua New Guinea	54.65	42.12	75.64	54.47	35.99	17.45	54.44
82	Paraguay	53.81	44.59	65.89	62.93	60.62	26.97	60.18
83	Peru	61.88	52.42	75.38	70.96	61.47	30.44	67.74

84	Philippines	64.02	44.85	77.30	59.05	49.95	25.78	64.14
85	Poland	80.48	53.53	66.58	74.89	71.88	44.23	77.43
86	Portugal	85.13	45.21	67.75	74.41	80.35	54.14	79.68
87	Romania	69.99	52.03	73.21	69.44	66.69	38.43	70.44
88	Russian Federation	27.08	58.34	51.23	72.73	60.67	51.16	50.81
89	Senegal	66.11	37.28	67.72	54.66	43.93	18.95	61.85
90	Serbia	67.86	29.89	60.18	61.91	70.49	44.04	66.36
91	Sierra Leone	56.47	40.78	93.87	44.11	12.81	9.48	51.11
92	Singapore	52.18	90.54	78.07	86.55	79.71	63.10	65.46
93	Slovak Republic	75.19	51.49	64.17	68.28	72.58	47.09	71.26
94	Slovenia	83.74	54.56	62.40	79.93	79.32	64.51	82.60
95	South Africa	70.47	26.92	48.60	35.89	30.59	27.85	57.09
96	Sri Lanka	42.66	46.80	83.80	63.10	62.05	20.53	55.30
97	Sweden	97.40	67.37	71.37	85.34	84.79	66.16	90.95
98	Tanzania	53.69	41.54	68.72	61.28	40.29	15.15	60.77
99	Timor-Leste	56.81	39.27	93.75	50.27	46.39	22.97	54.81
100	Togo	40.21	38.43	65.11	53.36	28.60	7.24	48.41
101	Trinidad and Tobago	71.31	60.08	38.87	68.01	55.24	31.99	70.76
102	Tunisia	61.63	41.64	71.76	51.97	62.23	29.98	57.43
103	Turkey	42.64	51.20	71.48	62.90	64.00	42.78	53.69
104	Ukraine	54.27	42.79	29.75	72.26	62.90	43.62	65.26
105	United States	84.15	71.51	49.05	78.68	82.97	62.25	80.47
106	Uruguay	83.25	52.16	78.52	73.83	71.46	43.17	77.04
107	Venezuela, RB	31.42	33.35	60.56	68.23	62.93	39.44	52.87
108	Yemen, Rep.	10.22	28.95	70.38	20.88	38.74	14.88	14.37
109	Zambia	50.09	32.34	73.39	57.30	30.99	10.41	53.54

The Effect of Country of Origin on Foreign Brand names in Local Market: A Case Study on Apparel Product

Saima Akhter*

ABSTRACT

This paper aims to measure the effects of Country of origin (COO) on foreign brand names in local market. A conceptual model is developed based on previous theories in which country of origin, foreign brand name, product knowledge are postulated to influence the perceived product quality, which in turn influences purchase intention. Only one product category (t-shirt) was considered so that it can closely scrutinize the assumed effects on purchase intention. This study included administering a questionnaire among the students of Faculty of Business Studies, University of Dhaka, Bangladesh to a total sample of three hundred (300). Structural Equation Modeling (SEM) with AMOS software (IBM SPSS Amos Version 24) was used to analyze data. Results indicated that product knowledge has significant and positive influence on perceived product quality which in turn positively and significantly influences consumers' purchase intention. Findings showed that foreign brand name and country of origin do not have a significant and positive impact on perceived product quality. These findings contribute to the existing theories and therefore have a managerial implication. Managers, dealing with t-shirt market in Bangladesh, should focus more on communicating product knowledge to the customers than communicating foreign brand name and COO to influence their perception of product quality. Perceived product quality in due course will lead positively to purchase intention.

Key Words: ***Foreign Brand Names, Country of Origin, Product Knowledge, Perceived Product Quality and Purchase Intention.***

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Introduction:

The effect of country of origin (COO) on consumers' perceptions and purchasing intentions is a common theme in marketing (Godey et. al 2012). This paper is concentrating its focus on a specific product category – t-shirt. Products' country of origin is now used as a variable for determining the quality of products (Kalicharan 2014). Specially in developing countries, the customers perceive the product of foreign country's to be higher in quality. Scenario is not atypical in Bangladesh, a developing economy in South Asian region. Even the people think their neighbor country's products (India, Thailand and Nepal etc.) are much trustworthy in terms of quality and manufacturing standard though these are not leading economies in the world. It has been observed that in the clothing sector, customers purchase domestic products by perceiving it as a foreign origin often due to foreign sounding names. Usually, prominent Bangladeshi clothing (men's wear) manufacturers' use these names despite using any local sounding name such as Cat's Eye, Gentle Park, Easy etc. Brand name is one of most influential contributor to overall brand positioning. From a brand's name customers can infer its country of origin (COO), associate the COO with perceived product quality regarding or regardless sufficient product knowledge and therefore form up their purchase intention. This study closely examined to find out the impact of COO, product knowledge and foreign brand names on the product quality and eventually on purchase decision.

Background of the Study:

The process of globalization has made some radical changes in international marketing. Through this consumers are now getting easy access to products, related information and alternatives. Fukunishi and Yamagata (2014), experts in international development said that the garment industry was the main factor of globalization in Bangladesh. As a consequence of globalization, products of different categories from furthest corner of the world can be found in another region. Bangladeshi industries and market are also flooded with thousands of foreign companies and brands. Textile industry in Bangladesh is a highly competitive one consisting both foreign and local brands. According to the International Trade Statistics 2015 by WTO, Bangladesh is the third largest clothing manufacturer (5.10%) with a growth rate of 4.60% (Hasan 2015). This paper concentrated on a single product category - t-shirt. Some well-known

brands are Infinity (Bangladesh), Calvin Klein (USA), Cat's Eye (Bangladesh), Polo (USA), Ecstasy (Bangladesh), Manyavar (India) etc.

Statement of the Problem:

Despite having a heritage of producing apparel consistent with home culture and being one of the leaders in RMG sector, Bangladeshi (COO) brands are facing tough competition from their counterparts of foreign countries. This paper is an attempt to find the driving forces for which customers are purchasing foreign apparels instead of having local quality products. The paper aims to find out whether foreign brand names, country of origin and product knowledge have an impact on perceived product quality. The study also examined perceived product quality's impact on purchase intention.

Objective of the Study

The broad objective of this paper is to investigate the country of origin (COO) effect on local customers' purchase intention. Specific objectives of this study include specifying a model portraying the effect of foreign brand names, the location where the product is produced/designed, the amount and depth of product knowledge on the perceived product quality and its impact on purchase intention. The study also aims to provide some recommendations for local brand managers to achieve a more competitive position in the apparel industry.

Literature review

The Country of Origin (COO) can be referred to "the place where the product has originated or manufactured or place which is associated by consumers with the product" (Munjal 2014). The country of origin effect can be broadly defined as "any influence, positive or negative, that the country of manufacture might have on the consumer's choice processes or subsequent behavior" (Samiee 1994). This effect can be further decomposed into two wings: COB and COM. Uddin et.al's (2013) study revealed the empirical evidence of Country of Brand (COB) and Country of Manufacture (COM) image importance by the consumers in emerging markets (Bangladesh). It

was said that customers consider both Country of Brand and Country of Manufacture for forming up their price perception of a product. Ghalandari and Norouzi (2012) stated that the effect of production origin country on individuals' willingness to purchase a product with low product knowledge is greater than the one who has high product knowledge.

Studies suggested that COO works as an external cue of a product's overall functionality (Elliot and Cameron 1994; Kral 2015). In a pilot study conducted on the consumers of Turkey, (Boran, 2013) found that consumers deduce hints about the quality of the product from the COO. Another study on the same country consumers, Ergin et al (2014), found that consumers have a very positive attitude towards products and services with foreign brand names. Consumers have a potential tendencies to purchase products with foreign brand names more so than the products with domestic brand name. Moslehpour and Huyen (2014) stated that consumers are willing to obtain high quality foreign famous brands at high prices. Kalicharan (2014) stated that when consumers are aware of certain country characteristics, they are more inclined to use COO as an external cue in evaluating product quality. The study also argued that consumers prefer a higher evaluation of product qualities that are from developed countries owing to technological advances and competitive nature of the markets in these countries. Tran and Fabrize (2013) found that national brands elicit more positive consumer perception than foreign brand. The study also stated that product attribute information moderates the relationship between brand names and consumer perception.

The country of origin effect has been in discussion for last 80 years. There is huge existing work on this particular topic. Elliot and Cameron (1994) conducted a study on Australian (developed) consumers on a ground of 'buy Australian' campaign and concluded it saying that relative to other product attributes, COO information is generally of low importance. The research argues if the 'price' and 'quality' (attributes) of locally made product is parallel or better consumers have strong preference for those products. In case of significant perceived quality differences where local made products are not quality leader , consumers prefers developed countries' products perceiving those to be of higher quality. On the other hand, Ramsaran (2015), covering the consumers of Mauritius (developing economy), argued that respondents perceives "imported products to be superior to domestic those originating in the home country." In addition, the research found that the 'home' country brands completed in consumers mind only when it comes to price. Another survey conducted on Indian customers by (Kinra 2006) found that consumers

are highly aware of the foreign brands of different product categories in their market. According to the study the COO credibility of foreign brands is a significant factor that influences consumer's attitudes and preferences to the extent that it is highly correlated with 'quality' and 'status and esteem'. Further, it was said that, in case of non- durable products local brands are preferred more than foreign ones. Overall the study found that foreign brands are perceived to be more reliable and safe by Indian consumers than local brands. The findings from the empirical study of Sharma (2011) showed a significant main effect of COO and Home country on the product evaluations and purchase intentions. Thus a wide variety of findings can be seen from developed countries consumers' perception to developing countries. Further the study of Cai et al (2004) concluded that the degree of economic development of the producing country does affect the consumers buying intentions. Another study of Yunus and Rashid (2016) found that the growing economy and country's effort in technological and economic development seemed highly influence how consumers have a favorable perception of a country's image, product quality and its brand familiarity.

Scenario is a bit different for the global brands. Haefner and Rosenbool (2009) told that consumer's purchase decision in low involvement products is more influenced by brands than by COO. The study found that women are supposed to pay more attention on COO of a global brand for both high tech products and personal grooming products.

A study of Godey et al (2011) presented the combined effect of brand and COO on consumers' decision to purchase luxury products. A survey result, collected from 7 countries with a sample size of 1102, clearly identified the important criterion necessary for purchasing a luxury product-brand, COD, design and COO (hierarchical order maintained). In terms of non luxury products the element COM and COO come 5th and 6th in position among 8 factors that influences customers purchase decision. The study said that in case of luxury goods the impact of COO is weak also narrating that this scenario can be changed across the world. Shirin and Kambiz (2011) found that the COO image, product knowledge and product involvement have a significantly positive influence on consumer purchase decision. Shahrokh et.al (2014) study also supported the findings but in a slightly different way based on the decomposition of COO: COB and COM. According to that study, COB image has positive impacts on brand loyalty and purchase intention. In contrast COM does not have. Mostafa (2015) found that COB has a significant positive relation with every dimension of Customer based brand equity (perceived

quality, brand loyalty, brand image and brand awareness) and a positive influence on overall brand equity. Another Study of Saleem et al (2015) found that perceived product quality has a significant relationship with consumers' purchase intention. Similar finding was obtained in the research of Tsiotsou conducted on Greek students in 2015.

Melnyk et al (2010) completed a study on actual and implied COO and its impact on the customers. The research concluded by saying that confusion between the actual COO and the implied COO decreases purchase likelihood asymmetrically. The confusion has an impact on hedonic categories but hardly had an impact on utilitarian product category. The study also stated that this incongruence decreases purchase likelihood more if the COO is an emerging rather than a developed country. Ismail et al (2012) found important product attributes for consumers using international products - quality, status and symbol and current fashion and trends.

Kral (2015) suggested in a case study that the COO can have a positive effect on a company's marketing strategy (when the company is perceived positively) but could also be a big obstacle for market entries. According to the study the identity of the country can't be solely controlled by marketer of a company. It depends on so many factors such as-social, economical and technological. However, managers can create the identity of the brand and have a distinctive image on consumers mind. Eventually the brands play the role of ambassador of their culture abroad. The study mentioned 'national image hexagon' consisting six factors namely tourism, exports, governance, investments and immigration, culture and cultural heritage and people; that influence the image of the country abroad.

Javed (2013), completed a survey in Pakistan, found that some domestically made products are favorable such as fabrics but unfavorable in other categories such as electronics and cosmetics* in which they prefer Japan and USA respectively for perceived higher quality. On a quite similar ground, Kinra et al (2006) found, after conducting a survey on Indian customers that in case of durable or highly technical product categories consumers prefer foreign brands rather than domestic. Adina et al. (2015) said that a brand's COO can influence the perceived positioning by reducing perceived risks, acting as a guarantee and enhancer for the positioning strategy.

Research Question

Broadly, this paper tries to identify whether the COO and foreign brand names have an influence on consumers' purchase decision. Specific components/RQs are stated below -

a) Do foreign brand names have a different influence on perceived product quality?

b) Do local consumers assess the country of origin as an external cue to the product quality?

c) Do local consumers make their perception of product quality based on the accumulated product knowledge?

d) Do perceived product quality influences consumers in purchase decision?

Hypothesis Development and Conceptual Model

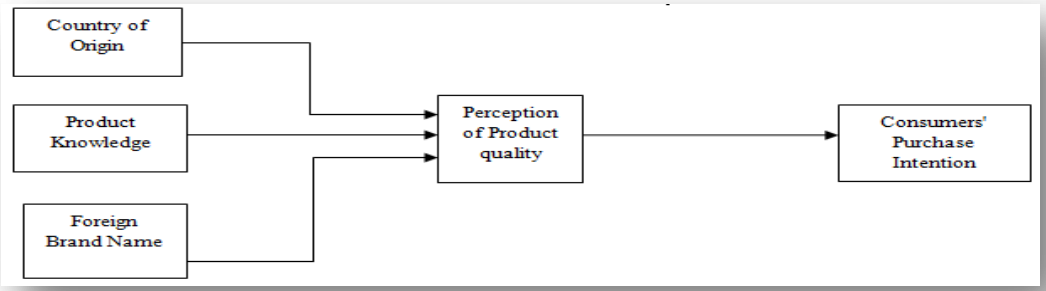

Figure1: Conceptual Model

H1: COO has a direct and positive influence as an external cue to the consumer's perception of product quality

H2: Product knowledge has a direct and positive influence on the consumer's perception of product quality

H3: Foreign Brand name has a direct and positive influence on the consumer's perception of product quality

H4: Product quality has a direct and positive influence on the consumer's purchase intention.

Research Methodology:

According to the literature review, conceptual model and hypothesis, following constructs are defined -

Operational Definition of Constructs:

(C1) Foreign brand name[FNB]: The name of a certain brand whose origin(manufacture/design) is a foreign country (Exogenous;6 indicators); (C2) Country of origin[COO]: The place where the product is actually manufactured/designed or the place of corporate headquarter of a company producing a particular product (Exogenous; 7 indicators); (C3) Product knowledge [PRK]: The accumulated knowledge about the products function, benefits and usage experience (Exogenous; 3 indicators); (C4) Perceived Product quality[PRQ]: The extent to which a brand can produce quality products (Endogenous; 5 indicators); (C5)Purchase intention[PURIN]: An individual's conscious plan to make an effort to purchase a brand (Endogenous; 4 indicators).

Product and Country Selection:

Men's wear (t-shirt) is interest of this paper. The study is concerned with describing the purchase intention of consumers from Bangladesh, a developing economy in South Asian region. The product category is chosen as this industry is having both local and foreign brands in the selected country.

Sources of Data:

Secondary sources for this paper are: International peer reviewed i) articles, ii) journals (published by Emeralds, Science Direct, Springer, Elsevier) iii) websites (*i.e.* Google scholars, Harvard Referencing Websites) and book namely Marketing Research: An Applied Orientation by Naresh K Malhotra from note worthy publisher Pearson Education Inc.

This study collected primary data through customer survey method (Malhotra and Das, 2011),.

Questionnaire Design:

The questionnaire design of this paper includes seven major parts - demographic profiles, most purchased brands for t-shirt along with their country of origin, foreign brand names, country of origin, product knowledge, product quality and purchase intention. The items of 'foreign brand names' are selected based on the study of Godey et al (2011); Kral (2015) and Ergin et al (2014). 'Country of origin' indicators are taken from Uddin et al (2011); Cai et al. (2004) and Kral (2015). However, the observed variables for 'product knowledge' came from the study of Shirin and Khambiz (2011). 'Perceived product quality' indicators are chosen from Aaker (1991). Indicators of 'purchase intention' are taken from of Ghalandari and Norouzi (2012); Hustic and Gregurec (2015). The most used or purchased brand by consumers along with their country of origin were inserted as leading questions [question that leads the respondents to answer in a certain way (Malhotra and dash 2011)]. Through these questions the respondents were able to identify the brands they use and can answer the rest of the questions associating with those product category and brand names. Moreover, five constructs were measured on a 7 point likert scale. Leading questions were given in a fixed alternative format based on the renown brands in the industry. The questionnaire was pretested three times on a group of 15 respondents who were included in the target population prior to final field work of data collection.

Sampling Design and Procedure:

The study mainly focuses on young (age: 18-26 years) male respondents as they are main users of t-shirt and usually make the purchase decision. For this particular study, students of FBS, DU were considered as the target population. Currently, around 6092 students are enrolled in 5 running batches from 8 departments (FBS Website). Data were collected in last week of November 2016. There were three qualifications to be fulfilled to be a respondent: 1) Respondents have to be male, 2) Age: 18-26 years. 3) Student of Faculty of Business Studies, Dhaka University.

Sampling Design
Target population: Students meeting the three qualifications with a studying experience of at least one year at Faculty of Business Studies, University of Dhaka**.**
Sampling Frame: The students' list from respective departments.
Sampling Technique: Judgmental Sampling
Sample Size: 300*
Execution: 12 members were assigned to collect data in four areas – classroom, food court, e-library and department office to allocate questionnaires among qualified respondents with a personal interview approach.

**Malhotra and Dash (2010) stated that SEM models, which have five or fewer constructs containing three or less indicators and communalities are less than 0.5, at least have a sample size of 300.*

Table 1: Sampling Design

Data Analysis:

Structural Equation Modeling (SEM) with AMOS software (IBM SPSS Amos Version 23) was used for data analysis. The study aims at finding a dependence relationship among certain constructs to describe the purchase intentions of local consumers.

Results

This part consists of several sections. The analysis results are presented below –

The conceptual model consists of 5 constructs. Foreign brand name, product knowledge and country of origin are assumed to have an impact on perceived product quality which in turn will have an effect on purchase intention. Before estimating measurement model, internal consistency reliability test was done using SPSS version 16.0. There were 29 items and all the items are presented along with their designated constructs in *Appendix 1*. To obtain internal consistency reliability (Prk4; Prk5; Purin5; Purin6) were removed from the constructs. Results of Cronbach's Alpha are presented in Table 2.

Scale	Items	Cronbach's Alpha
Product Quality	5	.668
Purchase Intention	4	.743
Foreign Brand Name	6	.721
Country of Origin	7	.716
Product Knowledge	3	.612

Table 2: Internal Consistency Reliability test of items

As all the items of respective constructs are having a value of greater than .60, therefore, we can say that the items are having internal consistency reliability (Malhotra and Dash 2010). As the scales show internal consistency reliability, the measurement model is estimated.

The Measurement model:

In this case, measurement model is specified in a way that the five constructs are allowed to correlate with each other and five constructs are associated with their designated items but not with other items. The CFA results indicated that the model fits the data well (x^2=353.880, df=179, p>.001 along with a GFI = .899; CFI =.888; NFI=.801; RMSEA=.051). But observed variables (Prq4;Prq5;Prk3;Purin4;Fnb5;Fnb6;Coo4;Coo6;Coo7) had loadings below .50 and therefore to obtain convergent validity, were omitted from the calculation. The measurement model is portrayed in Figure 2.

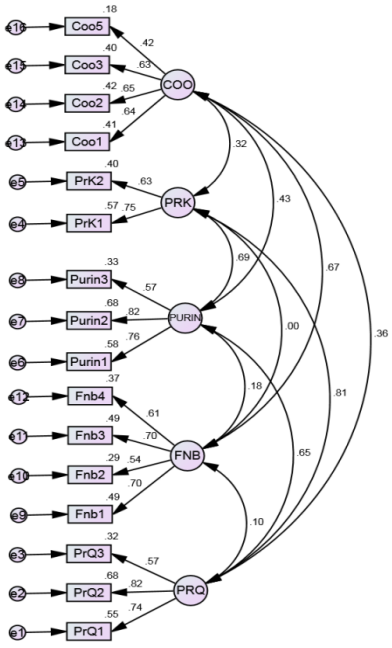

Figure 2***: Measurement Model***

The measurement model (n=300) yields the following model fit results:

	GFI	**CFI**	**CMIN/DF**	**NFI**	**RMSEA**	***X²***
Value	.918 (higher values above .90 resembles a good model fit.)*	.913(values above .90 resembles a good model fit.)*	2.305 (values within 2.0-5.0 resembles a good model fit)*	.858(values above .90 resembles a good model fit.)*	.066 (values lower than or equal .08 resembles a better fit.)*	Chi-square = 216.658 Degrees of freedom = 94 Probability level = .000

Table 3: Model Fitness: Measurement Model. **Cut off values (Malhotra and Dash 2010)*

The CFA showed the following loadings:

Construct	Item	Standardized Loadings	P
Product Quality	Prq 1	.74	***
	Prq 2	.82	***
	Prq 3	.57	***
Product Knowledge	Prk 1	.75	***
	Prk 2	.63	***
Purchase Intention	Purin 1	.76	***
	Purin 2	.82	***
	Purin 3	.57	***
Foreign Brand Name	Fnb 1	.70	***
	Fnb 2	.54	***
	Fnb 3	.70	***
	Fnb 4	.61	***
Country of Origin	Coo 1	.64	***
	Coo 2	.65	***
	Coo 3	.63	***
	Coo 5	.42	***

Table 4: Standardized Item loadings for designated Constructs; ***p<.001

The result showed that all the observed variables are having significant loading ($p<.001$) of greater than .50 except Coo5. But this has a significant loading therefore is considered further in the calculation. The result of regression weights are attached in Appendix 2.

Construct Reliability, Average Variance Extracted and Correlation matrix:

To assess the measurement model reliability and validity, composite reliability, average variance extracted and correlation matrix were calculated. The results are shown in the following table:

Name	CR	AVE	FNB	PRQ	PRK	PURIN	COO
FNB	0.733	0.410	**0.640**				
PRQ	0.758	0.516	0.099	**0.718**			
PRK	0.649	0.483	0.002	0.806	**0.695**		
PURIN	0.766	0.528	0.176	0.648	0.687	**0.726**	
COO	0.680	0.352	0.669	0.364	0.318	0.430	**0.59**

Table 5: Construct Reliability, Average Variance Extracted and Correlation matrix

The composite reliabilities of 0.70 or higher are considered good (Malhotra and Dash 2010). Three of five constructs have values above .70. Moreover, other two constructs are having values above .60 and close to .70. Thus the model is acceptable in terms of reliability. AVE greater than .50 and .70 establishes convergent validity. The result shows that there are two constructs which has values greater than .50. As observed variables' loadings *(See Table 4)* are all significant and higher than .50 *(except one)* therefore convergent validity was established. Discriminant validity is achieved if the square root of AVE is larger than the correlation coefficients (Malhotra and Dash 2010). The condition (AVE>R2) is fulfilled in 8 of the 10 cases. In summary, overall the scale items were both moderately reliable and valid for structural model.

Structural Model:

As the models showed relatively bad fit the three times the models were run to have a better model fit. The fitness indices are compared below-

Fit indices	Recommended level	Model Fit
X^2		220.328
Df		96 (p<.001)
CMIN/DF	Within 2-5	2.395
GFI	>= .90	.912
CFI	>= .90	.904
RMSEA	<=.08	.068
NFI	>= .90	.848

Table 6: Comparison of Structural Model Fitness of three modified models

Our proposed model was found to fit the data satisfactory as the values were well within acceptable range. The structural model is portrayed in the following figure:

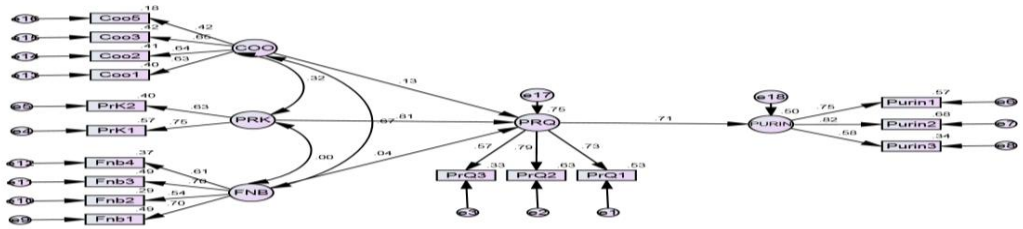

Figure 1: Structural Model

Hypothesis testing:

The results are shown in the following table:

Hypotheses				Estimate (Unstandardized)	Estimate (Standardized)	S.E.	C.R.	P	Decision
H1	PRQ	<---	COO	.159	.133	.153	1.042	.297	Unsupported
H2	PRQ	<---	PRK	.770	.809	.111	6.920	***	Supported
H3	PRQ	<---	FNB	.039	.042	.106	.365	.715	Unsupported
H4	PURIN	<---	PRQ	.668	.709	.077	8.663	***	Supported

Table 7: Hypothesis testing of Structural Model

According to the results, Country of Origin (COO) doesn't have a significant impact on perceived product quality (PRQ). Therefore H1 (γ= 0.159, p>0.05) is not supported. Product knowledge (PRK) has a positive and significant impact on product quality (PRQ) (γ= 0.770, p<0.001), therefore, supports H2 that *Product knowledge has a direct and positive influence on the consumer's perception of product quality.* Foreign brand name doesn't have a significant impact on perceived product quality (PRQ). Therefore, H3 is not supported (γ= 0.039, p>0.05). Finally, the results show that perceived product quality (PRQ) has a significant impact on consumer's purchase intention (γ= 0.668, p<0.001) therefore supports H4 *Product quality has a direct and positive influence on the consumer's purchase intention.* Regression weights result for structural model are attached in *Appendix 3*.

Interpretation and Discussion:

Country or Origin (COO):

The results provided evidence that the customers don't use COO as an external cue of a product's quality. It is not consistent with the previous studies (Elliot and Cameron 1984; Godey et al 2011; Kral 2015). So it can be inferred that in terms of forming up the perception of product quality of t-shirts, customers (university students; age: 18-26) generally do not assess the origin of that country, the location of corporate headquarter, whether the country is developed or developing in terms of economy and culture and cultural heritage of that country.

Product Knowledge (PRK):

The results provided significant evidence that Product Knowledge highly influences the customers to form their perception of product quality. Previous theories (Shirin and Khambiz 2011; Shahrokh et. al 2014; Ghalandari and Norouzi 2012) suggested that product knowledge has a direct influence on purchase intention. This study reveals that in terms of t-shirt, product knowledge has an indirect effect on purchase intention and has a direct effect on perceived product quality. Therefore, it can be inferred that customers evaluate product knowledge about attributes and specifications to have a perception of product quality.

Foreign Brand Name (FNB):

The results provided evidence that Foreign Brand Name does not have a significant influence on perception of product quality. However, this study portrays only a sample of university students thus the result can be generalized to that particular customer segment. For another product category and another customer segment, the result may vary.

Perceived Product Quality (PRQ):

The result provided significant evidence that perceived product quality has highly positive influence on consumers' purchase intention. Therefore, it supports the previous findings of Saleem et al (2015) and Tsiotsou (2015). It can be inferred that customers form up their

perception of product quality based on product knowledge. In turn, the perceived product quality positively influences them to have a purchase intention.

Limitations and Delimitations:

The study showed an acceptable model fit. Due to time and budgetary constraints, non probability sampling technique was used instead of probability sampling technique. The study only focused on a particular customer segments and a single product category. Therefore, the findings can't be generalized to a wide variety of product categories and customer segments. Such as Foreign Brand Name may have a significant impact on other customer segments with different product category. However, the study contains evidence of statistical significance that H2 and H4 are supported. The scope of the study was narrowed down so that the findings can be generalized among this certain customer segment. The respondents (students) were chosen in an age range (18-26 yrs) as, in terms of usage rate, they highly use t-shirt for their apparel. Moreover, respondents were assumed to have a proper understanding about the product quality, country of origin and foreign brand name and product knowledge and the overall questionnaire as they have an educational experience up to university level. And therefore were assumed to have answered all the questions correctly according to their own views.

Recommendations:

The present structure scrutinizes the consumer purchase intention. Marketers, both local and foreign, can apply the results of this study in their marketing strategy to protect their own brands. First of all, both marketers need to take care of their product quality as it positively leads to customers purchase intention. Marketers need to consider other variables which influence their perception of product quality such as durability and comfort. Due to the fact that customers' product knowledge leaves a positive impact on product quality perception, it is recommended that companies would be benefited if they emphasize on communicating product knowledge (fabric; material; made in and other product specifications) to customers. The informing process can be achieved using various media channels. Foreign brand name doesn't have a significant effect on the customers' perception of product quality therefore foreign marketers may emphasize less on brand name. This may imply as a positive sign for local

marketers to take their brand names using indigenous language. Country of origin doesn't significantly influence customers' perception of product quality and implied that, in terms of t-shirt, they do not assess COO as an external cue to perceive the product quality of a certain brand. Foreign marketers can create awareness for their origin of country, may establish a distinct positioning in customers mind that this country produces superior quality product. However, this not only depends on that particular brand. Products of various categories from a country build up the image that the country's brands produce quality product. Local managers can capitalize on this to have an edge over the foreign competitors by providing superior quality product. Lastly, it is eternal for all the brands regardless of product categories and customer segments that product should provide superior quality than other competing brands. Foreign and local brand managers need to produce quality products, ensure customer requirements are maintained and highest possible value is delivered to extract positive purchase intention from target people.

Conclusion:

The verification of the hypothesis in this paper leads to certain conclusions: product knowledge positively and significantly influences perception of product quality which positively influences purchase intention. However, only for this particular product category (t-shirt) and customer segment (students) and in one country (Bangldesh), COO and foreign brand name don't have a positive and significant impact on customers' perception of product quality. According to the globalization and since young people used to see the products from around the world, this finding is not enough to take managerial decisions. Existing strategies undertaken by marketers to communicate their country of origin, foreign brand name, product knowledge and product quality should be closely monitored as much as possible. Identifying and examining the sources of their success and failure regarding as a result of these strategies may help vastly to take an effective decision. Further research also should be conducted for the same product category grabbing a large target population so the results may be implemented in the whole market. As there is little exiting work regarding country of origin effect in Bangladeshi context, research should be conducted for several industries to help both foreign and local marketers with valuable findings.

Appendix:

Appendix -1: Regression weights of Measurement Model.

Regression Weights: (Group number 1 - Default model)			Estimate	S.E.	C.R.	P	Label
PrQ1	<---	PRQ	1.000				
PrQ2	<---	PRQ	.979	.082	11.913	***	par_1
PrQ3	<---	PRQ	.742	.084	8.862	***	par_2
PrK1	<---	PRK	1.000				
PrK2	<---	PRK	.841	.094	8.924	***	par_3
Purin1	<---	PURIN	1.000				
Purin2	<---	PURIN	.945	.080	11.819	***	par_4
Purin3	<---	PURIN	.730	.081	9.029	***	par_5
Fnb1	<---	FNB	1.000				
Fnb2	<---	FNB	.692	.090	7.649	***	par_6
Fnb3	<---	FNB	.888	.096	9.282	***	par_7
Fnb4	<---	FNB	.810	.096	8.469	***	par_8
Coo1	<---	COO	1.000				
Coo2	<---	COO	1.000	.122	8.163	***	par_9
Coo3	<---	COO	.986	.123	8.047	***	par_10
Coo5	<---	COO	.607	.103	5.915	***	par_11

Appendix 2: Regression weights of Structural Model:

			Estimate	S.E.	C.R.	P	Label
PRQ	<---	COO	.159	.153	1.042	.297	par_12
PRQ	<---	PRK	.770	.111	6.920	***	par_13
PRQ	<---	FNB	.039	.106	.365	.715	par_14
PURIN	<---	PRQ	.668	.077	8.663	***	par_15
PrQ1	<---	PRQ	1.000				
PrQ2	<---	PRQ	.965	.082	11.836	***	par_1
PrQ3	<---	PRQ	.764	.086	8.890	***	par_2
PrK1	<---	PRK	1.000				
PrK2	<---	PRK	.842	.096	8.805	***	par_3
Purin1	<---	PURIN	1.000				
Purin2	<---	PURIN	.952	.083	11.510	***	par_4
Purin3	<---	PURIN	.747	.082	9.075	***	par_5
Fnb1	<---	FNB	1.000				
Fnb2	<---	FNB	.690	.090	7.632	***	par_6
Fnb3	<---	FNB	.889	.096	9.284	***	par_7
Fnb4	<---	FNB	.811	.096	8.474	***	par_8
Coo1	<---	COO	1.000				
Coo2	<---	COO	.997	.124	8.025	***	par_9
Coo3	<---	COO	1.016	.126	8.064	***	par_10
Coo5	<---	COO	.612	.104	5.877	***	par_11

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"Human resource management practices (HRMP) and its impact on employee's performance of the textile industry": An exploratory study in the readymade garments sector in the southern region of Bangladesh.

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ABSTRACT

The success of workers in human resource management is one of the most researched subjects. This is because of the effects of organizational success can be meaningful for dedicated workers. Human resource management (HRM) in organizations, which help them gain a competitive edge is considered one of the most significant multipliers. "This is a compendium of the entire object that seeks to examine human resources management practices (HRMP). Sound recruitment and Selection (SRS), proper training and development (PTD), appropriate compensation and reward (ACR) or timely performance evaluation (TPA), and its Impact on the employee's performance of textile employees in Barishal." Based on the literature review, there are limited data on the management of human resources and performance of employees in the garment sector in Bangladesh. The data were collected using an organized survey of 242 employees in the textile industry in Barishal to achieve this goal. SPSS and Structural Equation Modeling (SEM) analyzed the collected data and knowledge. The results showed that successful management of human resources have a significant positive impact on organizational success. The findings showed that sound recruitment and selection have a substantial positive impact on the performance of employees. The effect on the employee's results of adequate training and growth was also positive and statistically significant. Suitable benefits and remuneration have a significant positive impact on the success of workers. Finally, the findings demonstrated that an early assessment of performance has a substantial positive effect on the performance of the employees. These results are intended to provide positive suggestions for management in the garment industry in Bangladesh to improve their employees ' organizational performance by focusing on good recruitment and selection, functional training and development, suitable compensation and compensation, and timely evaluation of performance. Besides, quantitative methods have been used as the critical tool for collecting data, which may be regarded as limitations of this research, taking account of paper.

Keywords: Readymade Garments (RMG), Human Resource Management Practices (HRMP), Sound Recruitment & Selection (SRS), Proper Training & Development (PTD), Appropriate Compensation & Reward (ACR) or Timely Performance Appraisal (TPA).

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1. Introduction:

The discipline of human resources management (HRM) is aimed at promoting and encouraging employee training, recruitment, development, and management to increase employee efficiency and satisfaction (Mutua & Kinyili, 2017). HRM activities can be a significant universal remedy to assert the abilities, attitudes, and arrogances of employees, leading to an organization's better performance (Atteya, 2012). Previous research studies have shown a strong and optimistic relationship between HRM activities and work performance (Manzoor, Sadozai& Jan, 2016).Best HR practices can only ensure the continued success of business organizations in today's information organizations where interest is trapped in the workforce (Shaukat, Ashraf, & Ghafoor, 2015). "Human resource management has become a core part of many organizations in recent years, with one of their fundamental duties being to provide engaged workers to their employers" (Quarterly, 2013). Bratton and Gold (2012) indicate that HRM is a pragmatic approach to managing employment relationships that illustrates the increasing potential of the individual. A big part of HR is to provide engaged workers to organizations that can contribute to improved work satisfaction and efficiency (Mason, 2017). Besides, managers have a social obligation to provide a pleasant work environment for the staff. They know that happier workers make a positive contribution to the company in terms of higher efficiency, better goods and services, and less waste (AGOI, 2016). Effective Human Resource practices are a recent trend in developed economies such as ours (Ahmed, 2013; Masud, 2018, 2019).

Most companies follow the activities of Human Resource to the point of land law enforcement. Human resources are the source of competitive advantage due to their ability to turn other resources (money, machinery, methods, and material) to production (product/service) (Shaukat et al., 2015). "Employees are considered strategic assets, which is essential. Workers may also be a competitive advantage if their employer pays more attention and invests in improving the skills of employees on the job. Previous empirical research showed that positive and proper effective implementation of some human resource management practices (HRMPs) empower and boost employees ' efficiency" (Masud & Ferdous, 2016).

HRM's best practices thus encourage production by workers, which in effect encourages success (Jouda, Norulkamar, Ahmad, & Dahleez, 2016). Besides, the organization's growth, progress, and expansion are highly dependent upon its success. Moreover, the performance of the employees is related to employee satisfaction (Alshaikhly, 2017).

The key to sustaining a profitable company or a healthy economy is, therefore, the productivity of the workforce that can be achieved through improved HRM practices (Sarker & Afroze, 2014). Previous research shows that HRM practices and job performance has a direct and positive relationship. The paradigm shift in HRM practices can lead to a positive correlation with the performance of organizations (Atteya, 2012).Organizations can improve the quality of current staff by providing comprehensive HRM activities. Incentive compensation and performance management systems improve the performance of employees and organizations (Munjuri, 2011).

Readymade Garments industries are an export-oriented company in Bangladesh. The Readymade garments (RMG) industries take up a unique position within the Bangladesh economy. It's the most important exporting business in Bangladesh that seasoned extraordinary growth throughout the last thirty years (Masud&Mondal, 2017). Without the progress of this sector, the progress of Bangladesh is not possible. As human resources are essential for every organization, it is possible to improve this sector by improving human resources. It is designed and implemented in such a way that human capital plays a significant role in achieving the organization's goals and impacts the employee's performances (Bureau of Labor Statistics, 2017; Masud, 2018; Masud & Islam, 2018).

2. Literature Review, Conceptual Framework, Objectives, Research Problem and Hypotheses:

HRMPs are essential to an ideal integration for success in the global business environment. HRMPs are vital to the effective and efficient implementation of HR policies to achieve the organizational objective and the best performance of employees. Moreover, implementing HRMPs effectively leads to motivating, retaining employees to improve individual and organizational performance (Jouda et al., 2016). There is growing concern about the belief that human resources should be valued as essential assets rather than costs to the organization and as a strategic factor promotes and promotes sustainable competitive ads. Besides, successful HRMPs have led to an improved level of individual and organizational performance (Khan, Arafin, & Hossain, 2017).

The findings obtained under such research works have been briefed as follows: Some of these research work challenges the existence of a link between human resource management practices and organizational performance and HR activities that seem to have a more critical relationship with employee performance has been attempted to identify:

"Delaney and Huselid (1996: 949) found positive associations between human resource management (HRM) practices, such as training and staffing selectivity, and perceptual firm performance measures (using the sample of = 590 for-profit and nonprofit firms)".
Pfeffer (1998: 96) "has proposed seven HRM practices that are expected to enhance organizational performance: (1) employment security; (2) selective hiring of new personnel; (3) self-managed teams and decentralization of decision making as the basic principles of organizational design; (4) comparatively high compensation contingent on organizational performance; (5) extensive training; (6) reduced status distinctions and barriers, including dress, language, office arrangements, wage differences across levels; (7) extensive sharing of financial and performance information throughout the organization" (Ahmad & Schroeder, 2003: 20).
Jayaram et al. (1999: 1) "examined relationships among dimensions of human resource management practices and manufacturing performance of first tier suppliers to the Big 3 in North America. The study found support for the proposed framework, suggesting that human resource management practices can be grouped into five distinct factors, four of which are associated with specific manufacturing competitive dimensions" (quality, flexibility, cost and time).
"Several human resource management practices have been reported as key factors affecting both manufacturing performance and competitive advantage. Jayaram et al. (1999:3) conducted a study on top management commitment, communication of goals, employee training, cross functional teams, cross training, employee autonomy, employee impact, broad jobs, open organizations, effective labor management relations".
Cho et al. (2006: 262) "investigated the relationship between the use of 12 human resource management (HRM) practices and employees performance measured by turnover rates for managerial and non-managerial employees, labor productivity, and return on assets. The results of regression analyses indicated that companies implementing HRM practices such as labor- management participation program, incentive plans, and pre-employment tests are more

likely to experience lower turnover rates for non-managerial employees".

The research work that shows that HRM practices vary by country and type of industry, the findings of Ahmed and Schroeder (2003) provide overall support for Pfeffer's 7 HRM practices and empirically validate the ideal HRM system for manufacturing plants. Their study shows that there are differences in HRM practices in plants operating in different countries and industries (in particular, the extent to which some HRM practices are used in plants operating in the machinery industry has consistently lagged behind those found in garment industry plants).

Meyer & Smith (2000:319) "reported that relations between employees evaluations of HRM practices and their affective and normative commitment were largely mediated by perceptions of organizational support and procedural justice" (using the sample of = 281).

Conway (2003) "study extends on the literature by examining whether stage of the career of an employee has a moderating influence on the HR-performances relationship. The findings highlight the extent to which interaction effects are evident regarding attitudes towards HR practices and continuance and normative commitment, though not affectiveemployee's performances".

Paul &Anantharaman (2004: 77) "indicated that HRM practices such as employee-friendly work environment, career development, development oriented appraisal, and comprehensive training show a significant positive relationship with organizational performances".

Shahnawaz&Juyal (2006) "explored and compared various HRM practices and commitment degrees can be attributed to HRM practices in two different organizations-consultancy/research based organization and fashion industry. HRM practices were found significantly different in two organizations and mean scores on various HRM practices were found more in the fashion organization. Regression result showed that various HRM practices were significantly predicting organizational performances in two organizations and also when they were combined".

Fiorito et al. (2007: 186) "developed and tested hypotheses concerning the influences of human resource (HR) practices and organizational characteristics on employee's performances. Results showed that grievance resolution mechanisms and employee involvement indicators are

positively related to employee's performances and compensation cuts are negatively related to employee's performances".
Qiao et al. (2008) "investigated the effect of HRM practices on employee's performances using the sample of 610 IT employees in total. The hypotheses that information sharing, training and development, recruitment and selection, and compensation management had positive effect on IT employee's performances were partially supported by hierarchical regression".
Gellatly et al. (2009: 869) "examined how employee perceptions of development-oriented, stability-oriented, and reward-oriented human resource management (HRM) practices affected the likelihood of affective and continuance commitment profile membership. They showed ways that organizations can use HRM practices strategically to help shape the nature of overall employee performance" (using the sample of = 317).
Hashim (2010: 785) "examined the management of human resources from the Islamic perspective and its effects on organizational performance among selected employees in Islamic organizations in Malaysia. The results of correlation and regression analysis showed that the Islamic approach in HRM was highly and significantly correlated to employee's performances. About 45 per cent of the employee's performances variance was explained by the Islamic approach in HRM".
Gelade & Ivery (2003) "examined relationships between human resource management (HRM), work climate, and organizational performance in the branch network of a retail bank. They found significant correlations between work climate, human resource practices, and business performance".
Agarwala (2003) "analyses showed that the perceived extent of introduction of innovative human resource practices by the organizations was the most significant predictor or employee's performances".

Identify the variables and Hypothesis Development:

2.1 Sound Recruitment, Selection& Employee Performance:

Recruitment and selection is one of the most essential HRMPs. It is a process of finding, evaluating and having the right people in the right job (Waddock and Graves, 1997; Chaudhuri and Holbrook, 2001; Dickson, Waters, and López-Gydosh, 2012; Masud, 2019). A positive relationship has been reported between recruitment, selection and other procedures that are

effectively used for the selection of applicants who have a significant impact on the performance of employees and on the profits of firms. Many researchers have divided the recruitment process into four phases: (a) review of the need to hire new staff for an unaccompanied position; (b) job analysis; (c) job description; (d) candidate specifications and qualifications. This selection process affects employees and their organizational performance (Frooman, 1997; Masud&Ferdous, 2016). Following the review of previous studies, recruitment and selection are the basic HRMPs and would be used as an independent variable in this study. As a result, ensuring a good and effective recruitment and selection process by the organization leads to improved employee performance (Juda et al., 2016).

Hypothesis-1: *Sound recruitment and selection has a significantly positive impact on employee's performance .*

2.2 Proper Training, Development and Employee's Performance:

Training is one of the main activities of HR in the organization and helps the company to achieve its objectives. According to Grossman and Salas (2011), training is an organized task of information, skills, and attitudes leading to improved performance in a specific situation (Valente & Crane, 2010; Orlitzky, Siegel, and Waldman, 2011; Masud&Mondal, 2017). The next step follows recruitment and selection, therefore, is training and staff development. This process should involve recruits and existing staff. However, careful selection of employees does not guarantee that new staff will perform the tasks effectively. Therefore, firms should design and implement appropriate training programs for those employees to carry out the tasks assigned to them (Rhou et al., 2016; Masud&Mondal, 2017). Training and development are designed to improve employees' performance, their level of competence, and ultimately lead to the promotion of organizational performance. Training and development activities enable organizations to adapt, compete, develop advanced skills, innovate, develop, enhance employee safety, expand service, and achieve firm objectives (Jouda et al., in 2016).

Hypothesis-2: *Proper Training and Development has a significantly positive impact on employee's performance .*

3.3 Appropriate Compensation, Rewards and employee Performance:

Compensation & rewards are one of the essential factors for inducing and motivating workers to achieve greater efficiency and output. "An incentive attracts the attention of workers and encourages them to work. This includes both monetary and a variety of non-monetary prizes (Masud&Alam, 2014; Masud&Ferdous, 2016). They shall be paid to workers in recognition of their outstanding performance. Wages and salaries are relatively fixed, but the incentives vary from worker to worker and from time to time for the same worker. Several scholars discussed the impact of financial, non-financial rewards on employees, and corporate performance" (Peloza&Papania, 2008; Niluthpaul, Khaled, and Kohinur, 2016). On the basis of the discussion, compensation and remuneration were considered to be one of the independent variables to examine the impact of the worker and the performance of the worker as a textile worker (Jouda et al., 2016).

Hypothesis-3:*Appropriate compensation and rewards has a significantly positive impact on employee's performance.*

4.4 Timely Performance Appraisal and Employee Performance:

Performance assessment is an approach to assessing employee performance measurably. The objective of this assessment is to improve the efficiency of an enterprise by seeking to mobilize the best possible efforts of individuals employed there (Frooman, 1997; Freeman, 1994; Masud&Alam, 2014). The primary objective of a performance assessment is to ensure the maximum utilization of the skills, knowledge, and interests of each employee. Measuring and encouraging the performance of employees is a key the determinant of organizational success and competitive advantage (Ployhart et al., 2006). As such, performance assessment has been widely known as a critical process for managing and developing employees working in an organization (Lee, 1985; Eberhardt and Pooyan, 1988; Frooman, 1997;Masud, Alam&Hossain, 2014). Besides, the selection and training practices could be modified based on the information on the assessment of the desired behaviors and attitudes. Another study conducted revealed that HRMPs were positively correlated with the performance of employees (Jouda et al., 2016).

Hypothesis-4: *Timely performance appraisal has a significantly positive impact on employee's performance .*

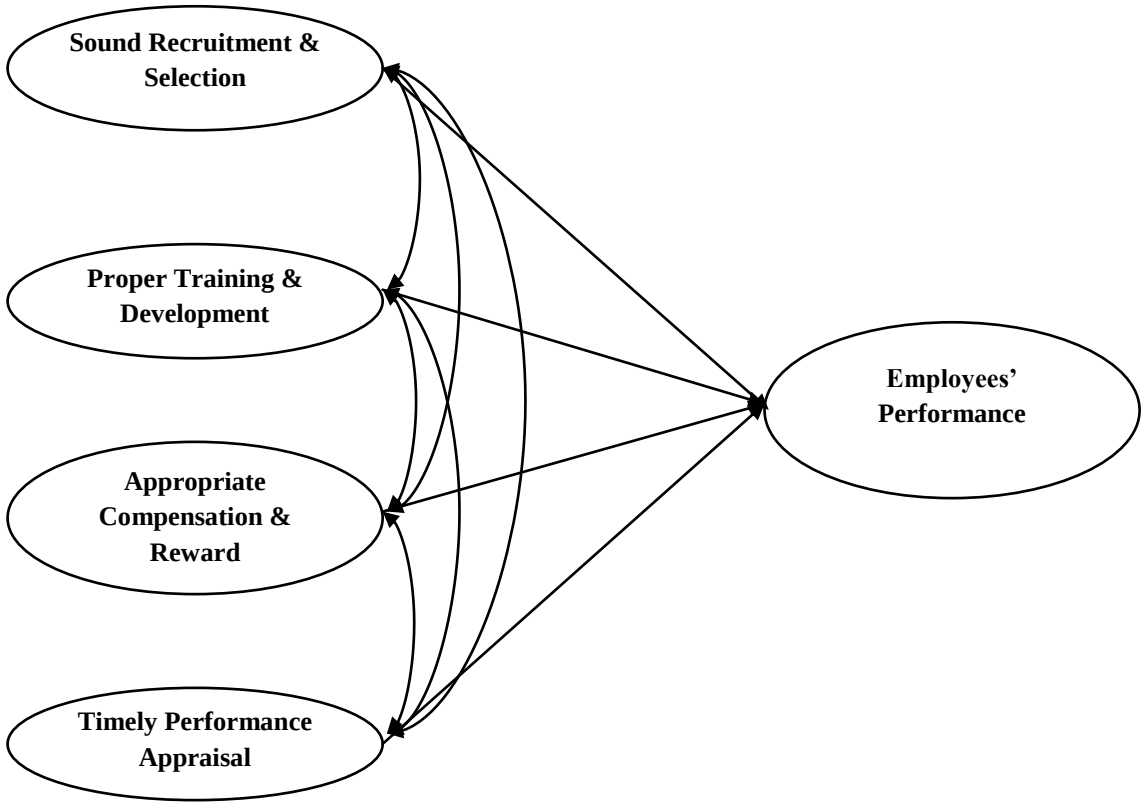


Figure 3: Conceptual framework that shows the impact among the dimensions of HRM practices & employee's Performance .

To examine Human Resource Management Practices (HRMP) viz. Sound Recruitment & Selection (SRS), Proper Training & Development (PTD), Appropriate Compensation & Reward (ACR) or Timely Performance Appraisal (TPA), and its Impact on employee's performance of Textile Employeesandthe specific objectives included are as follow: To determine the relationship between HRM practices and employee performance level of Garments workers. That means the existing HRM activities of Garmentssector positively or negatively impact the performance of Garments employees .

3. Methodology result and discussion of this Study:

This study examines Human Resource Management Practices (HRMP) viz. Sound Recruitment & Selection (SRS), Proper Training & Development (PTD), Appropriate Compensation & Reward (ACR) or Timely Performance Appraisal (TPA), and its Impact on employee's performance of Textile Employees This study followed the quantitative approach for designing the methodology and data collection. To collect the data, a structural questionnaire' was administered to 242 employees (administrative, HR, and blue workers) at some textile and RMG employees in the southern part of Bangladesh. The data collected was then analyzed using SPSS 21 and AMOS-23 structural equation modeling (SEM). SEM is used because previous literature considered it a powerful statistical technique for generating more accurate and reliable findings. Besides, SEM has recently emerged as a new generation data analysis tool and has received a high level of attention from several scholars, particularly for studies that contain intervention variables. The data on CSR practices were collected through a survey of organizations based in Bangladesh basically in Barishal division because, unfortunately, it is difficult to obtain reliable, objective data of any type in Bangladesh (Belal and Cooper, 2001, 2010, 2011, 2016; Masud, Ferdous and Hossain, 2017). The survey was designed in English because English is the language of corporate or international communication (Mishra and Suar, 2010; Elfenbein and McManus, 2010; Masud 2019).

The designated data collection instrument for this study consists of three main sections. Section A covers questions that focus on the demographic profile of participants, such as gender, age, educational qualifications, and work experience. Section B covers questions related to the measurement of employee performance and work engagement. HRMP has four variables to measure, of which twenty were adapted from Mowday, Steers, and Porter (1979). The items were chosen because they had an acceptable Cronbach alpha reliability of more than 0.70. In addition, the performance of employees was measured using a scale of five items adapted from Schaufeli and Bakker (2003). The last section included questions on the Timely Performance Assessment (TPA) measure. Proper Training & Development (PTD) measurement scale was taken from Joo and Park (2010). Finally, the Appropriate Compensation & Reward (ACR) measurement scale was taken from the literature with reference to the McGuire and McLaren (2009) studies. All selected items were measured on a five-point Likert scale of 1 "strongly

disagreed" to 5 "strongly disagreed. The analysis of the results of the data collected is presented in the following section.

4. Result and Discussion:

Of the 870 questionnaires distributed to the respondents, only 242 responded. The descriptive results showed that 65 (26.9%) of them were male and 177 (73.1%) female. On the age profile, 7 (2.9 percent) of respondents fall in the age group between 18 and Twenty-six years of age, 121 (50 percent) in the age group between 26 and 35. However, those aged between 36 and 45 years accounted for 40.5 percent of the total response, while 16 (6.6 percent) were 46 years of age or older. Education profile data showed that 36 (14.9 percent) of the participants had the highest degree qualifications, 79 (32.6 percent) had a bachelor's degree, 125 (51.7 percent) had either a master's degree or a doctoral degree, and 2 (0.8 percent) had additional certificates. In terms of work experience, the majority had more than five years of service in their current institutions.

***Table 3 Construct measure reliability and validity and confirmatory factor analysis and goodness-of-fit indices for measurement* model.**

Construct	Indicator/Items	Standardized	t-Value	Regression weight	SE	*P*	CR	AVE	Cronbachα
Sound Recruitment & Selection (SRS),	**SRS-1**	0.853	**	1.000			0.8851	0.6189	0.994
	SRS -2	0.755	13.049	1.120	0.102	<0.001			
	SRS -3	0.629	13.244	1.208	0.093	<0.001			
	SRS -4	0.816	13.284	1.110	0.092	<0.001			
	SRS -5	0.891	14.334	1.152	0.096	<0.001			
Model fit indexes χ^2 (21) = 58.775; *P* = 0.000; χ^2 /*DF* = 3.889; CFI = 0.994; SRMR = 0.0224; RMSEA = 0.080 (0.050–0.092)									
Proper Training & Development (PTD),	**PTD-1**	0.887	**	1.000			0.919	0.559	0.808
	PTD -2	0.837	12.682	0.880	0.048	<0.001			
	PTD -3	0.982	13.517	0.807	0.046	<0.001			
	PTD -4	0.776	15.868	0.718	0.049	<0.001			
	PTD -5	0.896	14.074	0.880	0.052	<0.001			
Model fit indexes χ^2 (21) = 62.797; P = 0.000; χ^2/DF = 4.040; CFI = 0.985; SRMR = 0.0314; RMSEA = 0.083 (0.053–0.094)									
Appropriate Compensation & Reward (ACR)	**ACR-1**	0.687	**	1.00			0.9344	0.6629	0.929
	ACR -2	0.899	21.395	1.471	0.138	<0.001			
	ACR -3	0.787	21.268	1.106	0.127	<0.001			
	ACR -4	0.934	15.074	1.373	0.119	<0.001			
	ACR-5	0.934	14.074	1.273	0.119	<0.001			
Model fit indexes χ^2(22) = 0.575; P = 0.813; χ^2/DF = 0.438; CFI = 1.000; SRMR = 0.0069; RMSEA = 0.030 (0.000–0.073)									
Timely Performance Appraisal (TPA).	**TPA-1**	0.802	**	1.000			0.9515	0.6347	0.951
	TPA -2	0.861	14.019	1.057	0.079	<0.001			
	TPA -3	0.787	18.837	1.066	0.060	<0.001			
	TPA -4	0.822	17.191	1.046	0.073	<0.001			
	TPA -5	0.880	18.757	1.103	0.061	<0.001			
Model fit indexes χ^2(15) = 9.809; P = 0.217; χ^2/DF = 1.862; CFI = 0.895; SRMR = 0.0076; RMSEA = 0.055 (0.000–0.092)									
Employee's Performance(EP)	**EP-1**	0.822	**	1.000			0.9951	0.6347	0.929
	EP -2	0.812	15.191	1.026	0.073	<0.001			
	EP -3	0.787	21.268	1.106	0.107	<0.001			
	EP -4	0.777	39.837	1.056	0.080	<0.001			
	EP -5	0.787	12.837	1.056	0.080	<0.001			
Model fit indexes χ^2 (21) = 59.775; *P* = 0.000; χ^2 /*DF* = 4.889; CFI = 0.984; SRMR = 0.0214; RMSEA = 0.050 (0.040–0.082)									

SE standard error, CR composite reliability, AVE average variance extracted
Note: χ^2 (242) = 441.428; P = 0.000; χ^2 /DF = 183; CFI = 0.913; SRMR = 0.0497; RMSEA = 0.077

Cronbach's alpha was used to check the reliability of the developed instrument. "In general, the results showed that all Cronbach's alpha values for the selected constructs are acceptable as they range from 0.808 to 994; Sound Recruitment & Selection (0.994), Proper Training & Development (0.808), Appropriate Compensation & Reward (0.929) and Timely Performance Appraisal (0.951) and Employee Performance (0.929) to further ensure the reliability of all the constructs, com Overall, composite reliability (CR) values were found to be acceptable (more than 0.70). Looking at these results, it can be said that the assumptions of reliability are met because all values exceeded the minimum cut-off point of 0.70, as recommended by Pallant (2010)."

Table 4: Fit Indicates of CFA

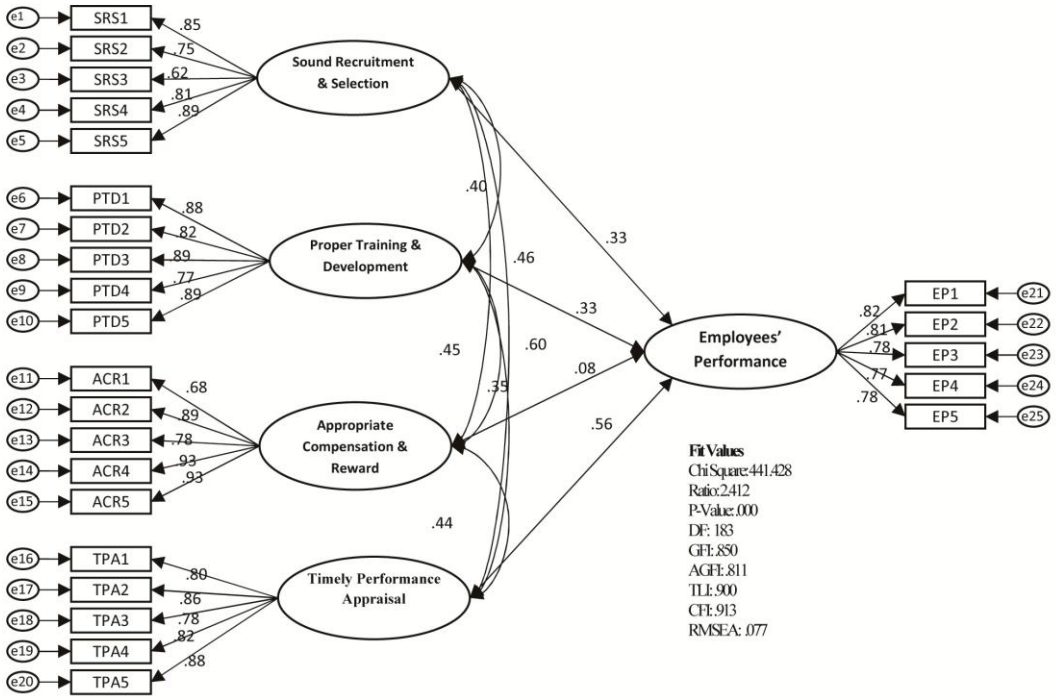
Fit Indicates	Scores	Recommended Value
Chi-Square/degree of freedom	1.459	≤ 3.00
Comparative Fit Index (CFI)	0.987	≤ 0.95
Root Mean Square Error of Approximation (RMSEA)	0.033	≤ 0.05
Adjusted Goodness-of-Fit Index (AGFI)	0.936	≤ 0.90
Goodness-of-Fit Index (GFI)	0.954	≤ 0.90
Non-normed Fit Index(NNFI)	0.960	≤ 0.90

Table 5: Fit Index of Structural Model

Fit Indicates	Scores	Recommended Value
Chi-Square/degree of freedom	1.432	≤ 3.00
Comparative Fit Index (CFI)	0.913	≤ 0.95
Root Mean Square Error of Approximation (RMSEA)	0.077	≤ 0.05
Adjusted Goodness-of-Fit Index (AGFI)	0.931	≤ 0.90
Goodness-of-Fit Index (GFI)	0.850	≤ 0.90
Non-normed Fit Index(NNFI)	0.960	≤ 0.90

Besides, the confirmatory factor analysis (CFA) was conducted in this study to confirm construct validity. Conducting CFA is very important to ensure that the set of items that are assumed to measure a specific construct is measured without mixing it with the elements of other constructs. Besides, CFA can support convergent validity assumptions and make it possible to address any Multicollinearity issues. The execution of the CFA was carried out on the modeling of structural equations using the AMOS-23 measurement model includes all elements (Hair, 1998; Byrne, 2010). In short, the findings showed that the CFA was achieved because the values of all factor loadings were reported between 0.629 and 0.982. This clearly shows that all items achieved the absolute cut-off value suggested by Hair et al. (2010).

Following the measurement model after achieving satisfactory results of CFA, the next step was to draw thestructural model and ensure that it has a good fit for the data. The model presented in Figure reveals that the current structural model which comprises all items achieved a reasonable fit to the data as the Chi-square value is equal to 441.428. Other fit indices were also used to support the Chi-square (df = 183, GFI = 0.850, AGFI = 0.811, TLI = 0.900, CFI = 913, and RMSEA = 0.077). Generally, it can be said that model fits the data well. To verify the hypotheses which were presented earlier, regression results were generated from the outputs of structural model.



"Structural Model"

The results shown in Table indicate that Sound Recruitment & Selection (SRS), has a significant positive effect onemployee's performance (β = 0.326, t-value = 3.279, p < 0.05), therefore, **H1 is accepted.** The findings also revealed that Proper Training & Development (PTD), has a significant positive effect on employee's performance(β = 0.559, t-value = 2.564, p< 0.05), hence, **H2 is accepted.**

Another findings also revealed that Appropriate Compensation & Reward (ACR) has a significant positive effect on employee's performance(β = 0.659, t-value = 5.564, p< 0.05), hence, **H3 is accepted.**Finally, the results indicated that Timely Performance Appraisal (TPA) also has a significant positive effect on employee's performance(β = 0.084, t-value = 5.621, p < 0.05), consequently, **H4 is confirmed.**These factors explain 51 percent of total variance in employees performance.

	"Hypothesized Effect"	"Std. Estimate"	"S.E."	"C.R."	"P"	"Support"
H1	Sound recruitment and selection has a significantly positive impact on employee's performance.	0.326	0.224	3.279	0.001	**Yes**
H2	Proper Training and Development has a significantly positive impact on employee's performance.	0.559	0.073	2.564	***	**Yes**
H3	Appropriate compensation and rewards has a significantly positive impact on employee's performance.	0.659	0.059	5.621	***	**Yes**
H4	Timely performance appraisal has a significantly positive impact on employee's performance.	0.084	0.021	6.621	***	**Yes**

5.Discussion and Conclusion:

The primary purpose of this study was to examine the impact of Human Resources Management. Practices (HRMP) on employee performance in the textile sector in the southern region of Bangladesh. To achieve this objective, data was collected from employees in some of the textile and clothing sector in Bangladesh. The findings indicated that the Sound Recruitment & Selection (SRS), Proper Training & Development (PTD), Appropriate Compensation & Reward (ACR) or Timely Performance Appraisal (TPA) has had a significant positive impact on employee performance is consistent with previous research (Gholami et al., 2013; Insan et al., 2013; Kun et al., 2007). KarimandRehman (2012) also confirmed that proper training and development (PTD) was one of the main factors that led to the performance of employees. Appropriate Compensation & Reward (ACR) provides employees with opportunities to feel their values within their organizations, which may increase their level of commitment and performance (Sahoo et al., 2010). Mullins and Peacock (1991) pointed out that Timely Performance Appraisal (TPA) is more motivated and loyal to their organizations. These results indicate that employees should be motivated by good HRM practice and that the organization will develop an influential culture that reflects employee performance to survive, grow, compete and face any potential challenges that may arise at any time.

The findings also supported the second hypothesis that Proper Training &Development (PTD) had a positive effect on the performance of employees. This was supported by a number of scholars (Ghorbanhosseini, 2013; Zincirkiran, Emhan, &Yasar, 2015) who found that Appropriate Compensation & Reward (ACR) played an essential role in improving organizational performance. Finally, this study found that proper training and development of employees had a significant positive effect on organizational performance and was supported by a number of previous research projects (Bulut&Culha, 2010; Lamba&Choudhary, 2013; Roehl &Swerdlow, 1999). Training is a useful technique used by many organizations to enhance the

skills and knowledge of their employees. This is because if employees are well trained, they will be more efficient in their work. According to Vasudevan (2014), training is one of the main strategies for achieving and managing organizational objectives by attracting and retaining employees. This result provides practical implications for decision-makers in the top management of RMG operations to focus on providing their employees with training programs to ensure that they have sufficient skills and knowledge to perform their duties effectively.

This research work aims to explore the impact of the HRMP on the performance of employees in the RMG sector in the Southern Region of Bangladesh and to make recommendations for its improvement. The limitation of this study is that the sample size was too small because the clothing industry and clothing employees are limited in the southern region, mostly in the Barishal region. As a result, the information that has been collected is not sufficient to investigate the whole matter. But we've been trying to explore my best to gather the actual information. The findings of my current survey show that the HRMP (Recruitment and Selection, Training and Development, Compensation and Reward, Performance Assessment) is positively linked to the performance of employees. It indicates that the employees of the RMG sector of the Southern Region are satisfied with the activities of the HRMP, which influence them to be more concerned with the objectives, objectives, and interests of the organizations. Successful and effective implementation of the HRMP empowers employees and improves their performance positively. Therefore, it is concluded that HRM practices can positively improve the employee's performance if the company follows all HRM activities appropriately and ethically.

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Factors Affecting Work-family Conflict among the Female Faculty Members: Empirical Evidence from Private Universities in Bangladesh

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ABSTRACT

In Bangladesh, large pools of females are now entering into labor market because of updated technologies, job sharing, flexibility and economic independence. They are playing various roles in home and work place. As a result, they are facing work-family conflict. The study analyzed the different factors that affected the work-family conflict in female faculty members who are working in different private universities of Bangladesh. Data from 100 valid samples was obtained using a structured questionnaire survey. Frequency and multiple regression analysis have been conducted to analyze the data and to draw the findings. The study reveals that there is a high degree of positive correlation between the dependent and independent variables. Family time demand, and problem at workplace are highly significant. Finally, few suggestions have been made to reduce the work- family conflict in private universities in Bangladesh. It is hoped that the findings of the present study will help the organizations in Bangladesh craft appropriate policies and initiatives to reduce work-family conflict.

Keywords: Work-family conflict, female faculty members, private universities, and Bangladesh.

INTRODUCTION

Managing the conflict between work and family responsibilities has been considered a critical challenge for organizations (Kossek and Ozeki, 1998).With the increase of women participation

in the job arena in developing countries, understanding the impacts of work family conflicts has increasingly been significant. Now-a-days, the interference of work family conflict is more

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evident to faculty members (Pattusamy and Jayanth, 2017) those who can't concretely define and separate their work and family life (Clark, 2000). Work-family conflict can be explained as the mutual interference of work and family roles and cause significant personal and organizational problems.

The number of women entering into the teaching profession has been substantially rising in recent years. Private universities play a significant role in development of human resources and the economy of the country. A large number of people are employed in private universities of Bangladesh. In these private universities, the faculty turnover rate is high (Akhter, Muniruddin and Sogra, 2008). Even this rate is much higher in private universities than in public universities of Bangladesh (Mannan, 2009).

Female participation in the labor force is on the rise in developing countries like Bangladesh. In the private universities of Bangladesh, female participation is gradually increasing (Akhter *et al.,* 2008). Though female participation in the private sector has increased, women are still defenseless and marginalized. Traditionally, females are less privileged to join the labor force, because of several social, cultural and religious norms (Hossain and Kusakabe, 2005).

With the rise of female education as well as the financial need, a large number of women enter the job market, which makes the global job market structure change. This requires that family structure be changed from a single-income family to a double-income family. Today, a couple plays multiple roles, like a worker, a spouse, father or mother and a housework handler. And, it is more possibly to lead work family conflicts in the modern organizations.

In Bangladeshi economic system, most of the cases it is seen that men are responsible for earning and women are responsible for housekeeping, childcare and all other things in running a family. Now-a-days, women of Bangladesh are getting more educational opportunities than it was before. Women are receiving higher degrees, and they are entering in job market. As a result, the extended family is being replaced by the dual earner family. Work-family conflict has many negative influences in the family area. It lowers life satisfaction and gives rise to inner conflict within the family. Now-a-days, work-family conflict is one of the burning issues on different organizations in Bangladesh. So, it has been very important to identify the factors that cause work-family conflict among female employees in Bangladesh and help develop the ways

through which they can become more capable of managing both family and work simultaneously.

LITERATURE REVIEW

A variety of studies on work-family conflict has primarily been conducted in the context of developed nations. But few studies have been conducted on this issue in the context of Bangladesh. Greenhaus and Beutell (1985) opined that work-family conflict is an incongruity between the demands of work and family to a working person. They added that work family conflict is a form of multiple conflicts in which the role pressures of the work and family domains are mutually incompatible in some respects.

Work family conflict occurs when an individual has to perform multiple roles as spouse, workers and parent. Time, energy and commitment are required to perform adequately each of these roles. Jacque L. King (2013) defines the incompatibility between the domain of work and the domain of family as work-family conflict. Conflict between these domains occurs when participation in one role is more difficult due to participation in the other role. A person playing his/her role in workplace, he/she cannot simultaneously play his/her work role (Khan, 2014). The work intensification of an academician has been common in many private universities with the attendant inability to balance the work and family domains (Jacobs and Sarah, 2004). Hence, the academicians of private universities tend to experience conflicts related to work and family issues.

Rotondo and Kinsaid (2008) opined that work-family conflict is conceptually bi-directional-family to work conflict (FWC) and work to family conflict (WFC). Work family conflict and Family work conflict relate each other through a bi-directional nature where one is affected by the other. The work related variables may cause work roles to interfere with family roles. The level of conflict in the family domain affects occupational behaviors leading to work family conflict and which in turn leads to a vicious cycle. Such dynamics at work are described in the context of conflict perspective (Parasuraman and Greenhaus, 2002). This perspective explains that the responsibilities and demands at home and in the office will not be compatible, so that the higher demands in one role will interfere with other roles. Thus, the home demands that are too high can interfere with an employee's role at office.

Work interference with family is more of an issue than family interference with work (Grzywacz, Frone, Brewer, and Kovner, 2006). Although men and women both experience inter-role conflicts, it is often more difficult for women to balance their work and home roles. Individual perception refers to variation in values as expressed by prioritization of life roles leading to differing experiences of work-family conflict. Individuals who valued work over family experienced greater conflict (Akkas *et al.*,2015).

Gender discrimination against women employees in terms of pay, promotion, and other facilities is visible in many private industries (Khan 2007; Bhuiya, 2007). Thus, in the socio-economic context of Bangladesh, gender differences in particular could be viewed as an important issue. Women are considered less powerful than their male counterparts and this long-established view creates a way for discrimination against them.

Now, a large number of women are coming to the labor force, where majority come from middle-class families with children into the paid work force, have either direct or indirect impact on everyone in society as people's mothers, wives, sisters, daughters, and friends stepped out of the home into paid employment (Perry-Jenkins *et al.,* 2000). Thus, the growing number of women in the labor force are in the understandings that more individuals have to simultaneously balance family and work (Grant-Vallone and Ensher, 2001; Karimi, 2006). The study conducted by (Akkas *et al.*,2015) found that female employees who are more committed to the families, face more work family conflict.

Indeed, across nations and occupations, women are to take the responsibility for child and elderly care, household chores and other family-related issues and they, typically regardless of hours worked in paid employment, work a second shift at home (Asher, 2011; Burnett et al., 2011). So, conflict and strain often arise for individuals who participate in both of these areas, because of frequent incompatibility of role expectation (Grant-Vallon and Ensher, 2001). Family care commitment and work intensification are the two major sources of work life conflicts (Cooke and Jing, 2009). Those who are young and single tend to have less work life conflict issues compared with those who have childcare and elderly care responsibilities (Chen, 2006).

Employees experience imbalance in their work and life due to the role conflicts, employment pressures, multiple roles, domestic responsibilities, child care, nature and attitude of superior and family members, competition etc. Women are to balance work effort and income for more

time and energy to devote to domestic labour. The greater the family time demanded on a working woman, and the less help she receives, the more time she spends on housework (Silver and Goldscheider, 1994). Work-family conflict is positively related to the number of hours worked per week (Burke *et al.*,1980; Pleck *et al.*,1980) as well as the number of hours worked/commuted per week (Bohen and Viveros-Long, 1981).

Moreover, personal problems of female employees make them irritate at work (Akkas *et al.*, 2015). Sometimes, they do a job which is no more enjoyable and interesting to them. Work–family conflict is related to increased occupational burnout, job stress, decreased health, and matters pertaining to organizational commitment and job performance (Amstad et al.,2014). Different problems at workplace like job pressure, excessive work, job hassle, and working fast or having many interruptions also lead to work family conflict. Work-family conflict also has been associated with the amount and frequency of overtime and the presence and irregularity of shift work (Pleck *et al.*, 1980).

Herman and Gyllstrom (1977) found that married persons experienced more work-family conflict than unmarried persons. In a similar vein, it might be expected that parents would experience more work-family conflict than non-parents. Although support for this expectation has been mixed (Holahan and Gilbert, 1979; Pleck *et al.*, 1980), having the major responsibility for childrearing may be the significant contributor to work-family conflict (Bohen and Viveros-Long, 1981). Based on the literature review, the following conceptual model can be developed:

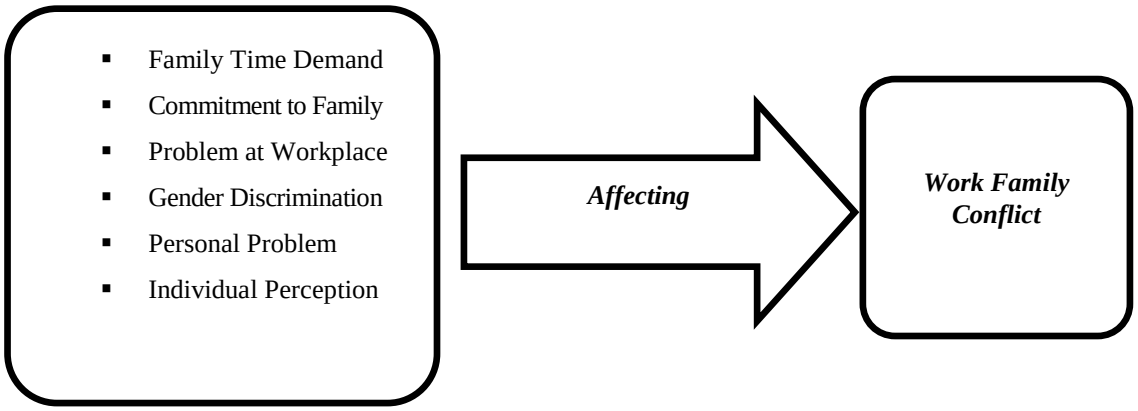

Figure-01: Factors affecting work family conflict among the female faculty members of private universities in Bangladesh (Authors' Constructed)

OBJECTIVES

Broad Objective: The broad objective of the study is to identify and measure factors affecting work-family conflict among the female faculties of private universities in Bangladesh.

Specific Objectives: The specific objectives of this study are as follows:

- To determine the factors that affect the work-family conflict among the female faculties of private universities in Bangladesh;
- To determine the importance of variables; and
- To suggest some policy recommendation.

METHODOLOGY

Nature of the study: This study is a descriptive research where data have been collected to find out the factors that affect family work conflict among the female faculties of private universities in Bangladesh.

Sample size and sample selection procedure: The sample size for the research was 100. The respondents in the sample were chosen through judgmental sampling technique. Private universities of Bangladesh were selected for the study.

Table 01: Research Work Design

1.	Target Population	Elements	Female Faculties of Private Universities in Bangladesh.
		Sampling Unit	Female Faculties
		Extent	Private universities in Bangladesh.
		Time	2018
2.	Nature of the study	Descriptive Research	
3.	Sampling Technique	Judgmental 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 instrument: For the research and data analysis purposes, both the primary and secondary data were collected. For the study, we have collected primary data through survey method under which we adopted the personal interviewing technique. The researchers themselves were actively involved in data collection. Secondary data have been collected from the existing literature and different published reports in the said field and also internet.

Scaling technique: For the study, five- point Likert Scale was used, which is a part of Non Comparative Scaling Technique (where 1 = Strongly Disgree, 2 = Disagree, 3 = Neutral (Neither agree nor disagree), 4 = Agree, and 5 = Strongly Agree).

Model specification: The regression model was as follows:

$$\mathbf{WFC= D+ \beta_1 FTD + \beta_2 CTF+ \beta_3 PWP + \beta_4 GD + \beta_5 PP+ \beta_6 IP + ei}$$

Where,

WFC = Work Family Conflict D = Multiple Regression Constant FTD=Family Time Demand CTF=Commitment to Family PWP=Problem At Workplace	GD=Gender Discrimination PP= Personal Problem IP=Individual Perception ei = Error

Reliability and validity of data

The reliability of the questionnaire was assessed by considering Cronbach's alpha. The reliability is said to be satisfactory when Cronbach's alpha has a value greater than 0.70 (Hair, 2006). The value of the Cronbach's alpha of the questionnaire of this study was .801 (table-2) which is higher than the above recommended value (.70). That means the data had sufficient reliability.

Table-2: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.801	.807	37

DATA ANALYSIS AND FINDINGS

The following methods would be used to analyze the collected data:

- Frequency tables
- Regression Analysis

Frequency tables:

The survey is conducted with some basic information of the respondents. Respondents were asked about their age, marital status, children, educational level, job position, work experience of teaching profession etc. Their information with percentages is found out from the frequency distribution, and these are shown below:

Table-3: Age

Age (year)	Frequency	Percent	Valid Percent	Cumulative Percent
20-30	48	48.0	48.0	48.0
31-40	47	47.0	47.0	95.0
41-Above	5	5.0	5.0	100.0
Total	100	100.0	100.0	

Source: Field Study, 2018

The table shows that 48% respondents have the age between 20-30 and 47% between 31-40 year. Only 5% have age between 41 and above. It indicates that comparatively young and middle aged women are mostly having work family conflict.

Table-4: Marital Status

Marital Status	Frequency	Percent	Valid Percent	Cumulative Percent
Unmarried	29	29.0	29.0	29.0
Married	71	71.0	71.0	100.0
Total	100	100.0	100.0	

Source: Field Study, 2018

The table shows 71% respondents are married and 29% are unmarried. It indicates that married females experience greater work-family conflict than the unmarried women.

Table-5: Children

Children	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	60	60.0	60.0	60.0
No	40	40.0	40.0	100.0
Total	100	100.0	100.0	

Source: Field Study, 2018

The above table shows that 60% respondents have children and 40% do not have any children. So, majority of the respondents experiencing work-family conflict have children.

Table-6: Job Position

Job Position		Frequency	Percent	Valid Percent	Cumulative Percent
	Lecturer	51	51.0	51.0	51.0
	Assistant Professor	44	44.0	44.0	95.0
	Associate Professor	5	5.0	5.0	100.0
	Total	100	100.0	100.0	

Source: Field Study, 2018

The above table shows that 51% respondents are lecturer, 44% are assistant professor and only 5% are associate professor. So, majority of the respondents experiencing work-family conflict hold the positions of lecturer and assistant professor.

Table-7: Monthly (Income)

Income (TK)	Frequency	Percent	Valid Percent	Cumulative Percent
Below 50000	53	53.0	53.0	53.0
50000-60000	38	38.0	38.0	91.0
61000 and Above	9	9.0	9.0	100.0
Total	100	100.0	100.0	

Source: Field Study, 2018

The above table shows that 53% respondents have income (monthly) below 50000Tk, 38% between 50000-60000 Tk, and 9% between 61000 and above Tk.

Table-8: Educational Level

Educational Level	Frequency	Percent	Valid Percent	Cumulative Percent
Graduate level	13	13.0	13.0	13.0
Post graduate	72	72.0	72.0	85.0
M Phil	9	9.0	9.0	94.0
PhD	6	6.0	6.0	100.0
Total	100	100.0	100.0	

Source: Field Study, 2018

The above table shows that 72% respondents have post graduate degree, 13% have graduate degree, 9% have M Phil, and only 6% have PhD degree. It shows that majority of respondents facing work family conflict have higher education.

Table-9: Job Duration of Teaching profession

Job Duration	Frequency	Percent	Valid Percent	Cumulative Percent
1-3 year	39	39.0	39.0	39.0
4-7 year	41	41.0	41.0	80.0
8-11 year	13	13.0	13.0	93.0
12-Above	7	7.0	7.0	100.0
Total	100	100.0	100.0	

Source: Field Study, 2018

The table shows 39% respondents have work duration between 1-3 year, 41% between 4-7 year, 13% between 8-11 year, 7% between 12 and above year. Most of them have quite a good duration of work experience.

Results of Multiple Regression:

The purpose of this analysis is to measure the relative influence of each independent variable on the dependent variable.

Hypothesis:

H_0: The coefficient of multiple determination in the population is zero (**$H_0: R^2pop=0$**)

H_1: The coefficient of multiple determination in the population is not zero (**$H_1: R^2pop\neq0$**)

Variables:

- **Dependent variable:** Work-family conflict among female faculties
- **Independent variables:** Gender discrimination, Commitment to family, Problem at workplace, Family Time Demand, personal problem and Individual Perception

Goodness of fit:

Table-10: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.819[a]	.671	.650	.42502

a. Predictors: (Constant), Individual Perception, Gender Discrimination, Personal Problems, Commitment to family, Problem At Workplace, Family Time Demand

b. Dependent Variable: Work Family Conflict

Table-11: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34.299	6	5.717	31.646	.000[b]
	Residual	16.800	93	.181		
	Total	51.099	99			

a. Dependent Variable: Work Family Conflict

b. Predictors: (Constant), Individual Perception, Gender Discrimination, Personal Problems, Commitment to family, Problem At Workplace, Family Time Demand

Table-12:Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.328	.413		-.795	.429
	Family Time Demand	.498	.071	.554	6.981	*.000
	Commitment to family	.081	.086	.061	.942	.349
	Problem At Workplace	.356	.061	.438	5.875	*.000
	Gender Discrimination	-.087	.060	-.094	-1.458	.148
	Personal Problem	.263	.140	.117	1.876	.064
	Individual Perception	.030	.110	.018	.271	.787

a. Dependent Variable: Work Family Conflict

Interpretation of R: Here, the Value of R = 0.819. There is a high degree of positive correlation among the independent & dependent variables.

Comment on model fitting: Here, the value of R^2 = 0.671% or 67%. 67% variation in the dependent variables can be explained by the regression model.

Interpretation of Adjusted R^2: Here, the value of adjusted R^2 = 0. 650 or 65%**.** Adjusted R^2 suggested that, addition of the other independent variables does not make a contribution in explaining the variation in the dependent variable.

H_0: R^2pop=0 (There is no relationship between work family conflict with Individual Perception, Gender Discrimination, Personal Problems, Commitment to family, Problem At Workplace, Family Time Demand.)

H_1: R^2pop≠0 (There is a significant relationship between work family conflict with Individual Perception, Gender Discrimination, Personal Problems, Commitment to family, Problem At Workplace, Family Time Demand.)

The above ANOVA table gives necessary information to approve one hypothesis and to reject another one. Statistically if the ANOVA table shows that the significant value is .0000, it will be meant that the **H_0** (null hypothesis) be rejected. On the other hand, it will be meant that **H_1** (Alternative hypothesis) be accepted. So, there is significant relationship between work family conflict with Individual Perception, Gender Discrimination, Personal Problems, Commitment to family, Problem At Workplace, Family Time Demand.

Regression Equation: Work family conflict = -.328 + .498 (Family Time Demand)+ .081 (Commitment to family) + .356 (Problem at workplace) + (-.087) (Gender Discrimination) + .263 (Personal Problem) + .030 (Individual perception).

Comment on Significance: It can be said that, work family conflict among the female faculties of private universities of Bangladesh is dependent on various factors like – individual perception, gender discrimination, personal problems, commitment to family, problem at workplace, family time demand. Family time demand (.000), problem at workplace (.000) are highly significant.

POLICY RECOMMENDATION

The study reveals valuable suggestions to lessen work family conflict in private universities of Bangladesh:

- Faculty members of the private universities of Bangladesh are the assets of the country as well as of the universities. They contribute to the development of the country through their knowledge, skills, efforts and talent. So, to explore best outcome of these faculty members, they must be provided with a family supportive work environment. Moreover, to reduce turnover and job stress, their workplace should be as attractive as possible.

- To lessen work-family conflict, all private universities should ensure impartial treatment to their employees. There should not be any discrimination between a male and a female faculty.

- Teaching load should be managed in such a way that faculties can work properly along with other tasks of their family life. Female faculty members should be provided with leave with pay or vacation programs to help them balance their work and family. Practices such as parental leave, domestic leave and flexible work can also be designed exclusively to make their family life easier.

- The university authority should encourage employees through offering greater flexibility in the form of part-time or flexible timing etc. Supervisory work-family support can be practiced in the workplace to reduce work-family conflict. Employers should be provided with adequate training so that they can help solve their employees' work-family conflict.

CONCLUSION

In today's a competitive world, male and female both are contributors to their family. Findings indicate that work-family conflict has become a significant problem for the female faculty members who are working at different private universities in Bangladesh. The findings of this study will help the female faculties to be concerned and careful about the work- family conflict that affect them in home and work area. When female faculty members in different Universities can be provided with effective knowledge, both family and university will receive proper service from them. It will be possible when both family and work place give them proper support. It is expected that the findings of the study will contribute to further understanding of the work-family conflict in Bangladeshi organizations. It is also hoped that insights gained from the present research can be revealed to help human resource practitioners design appropriate policies and for researchers to give additional support for more research into work-family conflict in the context of Bangladesh.

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The Impact of Reward Systems on Employee's Productivity in Small and Medium Enterprises of Barisal City of Bangladesh

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ABSTRACT

Small and medium enterprise sector play a vital role to develop the economy of the country. The impact of reward systems on employee's productivity of small and medium enterprises has been a wide researched area for years but few studies have been conducted different countries like Bangladesh. The main purpose of this study is to analyze the impact of reward systems on employee's productivity by considering the study on small and medium enterprises of Barisal city in Bangladesh. Here the specific objectives are to identify two types of rewards (intrinsic & extrinsic) systems which has have high impact on employee's productivity and overall nexus between rewards and employee's productivity. In this study extrinsic rewards focused solely salary/base pay, performance based cash bonuses and promotion whereas intrinsic rewards focused appraisal, recognition and delegation. Here the independent variables are appraisal, delegation, recognition, salary, bonus, promotion and dependent variable is employee's productivity. The research study as an explanatory research and adapted both qualitative and quantitative approach of analyzing the results of the study. In order to select the respondents from total population of 950, convenience sampling technique has been used.The sample size determination come with 274 samples were to be taken in to the study. Quantitative data has been collected through questionnaire and qualitative data through personal interview. In this paper, both primary and secondary data have been used. Survey data collected from respondents have been analyzed by using descriptive, correlation and regression analysis. The value of coefficient of correlation indicated that there are positive correlation between both independent and dependent variable which were significant at the 0.01 level. Regression analysis indicates that there is asignificant relationship between reward systems and

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employee's productivity. Finally, the concluded study has significant impacts of reward systems on employee's productivity of small and medium enterprises of Barisal city in Bangladesh.

Key words: SME, Reward system, intrinsic rewards, extrinsic rewards, Employee's productivity etc.

1. INTRODUCTION

Small and medium enterprises (SMEs) are being thought of one among the foremost key players within the sustainable development of each the developed nations and also the developing economies of accumulation countries, due to their contribution to any or all aspects of the development. In Asia, Small and medium enterprise sector is one among the most important and largest source of employment and constitutes the backbone of just about every economy on the continent (Ayanda & Adeyemi, 2011). Small and Medium Enterprises (SMEs), notably small enterprises are the age recent kind of business enterprises in our civilization. Small commercial enterprise appeared in our civilization quite 4000 years past. Since then, Small and medium business enterprises have contributed staggeringly to the good thing about customers and therefore the human civilization. Societies are enriched through the continual gushing of infinite type of product and services by the small and medium enterprises.SMEs flourished in most ancient civilizations. The Arabs, Babylonians, Egyptians, Jews, Greeks, Phoenicians, and Romans excelled at small business enterprises (Edmunds, 1978).The individuals engaged in SMEs had been considered the messengers of diplomacy among the civilizations of the globe. Today, SMEs relish additional esteem and status than ever before. Academics, journalists, and politicians alike currently have begun to under Score its achievements and opportunities, its promise and issues. It's a significant force in most economies of the globe currently.

SMEs even have got an excellent past in our region, the People's Republic of Bangladesh, too. The artisans and therefore the craftsmen of this region had been acknowledging for his or her merchandise long before Christ was born. The Periplus of Hanno chemical analysis concerning sixth century B.C. mentioned the pearls and muslins of this region. Kautilya mentioned four distinct sorts of materials exported from the geographical region to the remainder of the Asian nation and of the globe. Bangladesh, as a section of the erstwhile Asian nation, nearly had no massive trade however SMEs at the time of the independence from British colonial regime. A

number of cotton textile mills, a sugar mill, and variety of jute bailing and process units were there solely. The share of industries in GDP was three percentage solely in 1949 of that 0.5% was the contribution of the big scale industries and therefore the rest 2.5 per cent was from small enterprise sector (Shafique Dar, Ahmed, & Raziq, 2017). Bangladeshi entrepreneurs were fate of just one fifth of the whole mounted assets of the commercial sector. After the liberation, the Govt of People's Republic of Bangladesh had nationalized all industries except small and medium industries with 2.5 million-taka total investment values that had been allowed to control beneath sector. The sequential Governments of People's Republic of Bangladesh had bit by bit upraised the ceiling and currently there's no limit on personal investment.

For Any organization to expertise effective functioning and quality performance it ought to have a full understanding of its staff desires that ought to inform the organization's applicable reward systems. Šajeva, (2014) argued that thanks to the very fact that organizations have to be compelled to perform optimally and vie effectively, they have to maximize on the resources they need, one amongst that is that the human plus and therefore the most vital plus any organization will possess. So as to realize the specified performance standards from the human resource, worker motivation is critical. Staff can peg their performance to the sensation of trust that their efforts are rewarded by the management Bustamam, Teng, & Abdullah, (2014). However, a desired goal and target could solely be achieved effectively if the hand gets a way of mutual gain of the organization with the action of an outlined performance target. It's against this background that a corporation should strategically set the reward system to judge employee's productivity in the slightest degree levels and reward them effectively. Small and Medium Enterprises (SMEs) have drawn plenty of interest among the policy manufacturers, academics, businessmen and folks generally. There's a broad accord that a vivacious SME sector is one amongst the principal driving forces within the development of the economy of Bangladesh. SMEs stimulate personal possession and entrepreneurial skills and may adapt quickly to dynamic market scenario, generate employment, facilitate diversifying economic activities, and create a major contribution to export and trade.

2. LITERATURE REVIEW

In the era of globalization, organizations engaged their worker in work and encourage them through variety of rewards. Organizations should adapt to changes within the market so as to stay competitive and survive within the long-term. So to stay competitive, managers look for competitive advantage. There is variety of competitive blessings that changes a type to stay competitive within the long-term.Competitive benefits can be gained through acquisition and allocation of structure resources.Lee & Ahn, (2007). One of the vital resources for a company is human resource. Human resources for a company embody each leadership and workers. This study targeted on employees. Employees are vital in achieving structure aims and objectives. According to Bau & Dowling, (2003) researched appreciation of the employees work from the higher management, build morale, sincerity with the work, self-motivated, and take initiative relating to the work. The results of that researched concluded that fifty of the employees were average glad with the reward system, and also the alternative employees who were unfavorable of reward system were absolutely glad.

Small and Medium scale businesses represent an actuation for economic process, job creation, and poorness reduction in developing countries. The final word goal of a small and medium enterprise is higher monetary performance or maximization of wealth. Dyer & Reeves, (1995). However, attaining the SME's goals depends upon the extent to that its structure performance is reached. Katou & Budhwar, (2007). SME's performance is essentially depends on employee's productivity. Employee's productivity (sometimes stated as work force productivity) is an assessment of the potency of an employee or cluster of staff. In the specific period of time, productivity always been judged in terms of output. Typically, the productivity of a given employee is assessed relative to a median for employees doing similar work. Small and Medium enterprises are significantly appropriate for the densely inhabited countries like Bangladesh wherever SME sector will give large employment chance with abundant lower investment.

Ayanda & Adeyemi, (2011) expressed that small and medium enterprises are thought-about because the engine of economic process and for promoting just development. The foremost advantage of the world is its employment potential at low cost of capital. The labor intensity of the SME sector is far over that of the massive enterprises. The role of small and medium enterprises within the economic and social development of the country is well established. The

world could be a nursery of entrepreneurship, typically driven by individual creativeness and innovation. It concludes that besides the expansion potential of the world and its vital role within the producing and price chains. There wide unfold and also the number effects they need on the remainder of the economy alter them to be the engine of economic progress. It had been conjointly noted that the SME sector is that the main drive behind job creation, impoverishment reduction, wealth creation, financial gain distribution and reduction in financial gain disparities. Most of the govt. interventions did not create a way required transformation because of poor coordination and observation and policy inconsistencies. SME sector conjointly shaped the vanguard of the trendy enterprise sector and presents the dynamical force of economic modernization and growth.SMEs ought to with success contend with the current forces for modification if they're to survive and grow and meet the expectations to form investment and employment opportunities. With success adapting to alter from technological advances, client expectations, provider necessities, the regulative surroundings and increasing competition needs productive implementation of structure modification. The 'Degrees of Turbulence' Model is planned as a self-assessment tool to help SMEs within their surroundings scan and to help in assessing the potential impact and adjusting to the upcoming changes in the external environment to make sure continuing viability Banham & College, (2010). To face those distinctive challenges SME sector ought to be established. To be established funding may be a main problems in SMEs. Beck & Demirguc-Kunt, (2006) present argued on access to finance by small and medium-size enterprises (SMEs). SMEs type an oversized a part of personal sector in several developed and developing countries. Whereas cross-country analysis sheds doubt on a causative link between SMEs and economic development, there's substantial proof that small companies face larger growth constraints and have less access to formal sources of external finance, probably explaining the shortage of SMEs' contribution to growth. Financial development helps to remove SME's growth constraints and increase their access to external finance. Specific funding tools like leasing and factorization may be helpful in facilitating larger access to finance even within the absence of well-developed establishments, as will systems of credit info sharing and an additional competitive banking structure.

Reward systems for individual staff stay one in all the polemic areas of quality management.Lawler, (2003) discussed the impact of reward systems on the effectiveness of

employee's productivity. There is variety of reasons for basic cognitive process that consistently attachment rewards to the result of staff can build the performance management system simpler with relation to motivation, however there are some that counsel it'll build it less effective with relation to development. The results of the study offer clear steerage with relation to the impact of attachment performance appraisal results to changes in pay and employment standing. They powerfully support the read that performance appraisal systems are simpler once there's an affiliation between the results of the performance management system and also the reward system of the organization. Organizations are realizing that they need to determine associate degree just balance between employee's contribution to the organization and also the organization's contribution to the employee. Organizations that follow a strategic approach to making this balance specialize in the 3 main elements of a bequest system, which incorporates, compensation, advantages and recognition. The reward management methods and practices of a company contribute to the advance of structure performance by developing and in operation reward systems that facilitate to draw in, retain and have interaction the individuals upon that the business depends.

Reward may be loosely classified in two teams specifically, intrinsic rewards and extrinsic rewards. Extrinsic rewards are sometimes money or tangible rewards. Intrinsic rewards are inherent within the job itself and that the individual enjoys as a results of with success finishing the task of accomplishing his or her goal". Therefore several approaches admire goal setting approaches, activity and feedback approach, job style approach and reward and recognition approach are developed and adopted within the world with the aim of skyrocketing worker performance. Operating conditions, employee and leader relationships, coaching and development, job security and firms overall tips and procedures for rewarding worker have an effect on worker performance. Reward can increases worker performance and the rewards can improve employee performance in very best manner, Arran et al, (2015). Reward systems are heart of human resource activities. Its main purpose is to attract talented individuals and motivate them for retaining them and serving better purpose of the organization. Franco-Santos, Monica & Gomez-Mejia, Luis. (2015). Eerde & Wendelien, (2015), said Reward systems may consist of several components, including financial and nonfinancial rewards, in fixed and variable amounts. Puwanenthiren (2011) concluded that the higher employ reward will increase more motivation and vise-versa relationship exists between them. According to Rizwan and

Usman, (2010) said that the reward system can motivate employees in the organizational arena. In other words, reward systems seek to attract people to join the organization to keep them coming to work, perform to best levels (Puwanenthiren 2011).

3. OBJECTIVES OF THE STUDY

The main objective of the study was to identify the impact of reward systems on employee's productivity of Small and Medium enterprises of Barisal city in Bangladesh. In order to materialize that objective, the following specific objectives were considered.

1. To determine the current status of reward systems of SMEs of Barisal city in Bangladesh.
2. To identify which of the two types of rewards (intrinsic & extrinsic) has high impact on employee's productivity.
3. To examine the relationship between reward systems and employee's productivity of SMEs of Barisal city in Bangladesh.

4. HYPOTHESIS OF THE STUDY

In order to analyze the impact of independent variables on dependent variable, following hypotheses have been formulated:

H1= Intrinsic rewards significantly affect employee's productivity.

H2=Extrinsic rewards significantly affect employee's productivity.

H3=There is a positive relationship between reward systems & employee's productivity.

5. THEORETICAL FRAMEWORK

Theoretical framework has been made to conduct research concerning the impact of reward systems on employee's productivity of small and medium enterprises of Barisal city in Bangladesh.

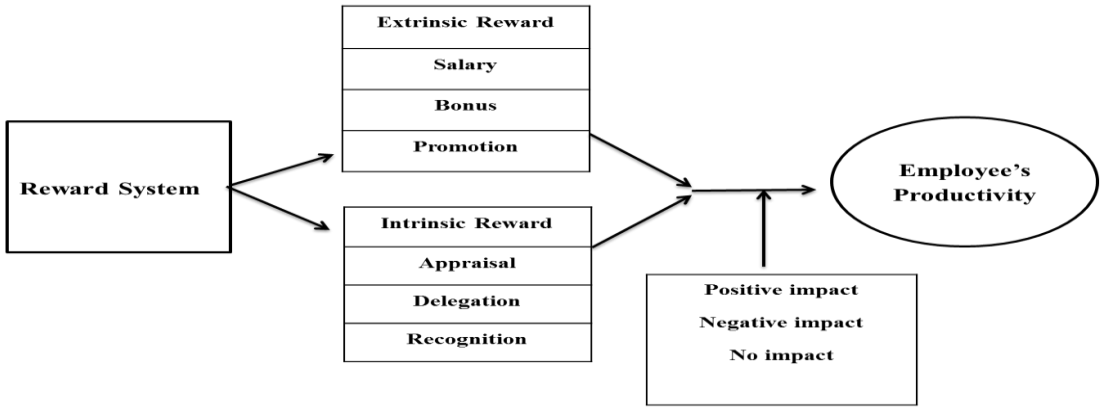

Figure 01: *Theoretical Framework of reward system on employee productivity*

5.1 Reward System

A reward is typically something valuable, like cash. Rewards serve several functions in organizations.A study by Svensson, (2001) mentioned, reward sestem puts thgather employees real self interests with its objectives and provides three kinds of management control benefits, informational, motivational and personnel relate. It serves to create an improved employment deal, hold on to sensible employees and to cut back turnover. The principal goal is to extend people's disposition to figure in one's company, to reinforce their productivity. According to Eerde and Wendelien. (2015), there are two types of reward which are discussed below:

1. Intrinsic rewards
2. Extrinsic rewards

5.1.1 Intrinsic Rewards

An intrinsic reward really fulfills employee's intrinsic factors or motivators and therefore motivates him or her. Intrinsic rewards are those that exist within the job itself. Intrinsic rewards

are derived from the content of the task itself and embody such factors as fascinating and difficult work.

Appraisal: Appraisal is that the systematic analysis of the performance of employees and to grasp the talents of an individual for any growth and development. Appraisal is the fundamental to achieve the pre set goal over the time.

Delegation: Delegation is the method where work related task or authority deligates to employees and subordinates. Small business homeowners typically have issue with delegation for a spread of reasons, from considerations regarding the skills of subordinates to long-standing "hands-on" management habits (a common characteristic of booming entrepreneurs).

Recognition: Recognition is that the identification or acknowledgement given for one thing. Employees should be recognized and rewarded for his or her sensible work and contribution to the organization. Employee's recognition is the overall achievement of a person or a team's behavior and efforts that helps to earn business growth.

5.1.2 Extrinsic Rewards

An extrinsic reward really fulfills employee's extrinsic factors or hygiene factors and therefore don't let him begin puzzling over deed the corporate. Extrinsic rewards as well as financial rewards or money rewards are accustomed cater the expectations of individual employees so as keep them driven.

Salary: Salary is a payment, sometimes monthly, created by an employer, beneath a contract of employment, to an employee. Salary can be fixed by the contract of employees and employers. It's contrasted with piece wages, wherever every job, hour or alternative unit is paid severally, instead of on a periodic basis.

Bonus: Bonuses motivates the employee to place all told activities and efforts throughout the year to attain quite a satisfactory appraisal that will increase the possibility of earning many salaries as payment. Bonus pay additionally has been wide utilized in organizations to encourage employees' performance.

Promotion: Promotion refers to advancement of an employee to a better post carrying bigger responsibilities, high status and higher earnings. It's the upward movement of an employee within the organization's hierarchy, to a different job commanding bigger higher authority, high status and higher operating conditions.

5.2 Employee's productivity

According to Hanaysha & Jalal, (2016), Employee productivity is the significant management tools that have been used by several scholars to consider as a prime mechanism for organizational success. Productivity refers to a magnitude relation of output to input or the connection between the output generated by a production or service system and therefore the input provided to form this output.

Employee's productivity (some Times brought up as force productivity) is an assessment of the potency of an employee or cluster of employees'. The rewards play an important role in increasing productivity. In these days competitive atmosphere for influence on employee the rewards employed by managers that impact their behavior and still increase motivation. The employee's productivity connected with job satisfaction, employee motivation, employee performance that increase by the bonus, rise in pay, benefits, promotion and recognition (Extrinsic and intrinsic rewards).

6. RESEARCH METHODOLOGY

6.1 Research Design: In this study, quantitative data has been used to achieve an in-depth and multi-perspective understanding of however reward systems have an effect on employee's productivity.

6.2 Research Purpose: The research study is an explanatory research and adapted quantitative approach of analyzing the results of the study.

6.3 Source of Data: This study relied on primary data collection besides this some Secondary data was collected from existing literature and primary data was collected from survey. The survey questionnaire comprised of close-ended questions designed on a five point Likert Scale and open discussion with the respondents. In likers scale, 1 represent strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agrees.

6.4 Sample Size Determination and Sampling Techniques: The study population included the employees that are working in SMEs of Barisal city in Bangladesh. Here non probability sampling technique has been used to collect participants and convenience sampling method applied for collecting data. In this study, small and medium enterprises referred to firms employing 10 to 25 employees. According to BSCIC Barisal office, there were around 950 employees in this category of SMEs in Barisal. From the total population 950 employees 274 employees was chosen.

Standard formula for sample size calculation is:

$$\text{Sample Size} = \frac{[Z^2 * p\,(1-p)] / e^2]}{[1 + [Z^2 * p\,(1-p)] / e^2 * N]}$$ Where,

N = (950) population size, Z = (1.96) from z-score, e = (0.05) margin of error, P = (0.5) standard of deviation.

Therefore the sample size is= $$\frac{[Z^2 * p\,(1-p)] / e^2]}{[1 + [Z^2 * p\,(1-p)] / e^2 * N]}$$

$$= \frac{[1.96^2 * 0.5\,(1-0.5)] / .005^2]}{[1 + [1.96^2 * 0.5\,(1-0.5)] / 0.05^2 * 950]}$$

=274

6.5 Validity and Reliability: In this study, ensuring validity of the data collection instrument involved going through the questionnaire in relation to the set objectives and making sure that it contains all the information that can enable answer these objectives. In this study reliability co-efficient (Alpha value) of more than 0.9 was assumed to reflect the acceptable reliability of the data.

6.6 Data Analysis and Presentation: Data from the proposed research was coded, processed and analyzed using computer based statistical package for social sciences (SPSS). Descriptive statistics involved with summarizing and describing a body of data. Pearson's correlation coefficient was used to identify the magnitude, direction and strength of relationship between

the variables. Regression analysis as well as multiple regressions was used to find out the impact of independent variables on dependent variable.

7. DATA ANALYSIS & INTERPRETATION

7.1 Demographic profile of the respondents: The self-completion questionnaire was administered to 274 respondents. The 274 respondent samples have been described on the basis of their gender, age and working experience by the following tables.

Gender of Respondents

Variables	Frequency	Percent	Valid Percent
Male	196	71.5	71.5
Female	78	28.5	28.5
Total	**274**	**100.0**	**100.0**

As per the table the majority of the respondents are male 196 (71.5%) and female are 78 (28.5%). It seemed that majority of workers of SME's in Barisal city are male.

Age of Respondents

Variables	Frequency	Percent	Valid Percent
Below 25	146	53.3	53.3
25-30	86	31.4	31.4
31-35	35	12.8	12.8
Above 35	7	2.6	2.6
Total	**274**	**100.0**	**100.0**

Here the larger number of employees is between the ages of below 25 which add to 146 respondents representing to 53.3% of the total respondents. Second largest age groups which constitute 31.4% of the respondents are 25-30 years of age. The rest covers 12.8% and 2.6% of the population which accounts 31-35 and above 35.

Working Experience of Respondents

Variables	Frequency	Percent	Valid Percent
Less than 2 years	153	55.8	55.8
2 – 6 years	80	29.2	29.2
7 – 9 years	37	13.5	13.5
Over 10 years	4	1.5	1.5
Total	**274**	**100.0**	**100.0**

With regard to working experience of respondents of small and medium enterprises in Barisal city the majority of the respondents have service years of less than 2 years (55.8 %) followed by 2-6 years of service respondents with 29.2%. Then 7-9 years are 13.5% and the last groups of the respondents are employees with above 10 years of experience are 1.5%.

7.2 Relationship between variables: The Pearson's Product Movement correlation coefficient is computed to see the relationships between independent variables and dependent variable(employee's productivity).

Variables	Appraisal	Delegation	Recognition	Salary	Bonus	Promotion	EP
Appraisal	1	.559**	.572**	.589**	.474**	.538**	.509**
Delegation	.559**	1	.866**	.869**	.841**	.806**	.828**
Recognition	.572**	.866**	1	.933**	.876**	.851**	.890**
Salary	.589**	.869**	.933**	1	.890**	.870**	.895**
Bonus	.474**	.841**	.876**	.890**	1	.845**	.853**
Promotion	.538**	.806**	.851**	.870**	.845**	1	.833**
EP	.509**	.828**	.890**	.895**	.853**	.833**	1

The correlation analysis indicated that there is positive correlations exist between independent variables and dependent variable. With highest relationship between employee's productivity & salary and lowest relationship exist between appraisal & employee's productivity.

7.3 Regression Analysis:

Intrinsic Rewards and Employee's productivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.735[a]	.541	.539	.21941

a. Predictors: (Constant), Intrinsic Reward

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.428	1	15.428	320.477	.000[b]
	Residual	13.094	272	.048		
	Total	28.523	273			

a. Dependent Variable: Employee's productivity
b. Predictors: (Constant), Intrinsic Rewards

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.903	.106		8.510	.000
	Intrinsic Rewards	.484	.027	.735	17.902	.000

a. Dependent Variable: Employee's productivity

The R-square value of the regression model is calculated to be 0.541 which explains the fact that at least 54.1% of variation in intrinsic rewards can be explained and elaborated by the variability in employee's productivity. ANOVA value measures the linear relationship between the independent and dependent variable of the regression model. The statistical significance value of 0.00 means that that there 100 per cent chance that the relationship between the independent and dependent variable is not due to a chance. Above statement shows that hypothesis one is accepted. That means intrinsic rewards significantly affect employee's productivity.

Extrinsic Rewards and Employee's productivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.899[a]	.809	.808	.14169

a. Predictors: (Constant), Extrinsic Rewards

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.062	1	23.062	1148.715	.000[b]
	Residual	5.461	272	.020		
	Total	28.523	273			

a. Dependent Variable: Employee's productivity
b. Predictors: (Constant), Extrinsic Rewards

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.388	.042		32.917	.000
	Extrinsic Rewards	.407	.012	.899	33.893	.000

a. Dependent Variable: Employee's productivity

The R-square value of the regression model is calculated to be 0.809 which explains the fact that at least 80.9% of variation in intrinsic rewards can be explained and elaborated by the variability in employee's productivity. ANOVA value measures the linear relationship between the independent and dependent variable of the regression model. The statistical significance value of 0.00 means that that there 100 per cent chance that the relationship between the independent and dependent variable is not due to a chance. Above statement shows that hypothesis two is accepted. That means intrinsic rewards significantly affect employee's productivity.

Reward Systems and Employee's productivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.880[a]	.774	.773	.15408

a. Predictors: (Constant), Reward Systems

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.065	1	22.065	929.446	.000[b]
	Residual	6.457	272	.024		
	Total	28.523	273			

a. Dependent Variable: Employee's productivity
b. Predictors: (Constant), Reward Systems

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.961	.061		15.831	.000
	Reward Systems	.499	.016	.880	30.487	.000

a. Dependent Variable: Employee's productivity

The R-square value of the regression model is calculated to be 0.774 which explains the fact that at least 77.4% of variation in intrinsic rewards can be explained and elaborated by the variability in employee's productivity. ANOVA value measures the linear relationship between the independent and dependent variable of the regression model. The statistical significance value of 0.00 means that that there 100 per cent chance that the relationship between the independent and dependent variable is not due to a chance. From the above statement it has been seen that the hypothesis three is accepted. That means intrinsic rewards significantly affect employee's productivity.

7.4 Summary of Hypothesis Result

Hypothesis		Result
H1	Intrinsic rewards significantly affect employee's productivity.	Accepted
H2	Extrinsic rewards significantly affect employee's productivity.	Accepted
H3	There is a positive relationship between reward systems& employee's productivity.	Accepted

7.5Multiple Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.915[a]	.837	.833	.13197

a. Predictors: (Constant), Promotion, Appraisal, Delegation, Bonus, Recognition, Salary

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.873	6	3.979	228.465	.000[b]
	Residual	4.650	267	.017		
	Total	28.523	273			

a. Dependent Variable: Employee's productivity
b. Predictors: (Constant), Promotion, Appraisal, Delegation, Bonus, Recognition, Salary

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta(β)		
1	(Constant)	.330	.216		1.523	.129
	Appraisal	-.013	.010	-.039	-1.241	.216
	Delegation	.087	.058	.082	1.493	.137
	Recognition	.279	.067	.312	4.172	.000
	Salary	.168	.041	.338	4.131	.000
	Bonus	.046	.023	.123	2.017	.045
	Promotion	.055	.024	.124	2.314	.021

a. Dependent Variable: Employee's productivity

Here the table shows the value of the coefficients to construct the model. Since the beta value of standardized coefficients is O unstandardized coefficients have been used here. Hence the regression lines are:

EP (Employee's Productivity**) = 0.33 -0.039$_{x1}$ + 0.082$_{x2}$ + 0.31$_{x3}$ + 0.33$_{x4}$ + 0.12$_{x5}$ + 0.12$_{x6}$**

Employee's Productivity=0.33-0.039(Appraisal) + 0.082(Delegation) + 0.31(Recognition) + 0.33(Salary) + 0.12(Bonus) + 0.12(Promotion).

8. CONCLUSION

The study revealed that, reward systems have a positive impact on employee's productivity on small and medium enterprises of Barisal City in Bangladesh. The small and medium enterprises are believed as vibrant indicator for accelerating economic development of a country. Employees are the most valuable resource of small and medium enterprises. This study examined the factors that were exclusively made an effect on the employee's productivity that lead to the success of small and medium enterprises. These factors were appraisal, delegation, recognition, salary, bonus and promotion. This study additionally measured the relationship between SMEs success and its determinants. This study has been concluded both intrinsic and extrinsic rewards which gave positive impacts on employees productivity. This research also found that extrinsic rewards has much more positive impact on employee's productivity that were most significant factor that affects the SMEs success.

At the end the results obtained from the study showed that there's positive relationship between rewards and employee's productivity. Small and medium enterprises should concentrate on those variables of reward systems. Small and medium enterprises should place additional emphasis to their reward systems in order to attract, acquire and increase the productivity of the employee.

Future Implication

This research study has not inculcated all the rewarding methods that were available for the use of organizations, and has only focused on a limited number of intrinsic and extrinsic variables. Therefore, more research could thereby examine the use of further rewarding structures and analyze their impact on the productivity of the employees of SMEs.

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Effects of Socio-cultural and Marketing Factors on Consumer Purchase Intention towards Skin Care Products: Evidence from Bangladesh

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Samir Das**

ABSTRACT

The purpose of this paper is to investigate the effects of socio-cultural and marketing factors on consumer purchase intention towards skin care products. A self-administered questionnaire was developed and administered to a simple random sample of 307 students, job holders, businessmen and housewives. Factor analysis, Pearson correlation and multiple regression analysis were used to analyze data. The findings of this research indicated that all factors namely social belief, lifestyle, celebrity endorsement, purchase situation and advertising have significant impact on consumer purchase intention towards skin-care products. In addition, celebrity endorsement and lifestyle have more influence on consumer purchase intention towards skin care products. This study confirms the growing importance of socio-cultural and marketing factors in purchasing skin-care products in Bangladesh and also provides insights for marketers to understand and influence consumer purchase intention towards skin-care products.

Keywords: *Social belief, Lifestyle, Celebrity endorsement, Purchase situation, Skin-care products.*

1. Introduction

Skin care is a range of practice to keep smooth and attractive skin. The Bangladeshi market for skin care products is growing at a faster rate. In the past few years, the Bangladeshi market for skin care product has changed largely due to the changes in the perception of consumers towards the skin care products. Moreover, market size for skin care products in Bangladesh is

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increasing due to the changes in socio economic condition of this country. Today, women are more powerful because of changing economic condition and men are more conscious about their outlook and these are the main causes of expansion of skin care related products in Bangladesh. Customers have different choices and they show different behavior when they purchase skin care products and understanding this behavior is the key to success for skin care product marketers (Jalalkamali and Nikbin, 2010). According to Antignac *et al.* (2011), there has been a rapid and dramatic growth in personal care products across the world. Today women are liberal, more active, and they are taking part in every walk of life; therefore, they became more concerned of their looks and appearance. Beside women, men are interested in using skin care products. According to Datamonitor (2010), global toiletries market for men grew at a compound annual growth rate of 4.2 percent from 2004 to 2009. People are more conscious of beauty, hygiene and better lifestyle because they have more discretionary income with increasing number of dual earning (Souiden and Diagne, 2009). According to Vang (2010), for skin care products mainly women are targeted. But this dogmatic concept no longer exists. Consumers need and demands are increasing at a faster rate for skin care products and companies are meant to meet them and provide the products according to the demands of the people. However, people use skin care products for various purposes. Some use them for sexual attractiveness, social and professional acceptability.

Since skin care products is a growing business in Bangladesh, it would be worthwhile to study consumer purchase intention towards skin care products in Bangladesh. Moreover, consumer intention towards skin care products is influenced by different factors, therefore, this research aims to investigate the effects of socio-cultural and marketing factors on consumer purchase intention towards skin care products.

2. Literature Review

Purchase intention towards skin care products is the activities or tendencies of obtaining and using skin care products to keep smooth skin. The concept that skin care products are associated with women no longer exists as true in this world. Advancement of different fashion magazines for male is increasing day by day (Souiden and Diagne, 2009). According to Souiden and Diagne (2009), consumer purchase intention for skin care products is influenced by socio-cultural factors, marketing factors and personal factors. Socio-cultural factors are customs,

lifestyles and values that characterize a society. People live and behave in the way which is supported by the cultural environment. Every individual has different set of habits, beliefs and principles which he or she develops from his family status and background. On the other hand, marketing factors can be advertising, situational factors and celebrity endorsement.

2.1 Socio-cultural Factors:

2.1.1. Social belief

Social beliefs are the beliefs by which groups in a community identify themselves. When consumers buy a product, their main motivations are to fulfill their needs which are influenced by their cultures and own social beliefs. Social beliefs are statistically highly significant explanatory variable showing the substantial positive impact on men's attitude toward consumption of grooming products (Khan *et al.,* 2017). Social belief has a significant impact on consumption of skin care products because it shapes individuals' behavior (Weber and de Villebonne, 2002). But according to the findings of Souiden and Diagne (2009), social beliefs do not have significant influence on consumer purchase intention towards skin care products. According to Nickel (2004), people have a social desire to be beautiful and this leads a person to use skin care products. On the other hand, Caroline (2005) found that consumers use skin care products due to friends and workplace environmental pressure. Based on this discussion the following hypothesis can be developed.

H1: *Social Belief has positive and significant impact on consumer purchase intention towards skin care products.*

2.1.2. Lifestyle

Lifestyle can be defined as a pattern of consumption appearing in a person's choice of spending time and money (Solomon, 2006). People must represent themselves to the world so that their fellow, friends and other surrounded people will be interested in remaining a close contact with them (Askegaard *et al.,* 2002). The consumer is interested in changing their outlook like a woman to become modern (Firat *et al.,*1995). Despite people's similarities, their lifestyle can differ radically and companies are more involved and connected with customer to identify their lifestyle. Male customers purchase grooming products because of lifestyle determinants in many

countries. Career oriented men and women tend to be more concerned about their good looking and lifestyle because of this they are turning to use skincare products and use beauty treatment to improve their looks (Liu, 2006). According to Coley and Burgess (2003), social class, values and personality are determinants of lifestyle and these have huge impact on how people behave toward the consumption of products. People who are living in urban areas are more conscious about their looking and use more skin care products (Liu, 2006). Based on above discussions following hypothesis has been developed.

H2: *Lifestyle has positive and significant impact on consumer purchase intention towards skin care products.*

2.2 Marketing Factors:

2.2.1. Advertising

Kotler and Armstrong (2012) defined advertising as the promotion of ideas, goods or services by an identified sponsorship. Advertisements reflecting "cultural values" are more persuasive than those that exclude them (Hans and Shavvitt, 1984). Advertising is seen as the foremost means of associating cultural meanings with a brand. Research done in the past few years has revealed that consumption communities, written reviews, blogs by consumers, news reports, and expert columns also influence the consumer opinions about a brand (Thompson, 2004).

Compared to the female target market, people do not hear much about male's skin care products advertising but this situation has changed in the last twenty years and males are increasingly targeted by the marketers. Recently, media is increasingly targeting the men's products through communicating messages to increase the sales of skincare products for male and advertising through mass media has set beauty standards in our society (Souiden and Diagne, 2009). Moreover, in advertisement regarding men's skin care products, male celebrities are used more frequently (Iida, 2004). Based on previous discussion, the following hypothesis can proposed.

H3: *Advertising has positive and significant impact on consumer purchase intention towards skin care products.*

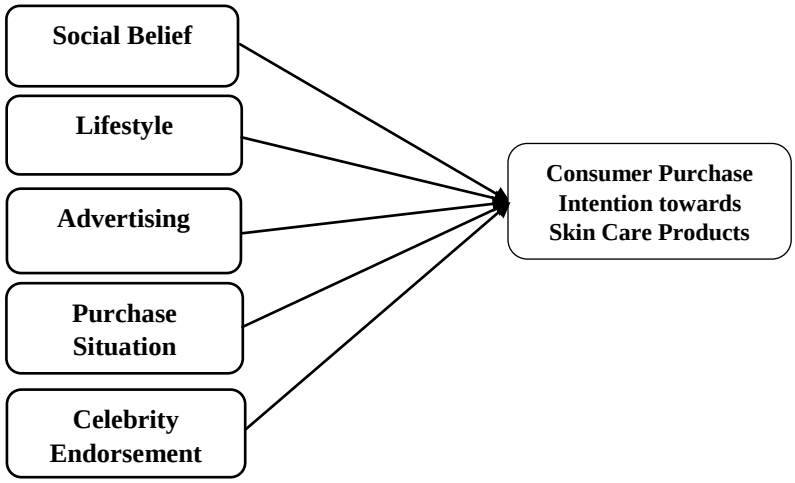

***Figure 1*:** Proposed model of the study.

2.2.2. Purchase Situation

Situational influences are temporary conditions that affect how buyers behave. They include physical factors such as a store's locations, layout, music, lightings and even scent. While purchasing skin care products, customers are sometimes influenced by some situational factors like location of purchase, salesperson and store environment (Weber and de Villebonne, 2002). The environment of buying situation or retail store is a caring function for attracting and keeping the customer interested in the shopping experience, and it has a significant effect on the moods of customers. Literature shows that purchase situation positively influences purchase intention (Grimmer *et al.*, 2016). The store environment plays a key role by providing significant cues and these may be important in developing positive purchase intentions (Chao and Schor, 1998). Therefore, the study put forward the following hypothesis.

H4: *Purchase situation have positive and significant impact on consumer purchase intention towards skin care products.*

2.2.3. Celebrity Endorsement

Celebrity endorsement has been defined as any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good (Byrne and Breen, 2003). Celebrity endorsement are used to offset the negative attributions that are associated with skincare products (Souiden and Diagne, 2009). Well-connected celebrity must be using the best quality available on the market and women are quick to buy the products when a celebrity claims to use it. Although the products always do not meet consumer's expectations, consumers are interested to buy the next products being endorsed by a celebrity (Begoun, 2010)**.** Increasing endorsement of celebrities in skincare product publicize that men can make themselves look better with the product. Moreover, celebrity endorsement contributed to the thinking that skin care is making men more comfortable and positively changing the men's attitude toward the idea of consuming skincare products (Coley and Burgess, 2003). This leads us to suggest the following hypothesis.

H5: *Celebrity endorsement has positive and significant effect on consumer purchase intention toward skincare products.*

3. Methodology

3.1. Research Approach

This research described the consumer purchase intention towards skin care products. So, this is descriptive in nature. For measurement and scaling a Likert scale was used, ranging from 1 to 5 (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree).

3.2. Data Collection and Data Analysis

Data were gathered through survey. The collected data was analyzed by factor analysis, Pearson correlation and multiple regression analysis using the statistical analysis tool SPSS 20.0.

3.3. Population and Sampling

Data were collected from three major cities: Dhaka, Barishal and Khulna of Bangladesh. For this research, target population was all the people who purchase and use skin care products. Data were collected from 307 sample respondents because Tabachnick and Fidell (2007)

suggested that it is good to have at least 300 samples for factor analysis. Samples had been chosen based on convenience sampling technique because previous study (Souiden and Diagne, 2009) found it least expensive and least time consuming method.

3.4. Questionnaire

To gather data a questionnaire with some standardized questions was used. These questions were drawn from prior research in this field. For the measurement of consumer purchase intention towards skin-care products, three items were adopted from the studies of Han (1987), Coley (1999), Youn (2000), and Beatty and Ferrell (1998). Social belief was measured by four items which were extracted from Coulter *et al.*(2002) and Bakewell *et al.*(2006) studies. Three items from Bakewell *et al.*(2006) and one item from Coulter's *et al.*(2002) studies were considered to measure lifestyle and two items from Mueller and Taylor (2010) were used to measure advertising. To measure purchase situation variable, three items were used from Lee *et al.* (2005) and one item from Bakewell *et al.*(2006). To gather data about celebrity endorsement, three items were drawn from Ohanian's (1990) study.

4. Analysis and Findings

4.1. Demographic of the Respondents

The summary on the distribution of the sample was tabulated in the ***Table I***. The total number of the respondents was 307. The gender distribution of the respondents was 52.12% males and 47.88% females and they were aged between 15 to over 39 years old. As seen in the table, most of the respondents were aged from twenty-one to twenty-six (47.23%). The majority of the respondents were university graduates (53.42%) and university post graduates were 28.66%. There are 67.75% of the respondents were student, and job holders constitute 19.22% of the total respondents and rest of them were businessman (6.84%) and housewife (6.19%). Only 8.79% of the respondents' monthly income was above BDT 35,000 and most of the respondents had monthly income less than BDT 20,000 and it was 60.26%.

Table I: *Profile of the respondents*

Description		Frequency	Percentage
Gender	Male	160	52.12
	Female	147	47.88
Age	15-20	40	13.03
	21-26	145	47.23
	27-32	75	24.43
	33-38	28	9.12
	Over 39	19	6.19
Education	HSC	55	17.92
	Graduate	164	53.42
	Post Graduate	88	28.66
Occupation	Businessman	21	6.84
	Job Holder	59	19.22
	Student	208	67.75
	Housewife	19	6.19
Income (Monthly)	Less than BDT. 20,000	185	60.26
	BDT. 20,001- BDT. 35,000	95	30.95
	Above BDT. 35,000	27	8.79

(Source: Authors' Calculations)

4.2. Exploratory Factor Analysis (EFA)

Before testing individual hypothesis for the study, exploratory factor analysis (EFA) with varimax rotation was conducted to evaluate validity and reliability of dependent variable and independent variables. Based on factor analysis, items with loadings greater than .60 and factors with eigenvalues greater than 1.0 were retained. Because factor loadings less than 0.4 are weak and minimally accepted and factor loading greater than or equal to 0.6 are strong (Gorsuch, 1983). Extracted variables using principle component analysis (PCA) showed that six factors contributed more than 70 percent of the total variance. And six items had the KMO index of 0.772 and the Sig. of Bartlett's test of 0.000 < 0.05. According to Kaiser (1974), a minimum acceptable score for KMO test is 0.5. Therefore, the sample size was adequate for factor analysis. All the nineteen items had loadings greater than 0.60 which illustrated the high correlation among each item and corresponding extracted components. Therefore, by examining all the underlined variables of a particular factor and placing emphasis on those variables with higher loadings, the authors' attempted to assign a name or label to a factor that accurately reflects the variables as shown in the ***Table II***. Therefore, all the independent variables (F1, F3, F4, F5 and F6) were named as; Social Belief, Lifestyle, Celebrity Endorsement, Purchase Situation and Advertising. Besides these, F2 was named as Consumer Purchase Intention.

Table II: *Summary of the Dependent and Independent Variable with Factor loadings and Reliability Coefficient*

Component Name	Items	Component						Cronbach's Alpha
		1	2	3	4	5	6	
Social Belief (SB)	SB3	.828						.786
	SB1	.745						
	SB2	.724						
	SB4	.703						
Consumer Purchase Intention (CPI)	CPI2		.841					.861
	CPI1		.821					
	CPI3		.805					
Lifestyle (LS)	LS1			.785				.749
	LS2			.781				
	LS3			.751				
Celebrity Endorsement (CE)	CE2				.803			.725
	CE3				.773			
	CE1				.755			
Purchase Situation (PS)	PS1					.773		.700
	PS3					.770		
	PS2					.770		
Advertising (AD)	AD2						.934	.888
	AD1						.919	

- *All items have factor loading > 0.60*
- *KMO index = 0.772 and Sig. of Bartlett's test = 0.000*
- *Total variance explained = 70.43%*

(Source: Authors' Calculations)

Moreover, data obtained from the respondents seemed to be reliable because all the variables had Cronbach's Alpha greater than or equal to 0.70. The Cronbach's Alpha ranged from 0.70 to 0.888. The EFA output had been further used as an input of multiple regression analysis. Before that correlation among the variables had been analyzed using Pearson correlation matrix.

4.3. Pearson Correlation

Table III showed the positive relationships among each socio-cultural and marketing factors with consumer purchase intention towards skin-care products. Among these significant relationships, lifestyle (r =.392, p =.000), celebrity endorsement (r =.381, p = .000) and social belief (r =.332, p =.000) had the strongest correlation with consumer purchase intention.

Table III: *Correlation among Variables*

	SB	LS	AD	PS	CE	CPI
SB	1					
LS	. 376**	1				
AD	. 230**	. 173**	1			
PS	. 284**	. 230**	. 062	1		
CE	. 116*	. 169**	. 187**	. 116*	1	
CPI	. 332**	. 392**	.238**	. 294**	. 381**	1

***Correlation is significant at the 0.01 level (2-tailed).*

(Source: Authors' Calculations)

Whereas, purchase situation (r =.294, p =.000) and advertising (r =.238, p =.000) had the moderate correlation with consumer purchase intention. This means two socio-cultural factors namely lifestyle and social belief had high correlation with consumer purchase intention for skin care products because Bangladeshi people pay homage to rituals and social beliefs and their purchase decision influenced by these factors. On the other hand, one marketing factor namely celebrity endorsement had high correlation with purchase intention towards skin care products.

4.4. Regression Analysis

The ***Table IV*** showed the results of multiple regression analysis for testing hypothesis of the research. Here simple multiple regression analysis was carried out by using five independent variables (Social Belief, Lifestyle, Celebrity Endorsement, Purchase Situation and Advertising) as derived from EFA and consumer purchase intention as dependent variable. Standardized coefficient showed the impact of independent variables on the consumer purchase intention towards skin-care products. The analysis revealed that 32% of the variance of consumer purchase intention towards skin care product was explained by the following five factors as R^2 value was 0.32. From the table, it was apparent that celebrity endorsement ($\beta = 0.287, p < 0.05$) and lifestyle ($\beta = 0.235, p < 0.05$) had the highest effect on consumer purchase intention towards skin-care products which was subsequently followed by purchase situation ($\beta = 0.16, p$

< 0.05), social belief (β *= 0.142, p < 0.05)* and advertising (β *= 0.101, p <0.05).* So, all these five factors had positive and significant impact on consumer purchase intention towards skin care products.

Table IV: *Summary of Regression Analysis*

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.*
	B	Std. Error	Beta		
(Constant)	.045	.312		.144	.886
SB	.164	.062	.142	2.652	.008
LS	.242	.054	.235	4.492	.000
AD	.091	.044	.101	2.041	.042
PS	.189	.059	.160	3.181	.002
CE	.310	.053	.287	5.863	.000

- **Coefficients are significant at the 0.05 level (2-tailed).*
- *Dependent Variable: CPI*
- *Independent Variables: SB, LS, AD, PS, CE*
- *ANOVA: F = 28.307, Sig. = .000*
- *Model Summary: R = .566, R^2 = 0. 320, Adjusted R^2 = 0. 309*

(Source: Authors' Calculations)

Therefore, the regression equation for socio-cultural and marketing factors affecting consumer purchase intention towards skin-care products could be stated as follows:

$$CPI = 0.287CE + 0.235LS + 0.16PS + 0.142SB + 0.101AD$$

As F = 28.307 and p < .05, the entire regression equation was statistically significant at the 5% level of significance. This means that the above regression equation was deemed to accurately envisage the level of consumer purchase intention towards skin-care products.

Table V: *Result of Hypothesis testing*

Hypothesis	Hypothesized Relationship	Coefficients	t value	p value	Decision
H1	SB → CPI	.142	2.652	.008	Supported
H2	LS → CPI	.235	4.492	.000	Supported
H3	AD → CPI	.101	2.041	.042	Supported
H4	PS → CPI	.160	3.181	.002	Supported
H5	CE → CPI	.287	5.863	.000	Supported

(Source: Authors' Calculations)

The results of hypothesis of ***Table V*** generated from multiple regression analysis, ascertained that two socio-cultural factors namely Social Belief ($p < 0.05$) and Lifestyle ($p < 0.05$) had significant impact on consumer purchase intention towards skin care products. On the other hand, the three marketing factors namely Celebrity Endorsement ($p < 0.05$), Purchase Situation ($p < 0.05$) and Advertising ($p < 0.05$) also had significant impact on consumer purchase intention towards skin care products. Therefore, all the hypotheses of the study were supported.

5. Discussion and Managerial Implications

This study investigated the impact of socio-cultural and marketing factors on consumer purchase intention towards skin-care products in Bangladesh. More specially, the research clarified the impact of Social Belief, Lifestyle, Celebrity Endorsement, Purchase Situation and Advertising factors on the purchase intention of consumer towards skin-care products. The empirical results showed the level of each factor that had impact on purchase intention towards skin care products.

With the highest coefficient ($\beta = 0.287$), the celebrity endorsement factor was the most influential factor which had the strongest impact on the level of consumer purchase intention. This had indicated that celebrity has more influence on Bangladeshi people when they intend to purchase skin-care products. This supports the findings of Cole (2008) who found that celebrity endorsement positively influence consumers' purchase intention toward skin care products. As people want to show themselves like their favorite persons who might be a media personality, footballer, cricketer or some other persons, skin care product providers should make an

association between products and celebrity to develop a positive purchase intention and thus influence the consumption of skin care products.

Besides, lifestyle is another important consideration for Bangladeshi consumer of skin care products as the result showed that it had second highest coefficient value ($\beta = 0.235$). According to Souiden and Diagne (2009), lifestyle has a major impact on the purchase and consumption behavior of consumers. In another research conducted by Khan *et al.* (2017) where they made a comparison between Pakistani and Chinese consumers, found that Chinese are more conscious about their lifestyle. So findings of this paper have correspondence with previous research. People are more concerned about their lifestyle, and how people and society perceive them when they use skin care products. People are interested in changing their outlook so that they can represent themselves smartly to others. In promotional message, marketers should promote that their products will enhance their customer's lifestyle and make the concept believable to the customers that using skin care products will enhance their image among their friends, families and largely in the society in which they belong.

Purchase situation ($\beta = 0.160$) and social belief ($\beta = 0.142$) had moderate influence on consumer purchase intention towards skin care products. This results partially correspond with Souiden and Diagne (2009) who found that purchase situation strongly affect consumer behavior and friendly store environment develop positive purchase intention but contradicts with the findings of Khan *et al.* (2017). According to Khan *et al.* (2017), social belief has strong influence on consumer behavior because people live in society and show respect to rules and regulations of the society but it contradicts with Souiden and Diagne (2009) who found that societal beliefs and consumers' cultural settings did not play a significant role in stimulating demand for skin care products. In Bangladesh, people are emotional and purchase situation works as convincing tool for purchasing skin care products. Young generation is more interested in purchasing skin care products and purchase situation is one of the main marketing tricks that influence the customers.

In addition, Advertising factor tends to have low impact on consumer purchase intention towards skin care products in Bangladesh with coefficient value ($\beta = 0.101$) and it has similarities with the findings of Souiden and Diagne (2009).

Finally, this study implicates that when marketers develop their marketing mix strategy for skin care products in Bangladesh, they should give more focus on lifestyle and celebrity

endorsement factors. As literacy rate of Bangladesh is increasing day by day, people become more conscious and fashionable than before. So here is an opportunity for marketers to get advantages by endorsing celebrities who have popularities among the Bangladeshi consumers and can gain trust among the people.

6. Research Limitations and Scope of Further Research

Some limitations of this study may be considered. Firstly, number of the respondents could be increased. The majority of the respondents were drawn from students and it would be better if respondents were drawn from different occupations. It would be more convenient if it was done for specific skin care product category like cosmetics. Future studies may address specific category of skin care products and attention should be given on male and female separately.

7. Conclusion

The Bangladeshi skin-care product industry is considered to be one of the fastest growing industries. So it is needed to understand consumer purchase intention towards skin care products. This research reveals that both socio-cultural and marketing factors are important for influencing consumer purchase intention towards skin care products. Celebrity endorsement and lifestyle are the main motivating factors for Bangladeshi consumers and the reason behind this may be the increase of disposable income of the consumers and increase in awareness towards their looks. Moreover, the findings of this research will help in developing strategies for particular segments and help to grasp all possible opportunities from this growing market.

Appendix A: List of Measures

Constructs	Items	Statement	Sources
Social Belief	SB1	In general, I am confident that I make good choices when I buy skin care products	Coulter *et al.*(2002); Bakewell *et al.* (2006)
	SB2	I'm confident that I buy good skin care products for the money I pay	
	SB3	I think carefully about the skin care products I use	
	SB4	I am conscious of the skin care products I use	
Lifestyle	LS1	Other people ask me what is fashionable/trendy	Bakewell *et al.* (2006); Coulter's *et al.*(2002)
	LS2	I usually notice what skin care products others are using	
	LS3	I switch among brands of skin care products just to try something new once in a while	
Celebrity Endorsement	CE1	Celebrity endorsers of skin care products are handsome and attractive	Ohanian (1990)
	CE2	Celebrity endorsers of skin care products are reliable and trustworthy	
	CE3	Celebrity endorsers of skin care products are experienced and knowledgeable	
Purchase Situation	PS1	I usually buy skin care products from the store which provide High-quality customer service	Lee *et al.* (2005)
	PS2	I usually buy skin care products from the store which have Friendly design layout	
	PS3	I usually buy skin care products from the store which have Spaciousness of internal layout	
Advertising	AD1	Advertisement about skin care products are believable	Mueller and Taylor (2010)
	AD2	Sometimes advertisement about skin care products are annoying	
Consumer Purchase Intention	CPI1	I always buy skin care products as I really like it	Han,(1987); Coley (1999); Youn (2000); Beatty and Ferrell (1998)
	CPI2	I feel a sense of thrill when I am buying skin care products	
	CPI3	I feel excited when making a purchase of skin care products.	

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Evaluating the Financial Health of Selected Commercial Banks in Bangladesh

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ABSTRACT

The aim of this paper is to predict the state of possibility of bankruptcy of the commercial banks operating in Bangladesh using the Altman's Z-score bankruptcy prediction model. The research is based on a dataset of 17 banks (three state-owned commercial banks, 11 conventional private commercial banks and three Shariah-based private commercial banks). The banks have been selected randomly out of 57 scheduled banks covering data for the past seven years from 2010 to 2016. Altman's Z-score model has been applied considering various financial ratios like liquidity, profitability, solvency and market value ratio as the explanatory variables and Z-score itself as the dependent variable to measure the state of possibility of bankruptcy of the banks. It has been found that almost 6% of the selected 17 banks show the sound performance, 65% indicate the weak performance while 29% maintain the healthy performance. The results of ANOVA show that the mean Z-score of the selected state-owned commercial banks, Shariah-based private commercial banks and conventional private commercial banks is significant. On the other hand, only Z-score of conventional private commercial banks and Shariah-based private commercial banks has been significantly different from each other. So, the stakeholders should strictly monitor the financial position of banks regularly.

Keywords: Altman Z-score, Commercial banks, Financial distress.

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1. Introduction

The economic system of a country largely depends on the successful and smooth operations of the banking sector. The role of the banking sector is to help in accelerating the country's economic growth. But the banks face chronic problems due to financial fraud or when a bank is unexpectedly unable to meet its financial obligations to the depositors and creditors. After the global financial crisis of 2007, bank failure or bankruptcy has been a common feature in the market economy. When a bank goes insolvent or bankrupt, it leads to financial distress which may cause equity investors to lose all of their investment and investors may see the bank as an incompetent firm. For this reason, stakeholders as well as creditors try to give more attention to predict banking failures with the help of some economic models. Altman Z-score Model is one of the best models for the prediction of financial health of the banks. This model is able to give 90% accurate results in prediction of bankruptcy (Altman, 2015). Many stakeholders like investors, financial analysts and bankers have given it a wide acceptance for its excellent measurement of evaluating the financial health. As many as 17 commercial banks have been selected randomly as a sample data. Among those three are state-owned banks, 11 are conventional private banks while three are Shariah-based private banks. The calculated values of the Z-score Model have been applied in conducting the study.

The rest of this paper proceeds as follows: Section 2 summarizes the Literature Review. Objectives of the study have been explained in Section 3 while Section 4 describes data and methodology employed. Section 5 presents analysis and findings of the study while Section 6 focuses on limitations and recommendations for further research. Finally, concluding remarks are given in Section 7.

2. Literature Review

A lot of researches have been conducted to find out the financial health of the banking sector which was very much helpful for preparing this paper. Kivuvo and Olweny (2014) identified twenty-four Kenya's SACCO sector having a positive slope and six SACCO sector having a negative slope based on the Altman Z-score model. The study suggests that SACCO's financial performance should be improved in grey and bankrupt area and financial analysis should be conducted in view of the model application. Mostofa et al. (2016) in a study of Bangladeshi private commercial banks using Altman Z-score model found 24% of the selected commercial banks are in the safe zone, 20% in the distress zone and 56% in the grey zone. Sajjan (2016)

conducted a study on detecting bankruptcy of six manufacturing and non-manufacturing companies by using the time series data beginning from 2011 to 2015 and his result based on the Altman's Z-score Model indicates that most of the companies are in the distress zone which may lead to the firm's bankruptcy in the upcoming future. Khaddafi et al (2017) verified the predictions of bankruptcy in the banking sector of Indonesia using the Altman Z-score Model. This study identified some banks as in a healthy condition or in a state of bankruptcy or in a condition of grey area according to the test result of Z-score over the period of 2011 to 2013.Gupta (2014) studied the strength of two types of bankruptcy model named Z Score Model and Logit Model to evaluate the predictive ability of 120 Indian listed companies and the study identified solvency of each companies by Z-score Model and examined probabilistic estimates of failure by logistic regressions. Jan and Marimuthu (2015) examined bankruptcy profile of Islamic Banking Industry by Altman Z-score Model and prepared a comparative analysis in terms of bankruptcy by ANOVA Post Hoc Scheffe Test. By using Z-score model, the study identified that there is a significant relationship between performance indicators (liquidity, profitability, insolvency) and bankruptcy and insignificant relationship between productivity and bankruptcy among the top five Islamic banking countries and it classified some Islamic banks as average or as mediocre or as unsatisfactory. Nireshand Pratheepan (2015) evaluated the financial soundness of the firms by using the Altman Z-score Model which was conducted on seven companies during the period of 2010 to 2014. The study reveals that 71% of the companies were involved in financial distress whereas the remaining 29% were under the grey zone. Altman (1968) developed a model named Z-score to predict the company's financial distress in terms of failure, insolvency, default and bankruptcy and this Z-score tries to predict the probability of default by the companies which was found to be extremely accurate because of 95% of the correct predictions of companies in the bankruptcy. Khalid et al. (2014) carried out an investigation to predict the financial distress using a sample of 30 GLC's listed companies in Bursa Malaysia and found the significant relationship between Z-score and Current Ratio which was compatible with the study of Suleiman et al. (2001) whereby they mentioned positive relationship between Current Ratio and financial distress. Brown bridge (1998) identified that non-performing loans (NPL) also caused bank failures. Muniappan (2002) suggested that a bank's profitability and capital adequacy would have no significance if it has a high level of NPL as a bank with a high level of NPL is compelled to claim carrying costs on non-income yielding assets. Beaver (1967) analyzed the performance of various financial ratios

as an indicator of bankruptcy and based on his study it has been found that the cash flow to debt ratio is the best bankruptcy indicator. Carson (1995) applied Multiple Discriminant Analysis (MDA), Logistic Regression and Recursive Partitioning to predict bankruptcy of life insurance industry. He concluded that among the three types of bankruptcy prediction models, MDA model was superior to other models in predicting bankruptcy. Alareeni and Branson (2013) examined failed and non-failed Jordanian companies to show how the original bankruptcy model works practically. Mizan and Hossain (2014) applied Altman Z-score Model to predict the bankruptcy of the cement industry in Bangladesh where five cement companies were taken as a sample size and the result concluded that two companies were found to be satisfactory while thre others were found to be unsatisfactory based on the performance indicators of the companies. Shum way (2001) used simple technique to estimate discrete-time hazard model with a binary Logit model estimation programme. This paper concentrates on the bankruptcy prediction including some of the most evident misappropriations of single-period bankruptcy models and the results reported are in more precise parameter estimation and superior prediction. Liao, Q. and Mehdian, S. (2016) applied an aggregate bankruptcy index (ABI) to predict the inclination of company's financial status on the basis of their relative financial distress. This paper is built on the work of these researchers by clearly comparing the predictive accuracy of Z-score Multiple Discriminant Analysis (MDA) and Aggregate Bankruptcy Index (ABI) to measure financial distress and predict corporate bankruptcy. Although several approaches are available to predict financial failure, there is a problem still which model is the best one to take action (Aziz & Dar, 2006). Higher model accuracy is not assured with a larger number of factors although some models which have only two or three factors are as capable of predicting accuracy as the models with larger number of factors depending on the analysis of accuracy of the models. Although Altman's Z-score model had high predictive ability for the initial sample one year before failure (95% accuracy), the model's predictive ability dropped off noticeably in the following four years before its failure and finally the model's predictive ability when tested on a hold-out sample was 79% (Bellovary, Giacomino and Akers, 2007). Z-Score became a trustworthy indicator for verifying the state of a company’s health. It was extremely accurate and received many positive reactions with only few criticisms (Altman, 2015).

As Altman defined the Z-score model as a linear combination of four or five common financial ratios, weighted by coefficients and used Multiple Discriminant Analysis (MDA) technique in

several financial distress and bankruptcy studies with satisfactory results, this model has been considered as one of the most well-known and proficient bankruptcy prediction models. At first, Altman Z-Score model was found to be widely used model because it enabled the analysis to include many financial characteristics within a single score. Z-score model could be precious instrumental indicators for many users of financial statement in the face of financial failure. The Z-Score (Altman, 1983) is an adaptation for private companies. Z -Score was chosen because only three commercial banks were public. So, the Z-Score prediction tool seemed to be more suitable for the commercial banks. For this reason, we used Altman Z-score model in the evaluation of the financial health of selected commercial banks in Bangladesh.

3. Objectives of the Study

The aim of this study is to identify the financial strength and forecast the financial distress of the selected state-owned commercial banks, conventional private commercial banks and Shariah-based private commercial banks of Bangladesh using Z-score Model. Besides, this study has set the following specific objectives in relation to Z-score of all sample units:—

i. To examine whether there is any difference among the mean z-scores of (a) the three state-owned commercial banks; (b) 11 conventional private commercial banks; and (c) the three Shariah-based private commercial banks.

ii. To find out the difference between industry mean z-scores of (a) the state-owned commercial banks and that of the conventional private commercial banks; and (b) state-owned commercial banks and that of the Shariah-based private commercial banks.

iii. To identify the variation between industry mean z-score of conventional private commercial banks and that of Shariah-based private commercial banks.

4. Methodology of the Study

The data of this study have been collected from the annual reports of the 17 banks covering the period of seven years from 2010 to 2016. The banks have been selected on the basis of the availability of data and information. Altman Z-score Model has been applied for this analysis because Altman Z-score Model is one of the best models for the prediction of financial health of banking sector. (Altman, 2015). At first, we calculated various financial ratios and then identified financially distress and non-distress firms. Z-score Model (Altman, 1968) takes into

consideration four independent variables and each of them represent common financial ratios weighted by coefficients. Results have been processed through MS Excel software. ANOVA (one way) and T-Test have been used for hypothesis testing.

There are two Z-score formulas. One is original Z-score formula (for manufacturing firms) and another one is modified Z-score formula (for non-manufacturing firms or service industry).

Z-score formula for manufacturing firms: It is a five-factor model to forecast bankruptcy of manufacturing firms.

X1 = (Current Assets − Current Liabilities) / Total Assets

X2 = Retained Earnings / Total Assets

X3 = Earnings before Interest and Taxes / Total Assets

X4 = Market Value of Equity / Total Liabilities

X5 = Sales / Total assets

The equation of Z-score Bankruptcy Model is Z = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + .999X5

Z-score formula for non-manufacturing firms: Altman developed a modified Z Score Model for non-manufacturing companies. It is a four-factor model to forecast bankruptcy of non-manufacturing firms. The original Z-score Model was modified to minimize the limitations of original model. The ratio that restricts the utility of original Z-score model is called X5 and it differs significantly from one company to another.

X1 = (Current Assets − Current Liabilities) / Total Assets

X2 = Retained Earnings / Total Assets

X3 = Earnings before Interest and Taxes / Total Assets

X4 = Market Value of Equity / Total Liabilities

The equation of Z-score bankruptcy model is Z = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4

The study covers the sample size of 17 banks which fall under the category of non-manufacturing sector. In this study, we considered the Z-score formula for non-manufacturing firms and excluded variable X5.

Table 1: Z Score Independent Variable:

Variables	Ratio	Description
X1	Working Capital/ Total Asset	Working Capital represents a company's operating liquidity whereas total Assets shows the total amount of assets including both current and fixed assets. A bank's liquidity and proficiency have been fulfilled by this ratio.
X2	Retained Earnings / Total Asset	Retained Earnings are the amount of net earnings which is not distributed as dividends and carried out to the next years. This ratio indicates the bank's accumulated profitability.
X3	Earnings before interest and taxes (EBIT) /Total Asset	EBIT is also an indicator of a bank's profitability. This ratio indicates the efficiency of the bank to make earnings to pay off its fixed obligation.
X4	Market value of equity/Total Liabilities	This ratio measures the performance of the fair market value of the bank's stock to total liabilities.

Table 2: Z Score Dependent Variable:

Z score value	Implication
If Z> 2.6- Safe Zone	Very healthy or sound performance.
If 1.1<Z< 2.6- Gray Zone	Healthy performance
If Z<1.1-Distress Zone	Weak performance

4.1 Research Hypothesis

For ANOVA (one way), following hypotheses have been established:

H_{OA}: There is no significant difference in means of Altman Z-score among three different state-owned commercial banks.

H_{OA}: There is no significant difference in means of Altman Z-score among the 11 different conventional private commercial banks.

H_{OC}: There is no significant difference in means of Altman Z-score among the three different Shariah-based private commercial banks.

For T-Test, following hypothesis has been established:

H_{OD}: There is no significant difference between the mean z-scores of state owned commercial banks and that of conventional private commercial banks.

H_{OE}: There is no significant difference between the mean z-scores of the state owned commercial banks and that of the Shariah-based private commercial banks.

H_{OF}: There is no significant difference between the mean z-scores of the conventional private commercial banks and that of the Shariah-based private commercial banks.

5. Results and Discussions

This section is designed for the analytical part to fulfill the purpose of the study. It begins with Z-score of selected banks and descriptive statistics followed by different statistical analysis.

5.1 Z-score of selected banks

The discriminate zones of selected state-owned commercial banks, conventional private commercial banks and the Shariah-based private commercial banks have been shown in Table 3 using Z-score Model. According to this model, if the value of Z-score is more than 2.6 score, it will be in safe zone and if the value of Z-score is in between 1.1 and 2.6, it will be in grey zone. But if the bank fails to obtain a score of at least 1.1, it will be in distress zone. The study shows that out of the 17 banks, one bank is in the safe zone, five banks are in the grey zone and 11 banks are in the distress zone. In the Table 3, it has been shown that the prediction of bankruptcy in the banking sector is not so improved from the year 2010-2016. The safe, grey and distress areas have experienced ups and downs in each year.

Table 3: Z-score of selected banks

Company Name	Year							Average Z score	Discriminate Zone
	2016	2015	2014	2013	2012	2011	2010		
Rupali Bank	-1.56	-0.05	0.37	0.99	0.47	0.46	0.58	0.18	Distress Zone
Agrani Bank	1.12	0.90	0.93	1.18	0.90	1.32	1.76	1.16	Grey Zone
Janata Bank	1.24	1.39	1.19	1.02	0.65	1.16	1.26	1.13	Grey Zone
IFIC Bank	0.86	1.16	1.57	1.59	1.33	2.00	2.31	1.55	Grey Zone
Islami Bank	2.19	1.56	1.78	1.56	2.11	2.37	2.88	2.06	Grey Zone
Mercantile Bank	0.64	0.49	0.32	0.85	0.18	1.63	0.72	0.69	Distress Zone
Shahajalal Bank	0.29	0.59	0.47	0.47	0.41	0.46	0.82	0.50	Distress Zone
Bank Asia	0.34	0.53	0.51	0.68	-0.06	0.64	0.06	0.38	Distress Zone
City Bank	0.58	0.75	0.50	1.27	1.49	1.69	1.05	1.05	Distress Zone
Eastern Bank	1.13	1.00	0.67	2.17	0.89	-0.21	1.06	0.96	Distress Zone
Trust Bank	0.32	0.13	-0.38	-0.87	-1.17	-1.42	-2.77	-0.88	Distress Zone
Uttara Bank	0.25	-0.01	-0.39	0.38	0.91	0.07	0.65	0.27	Distress Zone
AB Bank	0.32	0.38	0.34	0.26	-0.81	-0.44	0.10	0.02	Distress Zone
1st Security	0.34	0.27	0.32	0.43	1.18	1.42	1.71	0.81	Distress Zone
NCC Bank	0.56	0.34	0.25	0.38	0.31	0.55	0.83	0.46	Distress Zone
DBBL	2.46	2.61	2.17	2.51	2.22	2.99	3.37	2.62	Safe Zone
UCBL	0.75	0.70	0.74	0.73	0.80	2.56	6.34	1.80	Grey Zone

5.2 Statistical Analysis of Z scores

The Table 4, 5 and 6 in appendix show that the state-owned commercial banks, conventional private commercial banks and Shariah-based private commercial banks have consistent average Z Scores which indicates little improvement in health. Among the selected state-owned commercial banks, Janata Bank has the highest average of Z Score and Rupali Bank has the lowest average of Z Score. Among the selected Shariah-based private commercial banks, Islami Bank has the highest and Shahajalal Islami Bank has the lowest average of Z Score. Table 6 also shows that DBBL has the highest average of Z Score and Trust Bank has the negative average of Z Score. According to standard deviation (STD), state owned commercial banks are in less risky than Shariah-based private commercial banks and conventional private commercial banks. Independent sample T-Test has been performed for this reason. **Table 7, 8 and 9** in appendix revel the result of ANOVA. **Table 7** shows that calculated F value (7.77) is greater

than critical F-value (3.55). So, null hypothes is i.e. H_{OA} cannot be accepted because sample data provide sufficient evidence to conclude that there is a significance difference in the mean Z Scores of selected state-owned commercial banks. Table 8 shows that F value (22.87) is greater than critical F-value (3.554). So, null hypothesis i.e. H_{OB} cannot be accepted because sample data provide sufficient evidence to conclude that there is a significance difference in the mean Z Score of selected Shariah-based private commercial banks. As the calculated value F=9.28 in Table 9 is greater than critical value 1.98, so null hypothesis i.e. H_{OC} cannot be accepted which means that the mean z score of selected conventional private commercial banks differs significantly. **Table 10, 11 and 12** in appendix present the results of T-Test. Table 10 indicates that there is no significant difference between the mean score of Shariah-based private commercial banks and state-owned commercial banks as the T-Stat= 2.27 is less than the T-Criti= 2.4469. So, this study has failed to reject null hypothesis i.e. H_{OD}. **Table 11** indicates that there is no significant difference between the mean score of state-owned commercial banks and conventional private commercial banks as the T-Stat = 0.13 is less than the T-Crit= 2.45. So, this study has failed to reject null hypothesis i.e. H_{OE}. The result of **Table 12** shows that there is significant difference between the mean score of conventional private commercial banks and Shariah-based private commercial banks as the T-Stat= 2.99 is greater than the T-Crit= 2.4469. So, null hypothesis i.e. H_{OF} cannot be accepted.

Finally, Table 13 depicts the summary of statistical analysis including ANOVA and t-test carried out in this study. It can be seen from the table that all the null hypothesis are rejected when this study conducted ANOVA test which means there is a significant difference in means of Altman Z Score among three different state-owned commercial banks, conventional private commercial banks and Shariah-based private commercial banks respectively. On the other hand, it can be seen from the table that we accept the hypotheses H_{OD} and H_{OE} because there is no significant difference in means of Altman Z Score among three different state-owned commercial banks, conventional private commercial banks and Shariah-based private commercial banks respectively and we accept the hypothesis H_{OE} while conducting T-Test.

6. Limitations and recommendations for further research

In this research, there are some limitations that need to be improved in further researches. The samples used in this research are limited within non-manufacturing companies i.e. banking companies. Here, only one model (Altman Z score model) has been used in this study but there

are some other models. So, further research should be conducted in the field of Logit Failure Prediction Model and Aggregate Bankruptcy Index (ABI) model to forecast the success or failure of the company and prepare a comparison to the Altman failure prediction model. The sample size of this study was relatively small. It is also essential to take the manufacturing companies into consideration alongside the non-manufacturing companies so that it can provide a broader view of predicting financial health from a sample of selected companies. So, future research should be conducted to justify whether the use of modern models other than Altman's Z-score model may have consistent probability estimates in financial distress.

7. Conclusion

This study examined the financial distress of selected banking companies of Bangladesh in view of the Edward Altman Z-Score model. As many as 17 banking companies were selected as sample to conduct the study and the data for a period of last seven years from 2010 to 2016 were taken into consideration. The study tried to find whether there is any difference between the Z scores of the state-owned banks and Shariah compliant Islamic banks, state-owned banks and conventional private banks, conventional private banks and Shariah compliant Islamic banks. The results of ANOVA show that the mean Z score of selected state-owned banks, conventional private banks and Islamic banks is significant. On the other hand, only Z score of conventional private banks and Shariah compliant Islamic banks is significantly different from each other. By examining the financial health using Z score model, it has been found that the financial endurance of the state-owned banks, conventional banks and Shariah compliant Islamic banks is not healthy up to the desired and satisfactory level and that the financial health of one bank varies from another. This research will help the researchers to understand the overall financial position of the banks in terms of the key performance indicators like available liquidity and profitability. If the banks do not remain in a good financial position, they may face difficulty to survive in the long run. As the profit generating ability of a bank mostly depends on its financial health, the country's financial regulatory bodies like Bangladesh Bank and the Ministry of Finance should regularly monitor the financial position and loan disbursement and loan recovery activities of the banks so that they may remain alert and avoid the recurrence of gross irregularities.

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APPENDIX

Descriptive statistics

Table 4: Z score of State-owned banks

Year	Rupali bank	Agrani Bank	Janata Bank	**Average**	**STD**
2016	-1.56	1.12	1.24	**0.27**	**1.58**
2015	-0.05	0.90	1.39	**0.74**	**0.73**
2014	0.37	0.93	1.19	**0.83**	**0.42**
2013	0.99	1.18	1.02	**1.06**	**0.10**
2012	0.47	0.90	0.65	**0.67**	**0.21**
2011	0.46	1.32	1.16	**0.98**	**0.45**
2010	0.58	1.76	1.26	**1.20**	**0.60**
Average	**0.18**	**1.16**	**1.13**	**(0.82)**	
STD	**0.83**	**0.31**	**0.24**		

Table 5: Z score of Islamic banks

Year	Islami Bank	Shahajalal Bank	1st Security Bank	**Average**	**STD**
2016	2.19	0.29	0.34	**0.94**	**1.08**
2015	1.56	0.59	0.27	**0.81**	**0.67**
2014	1.78	0.47	0.32	**0.86**	**0.80**
2013	1.56	0.47	0.43	**0.82**	**0.64**
2012	2.11	0.41	1.18	**1.24**	**0.85**
2011	2.37	0.46	1.42	**1.42**	**0.95**
2010	2.88	0.82	1.71	**1.81**	**1.04**
Average	**2.06**	**0.50**	**0.81**	**1.13**	
STD	**0.48**	**0.17**	**0.61**		

Table 6: Z score of conventional private banks

Year	IFIC Bank	Mercantile Bank	Bank Asia	City Bank	Eastern Bank	Trust Bank	Uttara Bank	AB Bank	NCC Bank	DBBL	UCBL	Average	STD
2016	0.86	0.64	0.34	0.58	1.13	0.32	0.25	0.32	0.56	2.46	0.75	**0.75**	**0.63**
2015	1.16	0.49	0.53	0.75	1.00	0.13	-0.01	0.38	0.34	2.61	0.70	**0.74**	**0.71**
2014	1.57	0.32	0.51	0.50	0.67	-0.38	-0.39	0.34	0.25	2.17	0.74	**0.57**	**0.75**
2013	1.59	0.85	0.68	1.27	2.17	-0.87	0.38	0.26	0.38	2.51	0.73	**0.90**	**0.95**
2012	1.33	0.18	-0.06	1.49	0.89	-1.17	0.91	-0.81	0.31	2.22	0.80	**0.55**	**1.00**
2011	2.00	1.63	0.64	1.69	-0.21	-1.42	0.07	-0.44	0.55	2.99	2.56	**0.91**	**1.37**
2010	2.31	0.72	0.06	1.05	1.06	-2.77	0.65	0.10	0.83	3.37	6.34	**1.25**	**2.26**
Average	**1.55**	**0.69**	**0.38**	**1.05**	**0.96**	**-0.88**	**0.27**	**0.02**	**0.46**	**2.62**	**1.80**	**0.81**	
STD	**0.49**	**0.47**	**0.29**	**0.46**	**0.70**	**1.05**	**0.43**	**0.46**	**0.20**	**0.43**	**2.11**		

ANOVA for State-Owned, Islamic and Conventional Private Banks

Table 7: ANOVA for state-owned banks

Z values	*Sum of Squares*	*df*	*Mean Square*	*F-Stat*	*F crit*
Between Groups	4.33	2	2.17	7.77	3.55
Within Groups	5.02	18	0.28		
Total	9.35	20			

Table 8: ANOVA for Islamic banks

Z values	*Sum of Squares*	*df*	*Mean Square*	*F-Stat*	*F crit*
Between Groups	9.58	2	4.79	22.87	3.55
Within Groups	3.77	18	0.21		
Total	13.34	20			

Table 9: ANOVA for conventional banks

Z values	*Sum of Squares*	*df*	*Mean Square*	*F-Stat*	*F crit*
Between Groups	62.77	10	6.28	9.28	1.98
Within Groups	44.65	66	0.68		
Total	107.42	76			

t-Tests for State-Owned, Islamic and Conventional Private Banks

Table 10: ***t-Test (1)***

	Mean	Variance	Observations	df	*t-Stat*	*t-Crit*
Mean score of Shariah-based private commercial banks	1.13	0.14	7	6	2.27	2.45
Mean score of state-owned commercial banks	0.82	0.09	7	6		

Table 11: ***t-Test (2)***

	Mean	Variance	Observations	df	*t-Stat*	*t-Crit*
Mean score of state-owned commercial banks	0.82	0.09	7	6	0.13	2.45
Mean score of conventional private commercial banks	0.81	0.06	7	6		

Table 12: ***t-Test (3)***

	Mean	Variance	Observations	df	*t-Stat*	*t-Crit*
Mean score of Shariah-based private commercial banks	1.13	0.14	7	6	2.99	2.45
Mean score of conventional private commercial banks	0.81	0.06	7	6		

Table 13: Summary Results of ANOVA and T-Test

ANOVA			***t*-Test**		
Hypothesis	Reject / Accept	Remarks	Hypothesis	Reject/Accept	Remarks
Ho_A	Reject	Signicant	H_{OD}	Accept	Insignificant
H_{OB}	Reject	Signicant	H_{OE}	Accept	Insignificant
Ho_C	Reject	Signicant	H_{OF}	Reject	Significant

*α = 5% Level of Significance

*df = Degree of freedom

*df (N) = Degree of freedom (Numerator)

*df (D) = Degree of freedom (Denominator)

Measuring Influence of Green Promotion on Green Purchase Behavior of Consumers: A Study on Bangladesh

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ABSTRACT

Marketers use green promotion to promote green products to consumers. This paper aims at finding the influence of green promotion on the green purchase behavior of Bangladeshi consumers. Data were collected from 310 green consumers in this study. Five Green Promotion tools-Green Advertising, Green Packaging, Eco-labeling, Public Relation and Sales Promotion were chosen as exogenous variables in this study. Structural Equation Modeling (SEM) was used to analyze the data. The study found that Green Advertising, Public Relation, and Sales Promotion significantly influence the green purchase behavior of consumers. This paper will help marketers understand the importance of green promotion in influencing the green purchase behavior of consumers.

Key Words: Green Promotion, Green Purchase Behavior, Structural Equation Modeling

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1. Introduction

Environmental issues have been regarded as one of the most talked topics in the recent years. Both businesses and consumers in the industrialized nations are concerned about the environmental degradation. This issue has transformed into green marketing or ecological marketing in the business arena (Feldman & Staehler, 1996). Businesses have become concerned about environmental threats and fallen under pressure to deal with the environmental impact of production and consumption of products and services (Roy & Epstein, 2000).

The American Marketing Association (AMA) arranged the first workshop on green marketing in 1975. After that in 1980 the first time green marketing concept was introduced. According to AMA, "green marketing" is regarded as the marketing of goods and services that are considered environmentally friendly. Green marketing comprises several activities such as product adjustment, changes to manufacturing processes, and packaging, advertising strategies and also increases awareness on compliance marketing amongst industries.

From the research of Chavan (2005), we can see that lots of firms have launched green products at increasing number. But green marketing practices have varied from company to company. Companies undertake a wide range of marketing tools to promote green products around the world. Some companies have effectively used green promotional tools to enhance the wider acceptance of green products. It is evident that Consumers' purchasing behavior is significantly influenced by promotional tools. Therefore, effective green promotional tools can generate high purchase intention among consumers to buy environmentally friendly products.

Marketers can implement green marketing with the help of traditional marketing tools and techniques. Several promotional efforts need to be taken to address green marketing to a broad

range of customers where they will be able to know about the environmentally friendly features of products as making proper utilization of it (Rex & Baumann, 2007).

Consumers need to be aware of green products widely. Green promotional tools like eco-labeling disposable green packaging, green advertising, educational campaign, sales promotion, public opinion etc. can play a vital role to create awareness about and induce acceptance of green products to consumers. As today's consumers are well conscious about environmental safety issues, companies must undertake promotional strategies by giving emphasis on green marketing. Companies should communicate environmental information to customers through green promotion. By promoting environment-friendly attributes of products, companies can generate a high level of credibility among consumers and foster higher consumer purchasing behavior.

Hence, this study aims to identify the impact of green promotion on the green purchasing behavior of Bangladeshi consumers. The study presents that green advertisement, eco-labeling, green packaging, sales promotion and public relation may have wide positive impacts on the green purchasing behaviors of Bangladeshi consumers.

2. Literature Review and Hypothesis Development

This paper takes help from a number of literatures focused on the green purchasing behavior of consumers and green promotion. Literatures on Bangladeshi consumers' green purchase behavior are handful and rarely found. However, some effective papers are found on an international basis on the green purchase and green promotion issues. These papers enrich this research tremendously.

Green Marketing: Peattie (2001) defined green marketing as some marketing activities which reduce social and ecological impacts of present products and production systems by promoting less harmful products. Generally, marketers use traditional marketing practices and tools in green marketing. They promote eco-friendly products that have less damaging effects on the environment (Hossain & Rahman, 2018). Peattie (2001) also recommended that the level of understanding of the interaction among business, society, and environment has accelerated where global society realizes the necessity to be green and to enhance green marketing practices and principles.

Green Promotion: Green promotion is concerned with utilizing various marketing tools to promote eco-friendly products before consumers (Hossain & Rahman, 2018). Qader and Zainuddin (2011) stated that it is very difficult to address green marketing as deciding which environmental information should be communicated and how it should be. Marketers should attempt to understand and identify the needs and wants of the target markets and develop market offerings that the customers require (D'Souza, Taghian, Lamb, & Peretiatko, 2007).

According to Ottman (2008), companies should be transparent in the way of promoting environmental information so that consumers can easily find it credible. In addition, companies can facilitate customer awareness by spreading the message about the benefits and usages of eco-friendly products.

Green Advertising: Green advertising is regarded as a significant promotional tool to influence consumers' green purchasing behavior to buy environmentally friendly products. Green advertisement generates positive consequences towards green products and influences to change purchasing behavior of consumers (Delafrooz, Taleghani & Nouri, 2014).

Some researchers described green advertising by classifying its parts. According to Davis (1994) elements of green marketing can be classified into three parts. Firstly, the company will start with an environmentally friendly statement. Secondly, the company will emphasize on demonstration of the dedication to environmental value by changing its procedure from green advertising. Thirdly, a company's green actions should be promoted through green advertising (Rahbar & Wahid, 2011).

Chase and Smith (1992) revealed that almost 70 percent of consumers are influenced by the environmental message of advertising and product labeling. Ansar (2013) described that advertisements are significant in generating environmental knowledge. Some researchers showed that consumers are loyal to green advertising (Frankel, 1992), willing to pay a higher price(Schlossberg, 1992), and knowledgeable about product safety and environment (Davis, 1994).

Well convincing message of green advertising influences consumers' purchasing behavior (Zinkhan & Carlson, 1995). Consumers focus on the message being demonstrated in green advertisements. There is a strong relationship between green advertisements and changing lifestyle of consumers. According to Sharma (2011), firms have changed their production procedure to promote green lifestyle through advertisements that enhance organizational responsibility towards the environment. In such a situation, consumers' perceptions and attitudes are affected by green advertisements that help to form a positive impression of firms' image (Cox, 2008).

Green Packaging: Packaging is another important tool that is used to perform many functions including containing, identifying, describing, protecting, displaying, promoting and making

products marketable. Kotler wrote that packaging can be defined as all the actions of designing and producing the container of a product (Pathak, 2014). On the other hand, Kumar et al. (2014) stated that packaging refers to the employing technology and material for enclosing or protecting products for distribution, storage, sale, and use. It also enhances product familiarity that has an impact on consumers' purchasing behavior (Huddleston, Good & Stoel, 2001).

Green packaging can be defined as a strong 'P' of the modern marketing mix that not only performs the function as a container but also describes, protects, displays and promotes necessary information regarding environmental value. According to Agyeman (2014), a consumer's intention to buy green products are significantly influenced by packaging. In another way, Davis (2014) describes that women consumers' purchasing behavior is likely to influence more than the purchasing behavior of male consumers.

Green packaging is used to influence consumers' purchasing decision, promote products and brand values as well as make products differentiated from others (Ford, Moodie & Hastings, 2012; Magnier &Schoormans, 2015). That's why modern packaging should be attractive, appealing and safe and companies should adopt green product packaging that has no negative impacts on health (Lamberti & Escher, 2007). Besides, it can be a vital tool for achieving competitive advantages (Delgado, Gómez-Rico & Guinard, 2013; Jerzyk, 2016).

Modern marketers use green packaging as an important strategic tool for building strong ties with brands and generating consumer attraction (Jiménez-Guerrero, Gázquez-Abad & Ceballos-Santamaría, 2015). For this reason, marketers need to be careful to design product packaging, because it reflects product quality that influences consumer purchasing behavior (Hamelin, Ellouzi & Canterbury, 2011).

Eco-labeling: Consumers' purchasing behavior is significantly influenced by knowledge or information (Laroche, Bergeron & Barbaro-Forleo, 2001). Labels serve as a demonstrator of products. In such a way, Eco-Labeling provides useful information to those customers who purchase products for the first time.

Many sellers claim to have direct "label" but law makes it compulsory for them to provide more information about product usages and benefits (Delafrooz, Taleghani & Nouri, 2014). According to Zinkhan and Carlson (1995), consumers eagerly seek the information on eco-friendly products and try to understand logos to make a better purchasing decision.

According to Rashid (2009), Eco-Labeling is influential tool that demonstrates consumers about the environmental impacts of their purchasing behavior. On the other hand, through eco-labeling consumers can easily distinguish green products over normal or traditional products. Because eco-labeling creates eagerness among consumers to buy green products (Awan, Bukhari & Iqbal, 2011).

According to Caswell and Mojduszka (1996), consumers seek to find safety-related product labels to understand the term "green" and avoid product related confusion. Researches show that 70% of respondents are influenced by eco-labeling (Chase & Smith, 1992). In addition to, Eco-labeling affects the purchasing behaviors that are related to eco-friendly products (Wu et al., 2011).

Public Relation: Szyman´ska (2005) explained that the role of public relations in marketing mix is defined as it consists in passing specific information to key target customers within the marketing chain, so as to influence their purchase decision.

In the complex business world, public relation can be a popular platform for introducing green perspective. Organizations use public relation as a set of managerial functions to improve organizational image to consumers. It generates a bridge between society and business by focusing on "go green" themes. Consumers find it worthwhile to build up a win-win relationship with companies. Green advertising could be used to promote green features of the products (Arseculeratne & Yazdanifard, 2013).

Sales Promotion: Sales promotion promotes additional incentives to purchase products and services (Palmer, 2014). It includes short-term promotional incentives offered to target markets for generating desired responses (Gilbert & Jackaria, 2002).

Sales promotion refers to the short-term incentives that generate high sales and encourage to test new products. It results in high material consumption where consumers are influenced by 'buy one, get one free' incentives. Besides, Sales promotion may generate sustainable consumption by providing additional value (Belz & Peattie, 2009).

According to Manjunath and Manjunath (2013), to generate high consumer purchasing intention towards green products companies should use a wide range of promotional tools like; coupons, free samples, offers, schemes and premiums to have an appealing response in eco-friendly products.

Therefore, sales promotion helps to buy or taste green products. Because it helps to increase customer sensitivity, switch to other brands and facilitate brand's familiarity (Steenkamp, Nijs, Hanssens, & Dekimpe, 2005). Then consumers realize that the used products are good to go with it and they decide to go for a further purchase decision.

Green Purchasing Behavior: Consumer purchasing behavior can be defined as a set of consumer actions associated to identify a need or want, search for information, buy, use and provide feedback on goods and services to fill up their needs and wants (Vyas, 2009). Boztepe (2012)described that green consumers would not like to purchase those products and services that are harmful to health, animals, and the environment.

According to Cohen (1973), Green marketing is getting popular in many counties and consumer knowledge about green products is also increasing rapidly. Consumer knowledge is transforming into purchasing eco-friendly products (Rahman, Hossain, & Hossain, 2019). For this reason, marketers should highlight ecological knowledge in their organizations, their products, and their advertising in order to achieve the goal of changing the purchasing behavior of consumers (Mendleson, 1994; Rahman, 2019).

Golkonda (2013) believed that marketers may help to improve the consumers' awareness of ecological problems by promoting marketing strategies to get them involved in social welfares that stimulate the consumers' to move from conventional products to environmental products. Table 1 represents the summary of the literature review.

Based on the literature review this paper proposes the following hypotheses:

H1: Green advertising has significant influence on the green purchasing behavior of consumers.

H2: Green packaging has significant influence on the green purchasing behavior of consumers.

H3: Eco-labeling has significant influence on the green purchasing behavior of consumers.

H4: Public relation has significant influence on the green purchasing behavior of consumers.

H5: Sales promotion has significant influence on the green purchasing behavior of consumers.

[Table 1 has to be inserted here]

3. Significance of the Study

Marketers use traditional marketing promotion tools to influence consumer purchase behavior. For instance, marketers use advertising to encourage consumers to purchase certain products; attractive packaging to describe, displays and promote necessary information; labeling to provide product information; public relation to create positive brand image and sales promotion to increase short-term sales. Companies blend these promotion tools to make customers delighted. Recently, the flavor of marketing promotion has been turned into green marketing promotion due to increasing environmental consciousness among customers. Nowadays, companies use green promotional tools to create awareness about green products that influence consumers to take final action. Consumers are getting concerned about the value of health, society, and environment. They often purchase different products without learning whether these products are environmentally friendly or not. As a result green marketing promotion can be used as an effective tool to influence consumers green purchase behavior.

Hence, this paper attempts to identify whether marketers' green promotion really influences Bangladeshi consumers' green purchasing behavior or not.

4. Research Methodology

4.1 Research Design

This study is descriptive in nature. It is undertaken to find out and analyze the influence of green promotion on the green purchasing behavior of Bangladeshi consumers. To achieve the research objectives quantitative data were used in this study. Target respondents were the people who use green products. Total 310 respondents participated in the study using the personal survey method with a structured questionnaire.

4.2 Sampling plan

All consumers in Bangladesh using green products have been considered as the population for this study. The consumers who use green products are considered as the sample of this research. A total of 310 respondents were considered as the sample for this study. According to the sample size determining guidelines of Hatcher (1994), who recommended that the minimal number of participants providing usable data for the analysis should be the larger of 100 participants or 5 times the number of variables or items being analyzed, this study surveyed 310 samples. Additionally, Kline (2011) suggested that the sample size should be a minimum of 10 cases per parameter/ items. Thus, the study comprised of larger sample size of 310 participants, which are larger than the suggested number as the selection of larger samples may accompany more accurate results. Judgmental sampling technique was used to reach and collect valuable data from the respondents. Judgmental sampling technique was considered appropriate for this research since it works as a good method of picking up more representative samples from the population of interest and it also enables the researchers to locate the respondents with ease.

4.3 Sources of Data Collection

This study utilized both primary and secondary data. Primary data were collected from targeted samples by using a structured questionnaire survey containing five response options ranging from "strongly disagree" to "strongly agree" with 18 measurement items. The personal survey method was used for data collection because it provides face to face interaction opportunity between interviewer and respondents. Secondary data were collected from different Journals, Articles, Magazines, Books and other related publications found in web sources.

4.4 Data Analysis Procedure

The data obtained through the survey are quantitative in nature. Confirmatory Factor Analysis (CFA) using maximum likelihood was used to identify and confirm factors loadings of the constructs used in the study. Kaiser-Meyer-Olkin (KMO) value was calculated to ensure the sampling adequacy. Besides, Composite Reliability (CR) and Average Variance Extracted (AVE) measured the reliability and validity denoting the discriminant validity of the study. Structural Equation Modeling (SEM) was used to determine the relationship between observed variables and unobserved variables via AMOS 23 software.

5. Data Analysis

5.1 Demographic Characteristics of the Respondents

[Table 2 has to be inserted here]

Demographic data were collected from the respondents living in Barisal division. **Table 2** shows that among 310 respondents participating in the survey, 192 or 62% were male and the remaining 118 or 38% were female. Only respondents having 18 years or more age were selected for this study as they were believed to be knowledgeable on green promotion. From

310 respondents, 148 or 48% were undergraduates, 115 or 37% were graduates and the rest 47 or 15% were post-graduates. In case of green products purchase out of 310 respondents 96 or 31% purchased five times or more than that, 157 or 51% purchased twice but less than 5 times, 57 or 18% purchased green products only once.

5.2 Measurement Model: Assessing Validity and Reliability

Confirmatory Factor Analysis is used to access the measurement model of the study using AMOS 23. Confirmatory factor analysis is employed to access the latent factors for each and every construct. The appropriateness of a measurement model is determined by an overall fit of the model with data, the reliability of each construct and loading statistical significance (Magistris &Gracia, 2008). **Table 3** shows that this study has a KMO value of 0.885. This value denotes that there is sampling adequacy in the study (Kaiser, 1960).

[Table 3 has to be inserted here]

Cronbach's α was employed to determine the internal consistency of all factors used in the study (Robinson, Shaver, Wrightsman, & Andrews, 1991). As shown in the **Table 4,** Cronbach'sα values of green advertising, green packaging, Eco Labeling, public relation, sales promotion and green purchasing behavior were 0.791, 0.760, 0.772, 0.866, 0.799, and 0.907. All Cronbach'sα values were greater than 0.7 denoting high internal consistency of all measurement indicators (Nunnally & Bernstein, 1994).

The construct validity of latent variables is determined by AVE and CR. AVE is used to test the variance of the measurement model of a variable through the variance indicator. Its acceptable value is above 0.5 (Fornell & Larcker, 1981). In addition, the internal consistency of a variable is also measured by estimating the values of CR. The CR values ranged from 0.6 to 0.7 are

tolerable (Nunnally & Bernstein 1994). The CR values above 0.7 and the AVE values above 0.5 show high reliability and validity of the constructs. The following Table 4 shows that the AVE and CR values of six constructs were above 0.5 and 0.7, showing high reliability and validity of the constructs.

[Table 4 has to be inserted here]

[Figure 1 has to be inserted here]

Besides, convergent validity is measured through factor loadings and variance extracted. All the factorloadings close to 0.6 or above 0.6 are acceptable values for measuring convergent validity (Chin, Gopal & Salisbury, 1997). **Table 5** shows the correlation between constructs. The correlation between constructs below 0.8 is adequate to determine discriminant validity (Brown, 2006). The overall results of the study showed adequate reliability and validity.

[Table 5 has to be inserted here]

5.3 Structural Model: Assessing Goodness-of-Fit Indices and Hypotheses Testing

AMOS 23 was employed to test the structural model and goodness of model fit indices. First the results of the measurement were found to fit the data perfectly as all the values were within the acceptable ranges (X^2 =126.675, CFI =0.997, GFI =0.957 and RMSEA =0.013). The structural model was measured with the same sample (n=310) yielding the following model fit results (X^2 =126.675, CIMN/DF = 1.056, RMR = 0.017, GFI = 0.957, AGFI = 0.939, PGFI = 0.672, NFI = 0.954, RFI = 0.942, IFI = 0.997, CFI = 0.997, PNFI = 0.749, PCFI = 0.782, RMSEA = 0.013) shown in the **Table 6.**

[Table 6 has to be inserted here]

Table 7 shows the results of the structural model to test the proposed hypotheses in the study. The results of path coefficients represented that green advertising, green packaging, Eco

Labeling, public relation and sales promotion positively influenced the green purchasing behavior of Bangladeshi consumers. Total five hypotheses were developed and three hypotheses were supported. Among all variables green advertising (β = 0.245, p = 0.014) positively and significantly influenced the green purchasing behavior. Thus, H1 is supported. Green packaging (β = 0.173, p = 0.076) positively influenced the green purchasing behavior. But green packaging didn't significantly influence the green purchasing behavior as p >0.05. Thus, H2 was not supported. On the other hand, Eco Labeling (β = 0.140, p = 0.736) positively influenced the green purchasing behavior butH3 was not supported becausep >0.05. However, public relation (β = 0.133, p = 0.049) and sales promotion (β = 0.318, p = ***) positively and significantly influenced the green purchasing behavior. Thus, H4 and H5 were supported for the study. Therefore, three hypotheses named H1, H4, and H5 were supported among five hypotheses.

[Table 7 has to be inserted here]

[Figure 2 has to be inserted here]

6. Discussions and Implications

The results of the study showed that green advertising, public relation and sales promotion significantly influence the green purchasing behavior of Bangladeshi consumers. These three key factors make consumers aware of the value of green products over society and the environment. Consumers will realize the necessity of green products when they have proper knowledge about green products and then they will go to take the taste of green products.

Today's marketers could utilize the effectiveness of advertising to entice consumers to know about green products. Thus effective green advertisement can encourage consumers to make a green purchase. According to Alniacik and Yilmaz (2012), advertising staffs and marketing managers need to emphasis on communication and presentation of environmental information in their ads.

The purchasing behavior of consumers can be changed through green advertisements. For instances, TV and radio commercials of energy saving lights should emphasis on less energy consumption, health value and environmental effects. Through TV campaigns of energy saving lights, the users of traditional incandescent lights can realize that traditional incandescent lights are responsible for increasing global warming. As its users need to think that the more use traditional incandescent lights are equal to more emotion of carbon which leads to global warming. Marketers should also promote billboards, posters, leaflets highlighting the importance of eco-friendly products.

In this era of modern technology, consumers are more connected to the internet. People like to pass a large portion of their time browsing social media like- Facebook, Twitter, WhatsApp etc. So, marketers should place advertising of green products in social media that will knock them to buy eco-friendly products. Here, Ottman (2008) added that the information which will be

promoted to consumers should be correct and reliable. Thus, marketers should provide authentic information about green products. Therefore, green advertisements can foster motivation to buy green products and avoid those products that are harmful to the environment.

According to the result of the study, there is a significant relationship between public relation and consumer green purchasing behavior. Green product manufacturers often rely on public relation to communicate messages with their customers. In fact, it is an easier way to generate trust among customers and improve product and service credibility. To do this, marketers should endorse some key players who have vast knowledge in the environmental arena and able to disseminate information about environmental safety (Fuller, 1999).

Marketers may use sales promotion as a short-term incentive to increase sales. Sales promotion is regarded as one of the best effective tools in the marketing mix to induce and encourage customers to buy and test new products (Belz & Peattie, 2009). In such a condition, successful marketers should offer effective sales promotion for their green products. Many studies have proved that customers like to have discounts, samples, rebates, coupons and other sales promotion when they purchase products. In Bangladesh, customers are induced to buy green products through sales promotion. Hence, marketers should not only focus on increasing sales rather they should do this in a greener way for the betterment of society and the environment.

However, there is no significant relationship between green packaging and Eco Labeling with the green purchasing behavior of Bangladeshi consumers. Many studies have shown that green packaging and Eco Labeling have a positive impact on green purchasing behavior (Agyeman, 2014; Rashid, 2009). However, results indicate that green packaging and eco-labeling have the lesser impact on the green purchasing behavior of Bangladeshi consumers.

This paper has some important managerial implications. Successful marketers can utilize the findings of this study to design effective promotional strategies for their green products in Bangladesh. The findings of this study also provide some important insights to the marketers who are facing the challenges of promoting green products. Marketers will be successful by using this information to articulate a perfect combination of promotional tools to encourage customers to purchase green products.

7. Conclusion

Deterioration of environment is a major concern to the stakeholders in the business arena. Thus, all parties need to move towards "go green" revolution to survive in this battle. Green promotion can be an effective tool for ensuring environmental sustainability that can offer a safer world for the next generation. Nowadays, consumers ask to be informed about the benefits of using eco-friendly products that will help to reduce the consumption of environmentally harmful products. Marketers should design their promotional tools in the most effective way that will help them to become biased towards buying green products. This green movement can be a significant weapon to the marketers to earn more profits by introducing green products in the market that will give the organizations a new life and a strong base. So, organizations should utilize more green advertisement, green public relation, and green sales promotion to offer consumers a safer product usage experience.

8. Limitations and Scope for Further Research

The study was conducted only on 310 Samples. For better results, Iwrgcr sample sizes (More than 310) may be effective. Another limitation is that this research area is hardly explored by previous researchers. So, further study is needed to test the implications of these promotional

factors in the other parts of Bangladesh. This study has summarized three factors that influence the green purchasing behavior of Bangladeshi consumers. There may have some unknown factors that may also influence consumers' green purchasing behavior. As a result, further study is needed to investigate those unknown factors that may have a significant impact on the green purchasing behavior of Bangladeshi consumers.

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Appendices

Table 1: Summary of the Literature Review

Authors	Titles of the Research Studies	Key Factors
Leonidou, Katsikeas and Morgan (2013)	"Greening" the marketing mix: do firms do it and does it pay off?	Green Product, Green Price, Green Distribution Programs, Green Promotion Practices
Hossain and Rahman (2018)	Measuring the Impact of Green Marketing Mix on Green Purchasing Behavior: A Study on Bangladeshi Consumers	Green Product, Green Price, Green Place, Green Promotion, Green Purchasing Behavior
Rahman, Hossain and Hossain (2019)	Factors Affecting Environmental Knowledge and Green Purchase Behavior of Energy Saving Light Users in Bangladesh: An Empirical Study	Peer Influence, Green Advertising, Environmental Knowledge, Green Purchase Behavior
D'Souza, Taghian, Lamb and Peretiatkos (2006)	Green products and corporate strategy: An empirical investigation.	Perception of Green Products, Product Labels, Packaging, Price, Product
Davari and Strutton (2014)	Marketing mix strategies for closing the gap between green consumers' pro-environmental beliefs and behaviors.	Green Product, Green Price, Green Promotions, Green Place, Environmental Concern, Consideration of Future Consequences
Diglel and Yazdanifard (2014)	Green Marketing: It's Influence on Buying Behavior and Attitudes of the Purchasers towards Eco-Friendly Products.	Green Product, Green Price, Green Promotions, Green Place
Kim and Choi (2005)	Antecedents of Green Purchase Behavior: an Examination of Collectivism, Environmental Concern, and PCEE.	Collectivism, Environmental Concern, Perceived Consumer Effectiveness
Agyeman (2014)	Consumers' Buying Behavior Towards Green Products: An Exploratory Study	Price, Environmental Concerns, Quality, Brand Name, Convenience, Durability, Packaging
Ansar (2013)	Impact of Green Marketing on Consumer Purchase Intention.	Environmental Advertisements, Price, Ecological Packaging

Table 2: Demographic Characteristics of the Respondents

Variables	Respondents (N=310)	Frequency (%)
Gender		
Male	192	62%
Female	118	38%
Age		
Above 18 years	310	100%
Educational Qualification		
Undergraduate	148	48%
Graduate	115	37%
Post-graduate	47	15%
Green products purchase history		
Purchased five times or more than that	96	31%
Purchased twice but less than 5 times	157	51%
Purchased only once	57	18%

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.885
Bartlett's Test of Sphericity	Approx. Chi-Square	2713.794
	Df	153
	Sig.	.000

Table 4: Results of the measurement model

Constructs	Items	Item Loadings	CR	AVE	Cronbach'sα
Green Advertising	GA1	0.72			
	GA2	0.71	0.791	0.559	0.791
	GA3	0.80			
Green Packaging	GP1	0.71			
	GP2	0.71	0.761	0.515	0.760
	GP3	0.73			
Eco Labeling	EL1	0.77			
	EL2	0.76	0.779	0.541	0.772
	EL3	0.67			
Public Relation	PR1	0.77			
	PR2	0.86			
	PR3	0.85	0.868	0.686	0.866
Sales Promotion	SP1	0.63			
	SP2	0.81	0.808	0.587	0.799
	SP3	0.84			
Green Purchasing Behavior	GPB1	0.90			
	GPB2	0.83	0.907	0.766	0.907
	GPB3	0.90			

Note: CR = Composite Reliability; AVE = Average Variance Extracted; ***P < 0.001 (two-tailed)

Table 5: Correlation between constructs

	GPB	GA	GP	EL	PR	SP
GPB	**0.875**					
GA	0.460	**0.748**				
GP	0.482	0.337	**0.717**			
EL	0.511	0.678	0.594	**0.736**		
PR	0.465	0.370	0.553	0.485	**0.829**	
SP	0.548	0.365	0.501	0.539	0.463	**0.766**

Note: GPB = Green Purchasing Behavior, GA = Green Advertising, GP = Green Packaging, EL =Eco-labeling, PR = Public Relation, SP = Sales Promotion

Table 6: Goodness-of-Fit statistics

Fit Indices	Criteria	Indicators
Chi-square		**126.675**
Chi-square/(degree of freedom)	<5 acceptable; <3 good	**1.056**
Adjusted goodness of fit index (AGFI)	>0.8 acceptable; >0.9 good	**0.939**
Goodness of fit index (GFI)	>0.8 acceptable; >0.9 good	**0.957**
Comparative fit index (CFI	>0.9	**0.997**
Normed fit index (NFI)	>0.9	**0.954**
Relative fit index (RFI)	>0.9	**0.942**
Root mean square residual (RMR)	<.05	**0.017**
Root mean square error of approximation (RMSEA)	<0.1acceptable; <0.08 good	**0.013**

Table 7: Results of hypotheses testing [Path Coefficients (β)]

	Estimate	S.E.	C.R.	P-Value	Results
GPB <--- GreenAD	0.245	0.099	2.469	0.014	**Supported**
GPB <--- GreenPack	0.173	0.097	1.777	0.076	**Not Supported**
GPB <--- Ecolabel	0.047	0.140	0.338	0.736	**Not Supported**
GPB <--- PublicRel	0.133	0.067	1.969	0.049	**Supported**
GPB <--- SalesProm	0.318	0.076	4.189	***	**Supported**

Note: GreenAD = Green Advertising, GreenPack = Green Packaging, PublicRel = Public Relation, SalesProm = Sales Promotion

- P < 0.001***; P < 0.01***; P > 0.05*** (Statistically Significant)

Figure 1: The Factor Loadings of the Measurement Model with Standardized Estimates

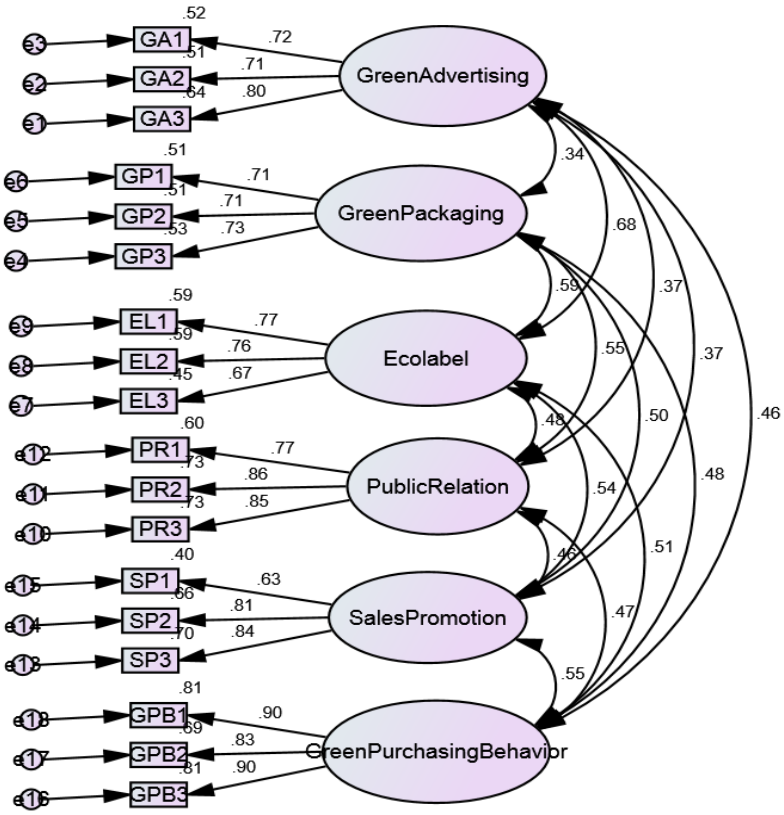
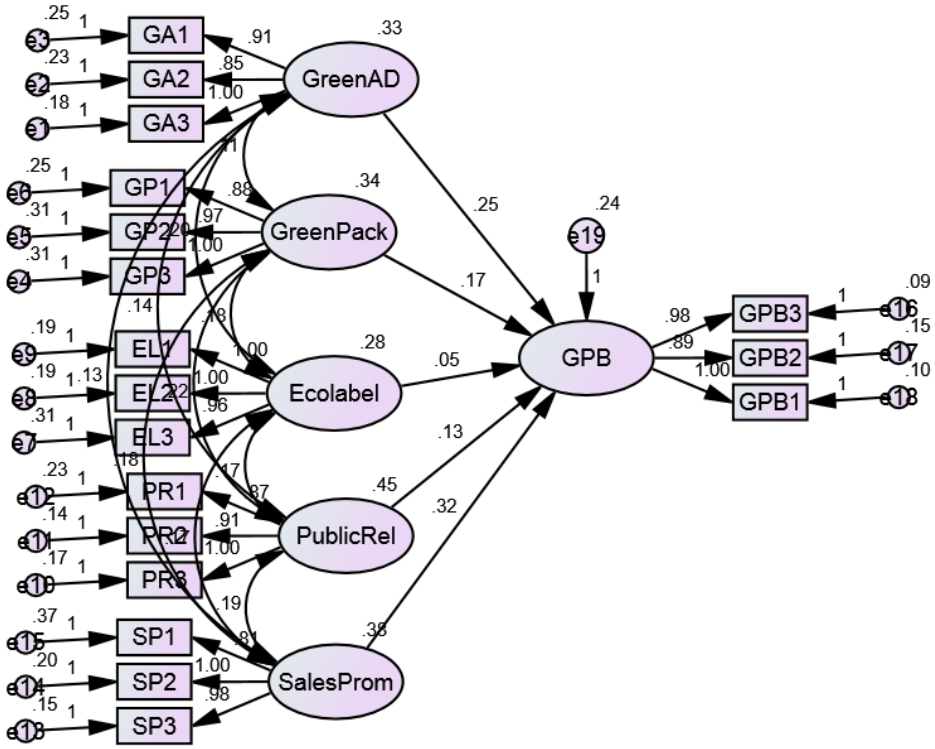


Figure 2: Results of the Structural Model



Perceived Differences of Health Service Quality between Patients and Health Service Providers: Empirical Evidence from Bangladesh

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ABSTRACT

Purpose: This paper seeks to explore the perceived differences of health services quality between patients and health service providers in Bangladesh based on an empirical study. Methods: The study was conducted based on SERVQUAL model with 5-dimensions like tangible, reliable, responsiveness, assurance and empathy in exploratory nature. To explore the differences data were gathered from both service providers ($n_{1=}340$) and customers ($n_2=337$) through a well-structured questionnaire. For analyzing data SPSS 16.00 is used and it covers descriptive statistics for general information and paired samples test for measuring health service quality gap. Findings: The study has found significant differences ($P<.05$) between the health service providers' feedback and customers' responses in case of all dimensions of health service quality. Policy Implications: Healthcare firms should take some measures like reducing patients' waiting time, adopting a suitable code of conduct, giving adequate training to the employees, increasing healthcare morality, recruiting qualified doctors, and applying the state-of-the-art equipment. These measures can reduce the perceived differences between patients and health service providers about the health service quality in Bangladesh. The government should adopt, implement, and monitor a timely and adequate healthcare policy. Originality: This study is first of its kind in Bangladesh and it is expected to contribute to the existing field of research. Research gaps are identified.

Keywords: Health service, health service quality, healthcare in Bangladesh, service quality

1.0 Introduction

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1.1 Background

Customer satisfaction is critical for the survival of a firm in this today's business world. Firms spend millions of dollars in marketing research to determine the customer satisfaction scenario. This is also important for healthcare firms.

Service quality is considered as one of the determinants of customer satisfaction, customer loyalty, cost reduction, profitability and so on (Islam, 2012). Kavitha (2012) stated that there is a close relation between service quality and customer satisfaction in healthcare industry.

Bangladesh is a small country in the world with a densely population. The population density in this country is near about 1266 per Km^2. The population of Bangladesh is equivalent to 2.19% of the total world population. However, Bangladesh has made substantive progress in some social development areas especially in health. Unfortunately a significant portion of its population are deprived from quality health service (Nury & Sayem, 2013). Although the government of Bangladesh has set up an institutional network for providing health care facilities for its people, the quality of healthcare service remains poor.

A customer satisfaction survey is considered as one of the important tools for measuring a firm's performance in delivering the quality service to its customers. It is equally important in case of healthcare service providing industry. This paper aims at exploring the perceived difference between customers and services providers regarding health service quality in Bangladesh. There are many studies on utilization and customers' satisfaction of health services, but such information is scarce in Bangladesh (Kahn et al., 2012).

1.2 Rationale of the Study

Pongs pap & Lerberghe (2006) stated that generally a patient expects more responsive and better quality health service from a service provider. The health service quality is critically important in determining the customer satisfaction. Although Bangladesh is a most densely populated country in the world, the quality health service is still a dream among the major portion of its population.

Again we see that there is disagreement between customers and service providers in healthcare industry regarding the service quality. So it is rational to conduct an empirical study to examine the perceptual difference between customers and service providers regarding health service

quality. Although numerous studies were conducted on healthcare service in Bangladesh (see table 1), not a single study is found focusing on the difference between customers and service providers perceptions toward health service quality. This is the first research in its kinds in Bangladesh. Again this study is based on SERVQUAL model (Parasuraman et al., 1988) which is scientifically proven. So the reliability of the study is expected to be high.

1.3 Objectives

The basic objective of this study is to explore the perceived differences of health services quality between patients and health service providers in Bangladesh. In addition to the main objective, the study also strives to meet the following objectives.

I. To identify the customers' experience regarding health services in Bangladesh.
II. To identify the service providers' comments about their services.
III. To justify the adequacy of the existing research in health services in Bangladesh.
IV. To provide concrete conclusions for policy implications.

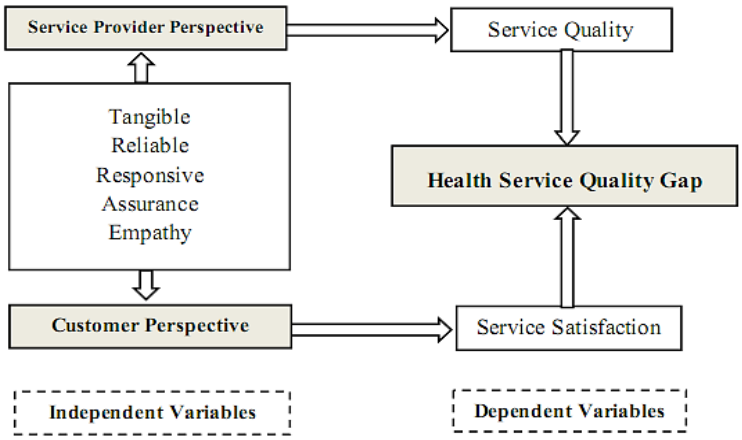
1.4 Conceptual Framework and Hypotheses Development

This study is carried out based on a conceptual analysis. See figure 1. Both the customers' and service providers' perspectives are analyzed based on the five dimensions as stated in SERVQUAL model. This model was developed by Parasuraman et al. in 1988. This model states that there are five dimensions of service quality measurement such as reliability, assurance, tangibles, empathy and responsiveness.

These five dimensions are independent variables for this study. The health service quality gap is the dependent valuable that results from the difference between customers' and service providers' perception.

Figure 1: Conceptual Framework of the Study

Source: Authors



In order to find out the service quality gap through the above research framework, the following hypotheses have been developed.

H1: There is a difference between customer perception and service quality in terms of tangible dimension in Health Service centers in Bangladesh.

H2: There is a difference between customer perception and service quality in terms of reliability dimension in Health Service centers in Bangladesh.

H3: There is a difference between customer perception and service quality in terms of responsiveness dimension in Health Service centers in Bangladesh.

H4: There is a difference between customer perception and service quality in terms of Assurance dimension in Health Service centers in Bangladesh.

H5: There is a difference between customer perception and service quality in terms of Empathy dimension in Health Service centers in Bangladesh.

H6: There is a difference between overall service providers feedback and patients' experiences in service quality in health service centers in Bangladesh.

2. Literature Review

2.1 Defining and measuring 'health service quality'

Although the term 'quality' is somewhat relative as it means different things to different people. Many researchers like (Lee, Khong, and Ghista, 2006) defined the term 'health service' is the ability to meet the patients' expectation. Leong, Zakuan, and Saman (2012) defined the quality of health service as ability to satisfy the given needs of its customers. Health service quality is a multi-dimensional construct affected by many variables.

The Agency for Healthcare Research and Quality (AHRQ) defines quality health care "as doing the right thing for the right patient, at the right time, in the right way to achieve the best possible results." The Institute of Medicine (IOM) stated that the term 'quality health care' is the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes.

Afkham, Abdi, & Rashidi (2012) stated that service quality consists of different attributes and many of them are intangible and difficult to measure. SERVQUAL model is used to evaluate the respondents' judgments of service quality. The Institute of Medicine (2001) proposed six domains to measure health service quality including safety, effectiveness, patient-centered, timely, efficient and equitable.

2.2 Health service in Bangladesh

Although Bangladesh is a small country in South Asia, it is one of the most densely countries of the world. Since its independence in 1971, we see that Bangladesh has been struggling with providing a proper health care system to its population.

It has gone through a significant number of reforms in healthcare infrastructure in both private and public sectors. Surprisingly Bangladesh has achieved notable improvements in population health status by achieving MDG 4 by reducing child death before the 2015 target. She has also improved on other key indicators including maternal death, immunization coverage, and survival from some infectious diseases including malaria, tuberculosis, diarrhea, and so on. For

example, the average lifespan of the people of Bangladesh is 71/73 years at birth (as of 2015) which is 46% higher from 1970.

The present birth rate stands at 2.16% while the death rate is 46 children in every 1000 ("The State of Healthcare Industry in Bangladesh [Part-I]," 2016). There are 128 public medical intuitions in Bangladesh that provide secondary and tertiary level healthcare. A notable factor in healthcare service in Bangladesh is that there is a new trend of startups in this sector initiated by a new breed of entrepreneurs who want to bring affordability and speediness in the health care system by introducing technology.

Healthcare system in Bangladesh can be categorized into three major categories such as medical professionals and the industry, public healthcare services, and private healthcare services. The health care sector in this country is beset with a number of hurdles. A survey conducted in 2012 found that less than 1% people is covered by the existing formal health protection program in Bangladesh.

Although Bangladesh has made some progress in healthcare, still She is confronted with a lot of challenges in the healthcare system. Andaleeb (2001) identified three major challenges in this regard, such as an improvement of quality, an increase of access, and a reduction of the costs.

Kahn et al. (2012) divided the healthcare services in Bangladesh into public versus private, formal versus informal or modern versus traditional services. Shortage of healthcare workforce, poor quality of services, absence of critical staff, lack of essential drugs, lack of supervision, and lack of job accountability are some common features of healthcare service systems in Bangladesh (Kahn et al. 2012). Ahmed et al. (2005) identified five kinds of existing healthcare services in Bangladesh such as self-care/self-treatment, pharmacy/drugstore, traditional treatment, paraprofessional, and qualified practitioner.

2.3 Contemporary Studies on Health Services

Several studies were conducted on healthcare service across the world. For example, Lee et al. (2006) studied the impact of deficient health service quality. Obama (2016) reviewed the factors influencing the decision to pursue health reform. Abrahamson et al. (2016) explored home and community-based service (HCBS) providers' perspectives of organizational readiness for quality improvement (QI). Pomey et al. (2015) focused on the perception of patients who

participated in Continuous Quality Improvement Committees (CIC) regarding their contribution, lessons learned, and challenges encountered. Arasli, Ekiz, and Katircioglu (2008) studied service quality in public and private hospitals in Northern Cyprus and found that the private hospitals were perceived better service than the public hospitals concerning the physical quality of equipment and facilities), quality of the service provide by doctors and nurses, and facility-related activities, i.e., building infrastructure and new equipment.

In addition to the worldwide research on health services, a significant number of studies were conducted in Bangladesh. A list of contemporary studies on health services in Bangladesh along with the basic research design and major findings. See Table 1.

Table 1: Contemporary Studies on Healthcare Services in Bangladesh

Studies	Methods	Key Findings
Heard, Nath, and Loevinsohn (2013)	A health facility survey was conducted.	Overall quality of care was better in the NGO area. Larger improvements were observed on some coverage indicators in the NGO area compared to the government area.
Nabi et al. (2015)	Cross-sectional study covering a total of 240 respondents.	Majority (79.6%) of the respondents has found satisfactory and good quality behavior from the doctor of these systems and it was also found that a good number of respondents (more than 80%) commented doctor's service as satisfactory and good.
Andaleeb (2007)	A field survey was conducted. A regression model was tested.	The behavior of nurses had the greatest impact on satisfaction (P, 0.001) as reflected in the standardized betas, followed by the behavior of doctors (P, 0.001). Facilitation payments had a negative effect on satisfaction (P, 0.01)
Biswas et al. (2006)	Nine focus group discussions and 30 in-depth interviews were conducted.	Old age and ill-health are perceived to be inseparable entities. Seeking health care from a formally qualified doctor is avoided

		due to high costs
Ashrafun & Uddin (2011)	Using a patient judgments questionnaire covering 10 dimensions of satisfaction.	Inpatients' monthly family income and levels of education have significant effect on the dependent variable.
Nury & Sayem (2013)	A face to face cross-sectional survey was carried out in a total of 674 married women.	Women's education specific to health care utilization, health related mass media campaigns and effective counselling on positive aspects of health care are necessary to reduce health care exclusion.
Raihan et al. (2014)	A descriptive research design was followed and methodological triangulation (social survey and FGD) was used to collect relevant data.	Most of the women go for modern medical assistance, although some of them use traditional treatment such as kabiraji, homeopathy etc.
Browaeys et al. (n.d.)	Conducting an explorative and qualitative research.	A facility's quality can be even more important than its accessibility.
Ferdousi (2015)	Household based survey.	The overall mean patient satisfaction score was 3.7 ± 1.0 and 2.4 ± 1.1 for facility based survey and household based survey respectively.
Andaleeb, Siddiqui, and Khandakar (2007)	A survey method was followed.	Doctors' service orientation, a composite of 13 measures, is the most important factor explaining patient satisfaction.
Mustafi etal. (2015)	Use of SERVQUAL model tocompare the patients' satisfaction.	The public hospitals are performing better in providing quality services compared to private hospitals.
Hasan, Chompikul, and Bhuiyan (2007)	A cross sectional study was conducted on 175 women.	There was a significant relationship between the satisfaction and facilities of the services (p-value <0.05).
Islam et al. (2009)	Literature Review	Financial and technical support is very helpful to ensure health service among village people

Islam et al. (2015)	Mixed-method approaches (both qualitative and quantitative) were adopted.	Identified several key factors that affect the quality of patient care.
Ahmad (2003)	Uses of secondary data for analysis.	The public health facilities in Bangladesh function poorly due to lack of proper decentralization.
(Andaleeb, 2000)	Combining use of MANOVA and two-group discriminant analysis (DA) method.	Service quality can be improved in the health care sector by gradually exposing the hospitals to market incentives.
Bhatia et al.(2009)	Conducting an opinion poll survey in Bangladesh, Mongolia, Nepal, and Sri Lanka by focusing on health inequalities.	A sizable number of respondents reported that their governments did not consider their views at all in shaping health care services.
Hossain et al. (2013)	Descriptive type of cross-sectional study.	Patient satisfaction with physiotherapy is higher in private setting than that in government setting in Dhaka.
Hasan et al. (2012)	Using a narrative interview method to better understand the user perspectives on the quality of PHC.	lack of adequate health professionals, misuse of resources, provider absenteeism, provider-centric consultations result in patient dissatisfaction and ineffectiveness of services.
(Khandakar, 2014)	The variables of the SERVQUAL model were used.	Negative relationship was found with patients' satisfaction.
Herdman et al. (2016)	A cross-sectional survey	Multidimensional poverty is associated with greater pre-hospital delays and expenditure in this setting.
Chowdhury and Osmani (2010)	Literature Review	Despite impressive gains being made on the health front, the health system of Bangladesh is characterised by many features that militate against the rights-based approach to health.

Source: Authors

3. Materials and Methods

3.1 Nature and Purpose

This study is exploratory in nature. It attempts to examine the perceived differences between service providers and customers toward the health service quality in Bangladesh.

3.2 Participants

The participants of this study comprises of the customers and service providers of hospitals, clinics, and diagnostic centers of Bangladesh. It covers two groups of respondents: customers /patients (n_1) and service providers ($n_{2)}$.

3.3 Materials

The study uses the SERVQUAL model to examine the perceived differences between service providers and customers toward the health service quality in Bangladesh. This model was developed and scaled by Parasuraman et al. (1988) for measuring service quality across the organization. This model includes 17 items across 5 dimensions. The dimensions are tangibles (4 items), reliability (4 items), responsiveness (3 items), assurance (3 items), and empathy 3 items (Zeithaml et al., 1990).

3.4 Sampling & Data Collection

A random sampling method was used to conduct the study. At first we conducted a pilot study on 5 respondents. We revised the questionnaire based the on the responses from pilot study. Then we conducted the final study by taking a sample size of 677. Out of these 677 respondents, 340 were service providers (n_1-340) and 377 were patients (n_2-337).

Based on SERVQUAL model, 5-point Likert scale (Chen, Clifford and Wells, 2000) was used to rate the scale ranged from Strongly Agree (1) to Strongly Disagree (5). Open-ended questionnaire was also used for collecting in-depth information. In considering the respondents' educational background and based on SERVQUAL model, a Bengali structured questionnaire was developed and translated back into English (Parasuraman et al., 1991). Data has been gathered through face to face interview method from June to July 2016 across Bangladesh. We collected data from primary as well as secondary sources. The secondary sources include relevant books, journals, statistical handbooks, websites, e-databases and so on.

4. Results and Discussion

4.1 Data Processing and Analysis

The collected data was processed by SPSS 16.0 version. Reliability and collinearity test were conducted to justify the reliability and validity of the study. See table 2.

Table 2: Reliability and Collinearity Statistics

Variables		No. of Items	Reliability Statistics	Collinearity Statistics	
			Cronbach's Alpha	Tolerance	VIF
Service Provider	Tangible	4	.727	.669	1.495
	Reliable	4	.637	.520	1.924
	Responsive	3	.713	.430	2.325
	Assurance	3	.662	.602	1.660
	Empathy	3	.575	.645	1.550
	Overall Service Quality	17	.867		
Customer	Tangible	4	.719	.735	1.360
	Reliable	4	.611	.514	1.944
	Responsive	3	.762	.394	2.540
	Assurance	3	.659	.559	1.788
	Empathy	3	.765	.472	2.120
	Overall Service Quality	17	.886		

Source: Survey data

In table 2 for reliability test, the Cronbach's Alpha was found 0.867 & .886 for service providers' feedback and customers' responses respectively. These Cronbach's Alpha values indicate the high reliable data for analysis. Out of 5-dimensions,data reliability test result for tangible, reliability, responsiveness and assurance is greater than 0.60 which states excellent reliable data for study; except empathy (.575) which is also good enough & at acceptable level of analysis. In multicollinearity test, result shows that all the tolerance value is less than 5. Machiels et al. (2013) expressed that if VIF is less than 10, it indicates that data are free from multicollinearity. In this study multicollinearity test shows that VIF value is within 1 and the

tolerance level support no multicollinearity. Finally, simple statistical tools and techniques were used to present the findings of the study in order to make them easy and convenient for the readers.

4.2 Demographic Profile of the Respondents

Table 3 shows the demographic profile of the respondents including the frequency and percentages of the service providers' feedback and patients' experience of health service quality in Bangladesh. Among the service providers (n_2=340), there were 253 male respondents and 87 female respondents. Among the customers/patients (n_2 = 337), there were 199 male respondents and 138 female respondents. The age group of the respondents mostly lies between 16 to 55 years (41.2%) followed by 36 to 45 years (19.4%) . The highest educational qualification group of the respondents was HSC (45.2%).

Table 3: Demographic Profile of Respondents

	Service Provider		Patient	
	Respondent (s)	**Percentage**	**Respondent (s)**	**Percentage**
Gender				
Male	253	74.4	199	59.1
Female	87	25.6	138	40.9
Total	340	100	337	100.0
Age				
Less than 5 Years	0	0	2	.6
6 to 15 Years	0	0	16	4.7
16 to 25 Years	52	15.3	82	24.3
26 to 35 Years	140	41.2	107	31.8
36 to 45 Years	66	19.4	62	18.4
46 to 55 Years	59	17.4	42	12.5
56 to 65 Years	21	6.2	12	3.6
More than 65 Years	2	.6	14	4.2
Total	340	100.0	337	100.0
Educational Qualification				
Illiterate	1	.3	45	13.4
Class 6 to 8	8	2.4	48	14.2
SSC	38	11.2	49	14.5
HSC	81	23.8	72	21.4

Degree	80	23.5	57	16.9
Honors	36	10.6	26	7.7
Masters	32	9.4	21	6.2
MBBS	50	14.7	18	5.3
Others	14	4.1	1	.3
Total	340	100.0	337	100.0

Source: Survey data

There are two kinds of health service providers covered in this study: private and government. These health services were categorized into three types: hospitals, clinic and diagnostics centers. There were 58.2% private and 41.8% government healthcare service providers in the study. See table 4. The kinds of services rendered by the service providers in this study include 49.1% hospitals, 32.1% clinics, 17.1% diagnostic centers, and 1.8% providing services to the patients' in combination of both clinic & diagnostic centers.

Table 4: Statistics for health service organizations

Organizations types	**Organizations kinds**				Total	
	Private		Government			
Hospitals	55	16.18%	112	32.94%	167	49.12%
Clinics	81	23.83%	28	8.24%	109	32.10%
Diagnostic Centers	57	16.77%	1	0.20%	58	17.10%
Clinic & Diagnostic Centers	5	1.48%	1	0.30%	6	1.78%
Total	198	58.2%	142	41.8%	340	100%

Source: Survey data

4.3 Descriptive Statistics

Table 5 represents the descriptive statistics for healthcare services in Bangladesh along with the five dimensions as proposed by SERVQUAL model. The table shows the mean, median, mode and standard deviation for service provider (n_1=340) and Patients' service experience (n_2=337) conducted in the study. The standard deviation ranges from 0.78287 to 0.53914 with very low differences (-.0656) from customers experience and service providers' perception. Here average mean is 1.8020 for service providers' feedback and 2.1551 for customers experience with average mean difference is (-03523).

Table 5: Descriptive Statistics for Health Services in Bangladesh

Variables		Mean	Median	Mode	Std. Deviation
Service Provider (n_1=340)	Overall Service Quality	1.7147	2	2	0.70674
	Tangible	1.8066	1.75	2	0.55878
	Reliable	1.775	1.75	1.50[a]	0.53914
	Responsive	1.749	1.6667	2	0.59144
	Assurance	1.8377	2	2	0.56579
	Empathy	1.9343	2	2	0.64526
Average		1.8028			0.60119
Customer Satisfaction (n_2=337)	Overall Customer-Satisfaction	2.0564	2	2	0.78287
	Tangible	2.1358	2	2.25	0.65885
	Reliable	2.1669	2.25	2.5	0.54908
	Responsive	2.183	2	2	0.69137
	Assurance	2.1029	2	2	0.58642
	Empathy	2.2859	2.3333	2.67	0.73219
Average		2.1551			0.66679
Average Differences		-0.3523			-0.0656

a. Multiple modes exist. The smallest value is shown

Source: Survey Data

4.4 Health Service Quality Gap Analysis and Hypotheses testing

Overall findings of the study show that there are some mean differences, but the standard deviation differences are very low. Table 6 shows the Paired samples test for health service quality gap analysis along with the results of the hypotheses testing.

Table 6: Paired samples test for health service quality gap analysis

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Tangible (SPF and CE)	-.34421	.72927	.03973	-.42236	-.26607	-8.665	336	.000
Pair 2	Reliability (SPF and CE)	-.39911	.64190	.03497	-.46789	-.33033	-11.414	336	.000
Pair 3	Responsive (SPF and CE)	-.44115	.80091	.04363	-.52697	-.35533	-10.112	336	.000
Pair 4	Assurance (SPF and CE)	-.27399	.67341	.03668	-.34614	-.20183	-7.469	336	.000
Pair 5	Empathy (SPF and CE)	-.36400	.81501	.04440	-.45133	-.27667	-8.199	336	.000
Pair 6	Overall (SPF and CE)	-.34125	1.05186	.05730	-.45396	-.22854	-5.956	336	.000

Note: SPF= Service Providers' Feedback; CE=Customers' Experience

Source: Survey Data

Since this study aims at exploring the perceived difference of health care service quality between customers and service providers, a pair-wise analysis according to each dimension of SERVQUAL model will be helpful for thorough analysis.

Tangibles

In SERVQUAL model, tangibles refer to the appearance of physical facilities, equipment, personnel and communication materials. In table 7, the observed *t* value indicates the significant difference ($P<0.05$). So H_1 is accepted i.e., there is a difference between service providers' feedback and patients' experiences in terms of tangible dimension in health service quality in Bangladesh.

Table 7: Paired samples statistics for tangible

		Mean	Std. Deviation	t	p
Pair 1	Tangible (Service Providers Feedback)	1.8019	.55324	-8.665	.000
	Tangible (Customer Experience)	2.1461	.66618		
	Gap Score (SPF – CE)	-0.3442			

Source: Authors' calculation.

Reliability

According to SERVQUAL model, Reliability refers to the ability to perform the promised service dependably and accurately. In table 8, the observed *t* in the scale of P<0.05 is significant i.e., H_2 is accepted. So, the differences can be seen between service providers' feedback and customers' experiences in case of reliable dimension.

Table 8: Paired Samples Statistics for reliability dimension

		Mean	Std. Deviation	t	p
Pair 2	Reliable (Service Providers Feedback)	1.7745	.54105	-11.414	.000
	Reliable (Customer Experience)	2.1736	.54751		
	Gap Score (SPF – CE)	-0.3991			

Source: Authors' calculation.

Responsiveness

By responsiveness, we mean the willingness to help customers and to provide prompt service as per SERVQUAL model. In table 9, the observed *t* in the scale of P<0.05 is significant i.e., H_3 is accepted. So there is a difference between service providers' feedback and customers' experiences related to responsiveness dimension.

Table 9: Responsive Paired Samples Statistics

		Mean	Std. Deviation	t	p
Pair 3	Responsive (Service Providers Feedback)	1.7478	.59374	-10.112	.000
	Responsive (Customer Experience)	2.1889	.69407		
	Gap Score (SPF – CE)	-0.4411			

Source: Authors' calculation.

Assurance

In SERVQUAL model, the term 'assurance' refers to the knowledge and courtesy of employees and their ability to convey trust and confidence. In table 10, the observed *t* value indicates the significant difference ($P<0.05$). Accordingly H_4 is accepted i.e., there is a difference between service providers feedback and patients' experiences in service quality in Bangladesh in terms of assurance dimension.

Table 10: Assurance Paired Samples Statistics

		Mean	Std. Deviation	t	p
Pair 4	Assurance (Service Providers Feedback)	1.8353	.56636	-7.469	.000
	Assurance (Customer Experience)	2.1093	.59457		
	Gap Score (SPF – CE)	-0.274			

Source: Authors' calculation.

Empathy

By empathy, we mean the provision of caring, individualized attention to customer as stated in SERVQUAL model. In table 11, the observed *t* value indicates the significant difference ($P<0.05$). So H_5 is accepted.

The conclusion is that there is a difference between service providers' feedback and patients' experiences in health service quality in terms of empathy in Bangladesh.

Table 11: Paired Samples Statistics for Empathy

		Mean	Std. Deviation	t	p
Pair 5	Empathy (Service Providers Feedback)	1.9298	.64564	-8.199	.000
	Empathy (Customer Experience)	2.2938	.73176		
	Gap Score (SPF – CE)	-0.364			

Source: Authors' calculation.

Overall Dimensions

Table 12 provides the overall dimensions statistics of the study. In this table, the observed *t* in the scale of P<0.05 is significant i.e., H_6 is accepted. So it is concluded that there is a difference between overall service providers' feedback and patients' experiences in health service quality in Bangladesh.

Table 12: Overall Paired Samples Statistics

		Mean	Std. Deviation	t	p
Pair 6	Service Providers Feedback	1.7151	.70848	-5.956	.000
	Customer Experience	2.0564	.78287		
	Gap Score (SPF – CE)	-0.3413			

Source: Authors' calculation.

4.5Gap Analysis (Service Providers' Feedback-Customers' Experience)

As the study aims at examining the perceived differences between services providers and customers towards health service quality in Bangladesh, it is critical to provide a concrete overall gap analysis. In table 13, service quality gap analysis specifies that the patients are somewhat unhappy in every dimension of the healthcare services quality in Bangladesh. The average gap of the service is -.36448 which indicates that the overall service system is very poor and patients are sufferings more.

Table 13: Overall Gap Analysis

Dimension	**Gap Score (Service Providers' Feedback-Customers' Experience)**
Tangible	-0.3442
Reliable	-0.3991
Responsive	-0.4411
Assurance	-0.274
Empathy	-0.364
Total Gap	-1.8224
Average Gap	**0.36448**

Source: Authors' calculation.

For example, the responsiveness dimension shows the highest gap (-0.4411), followed by the reliability dimension (-.3991), that indicates health service providers fail to deliver promised service quality. On the other hand, quick and on-time response is very slow and it is a reason for major concern. Empathy dimension indicates that the staffs are failed to understand the patient's specific needs. As a result, the healthcare service experience in clinic, hospital and diagnostic centers is not very pleasant to the patients. So, it can be concluded that a significant deviation exists between service providers' feedback and patients' experience across all service dimensions in healthcare service quality in Bangladesh.

5. Conclusion

Customer satisfaction is vital for the success of a business firm. There is a close relation between customer satisfaction and profitability. Although *quality* is a relative term, organizations like healthcare firms are constantly striving to provide the quality service to the customers. Health service quality is a major concern in Bangladesh as most of the people of this country are deprived from primary health services. The number of health service providers is increasing at a greater speed; but still the quality of health service is questionable. This study attempted to identify whether there is a perceived difference between healthcare service providers and customers towards health service quality in Bangladesh. The study was conducted based on the SERVQUAL model that includes five major dimensions of service quality.

The study found that there is a significant perceived difference between the customers and service providers towards health service quality in Bangladesh in every dimension of SERVQUAL model. The government as well as the owners of private health service providers should take appropriate measures to reduce this gap. Some specific measures can be suggested based on the findings as well as the experiences of the researchers of this study. First, the waiting time to visit the doctor should be reduced. Second, the doctor should treat each patient individually for ensuring empathy. Third, the healthcare firms should properly adopt and implement an employee code of conduct. Fourth, healthcare service employees should be trained up to cope with changing patients' needs. Fifth, a healthcare policy should be as responsive as possible depending on the medical treatment necessity of a patient. Sixth, the health service firms should appoint qualified physicians to make sure the reliability of the service. Seventh, the Government should adopt an adequate and equitable healthcare policy.

Finally, the Government should increase the motoring capacity to make sure that the adopted healthcare policy is being implemented properly.

This study is the first study of its kind in Bangladesh. So this study is not out of limitations. Narrow sample size in comparison of the scope of the study and respondents' lack of knowledge regarding quality health service are the major limitations of the study. However, the study has opened the door for future research.

Interested researchers and academics can take the inputs from this study and will explore this field of research at large extent in future. There are some research gap areas in this field like sector-wise research, motoring status of the healthcare policy, adequacy of healthcare measures, impact of technology on healthcare industry, impact of various socio-demographics on healthcare and so on.

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