

ISSN : 1817-1680

Stamford

Journal of Business Studies

Volume-8, Issue-2, December 2021

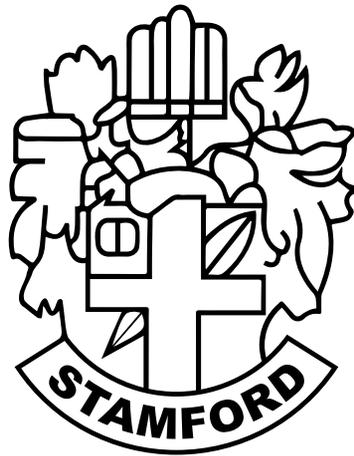


Stamford University Bangladesh

Stamford Journal of Business Studies

ISSN: 1817-1680

Volume-8, Issue-2, December 2021



Faculty of Business Studies

Stamford University Bangladesh

Published by:

Faculty of Business Studies
Stamford University Bangladesh

Published in:

December 2021

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Printed by:

Stamford University Press
51, Siddeswari Road
Dhaka-1217, Bangladesh

Cover page designed by:

Md. Tofazzal Haque

Editorial and Business Office:

Faculty of Business Studies
Stamford University Bangladesh
51, Siddeswari Road
Dhaka-1217, Bangladesh
Phone: 8153168-9, 8156122-3
8155834, 9124161

Price: BDT 200, \$10

Key Title: Stamford Journal of Business Studies

Abbreviated Key Title: SJBS

Stamford Journal of Business Studies is a referred Journal of the Faculty of Business Studies, Stamford University Bangladesh. The editorial board welcomes research based papers in the area of Business and Economics. All data, views and opinions published in this Journal are the sole responsibility of the author(s). The Editor or Editorial Board is not responsible for views expressed by the contributors.

STAMFORD JOURNAL OF BUSINESS STUDIES**Volume: 8, Issue: 2, December 2021**

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“The Role of Justice on Employee Performance in Ready Made Garment industry in Bangladesh: Mediating Effect of Organizational Commitment”

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Abstract

The focus of the current study is to investigate the effect of organizational justice on employee performance of RMG organizations in Bangladesh with the mediating effect of organizational commitment. Operators were surveyed employing a self-administered questionnaire. Partial Least Square (PLS2), a Structural Equation Modeling (SEM), was employed to data analysis based on the proposed hypotheses. The results of the analysis showed two dimensions of organizational justice had a significant positive relationship with both employee performance and employee organizational commitment. Moreover, organizational commitment also had a significant positive relationship with employee performance. Furthermore, organizational commitment was also found significantly mediating the relationships between both procedural and information justice and employee performance. In the current study, distributive justice was found insignificant in all cases. Thus, from the findings of the current study it can be suggested that proper application of organizational justice helps the organization to increase the performance of employees through higher commitment.

Keywords: Organizational justice, organization commitment, Employee performance, Ready-Made Garment Organization, Partial Least Square, Operators.

1. Introduction

The success of an organization totally depends on the proper utilization of the resources for attaining competitive advantage in the industry where human resources can play a vital role (Rubel et al., 2019). Therefore, it is an essential responsibility of an organization to differentiate the Human Resources (HR) than other resources, because HR is that group of resource who take the responsibility of their own as well as better utilization of all other resources. Thus, it is mandatory to treat the HR fairly and in an acceptable manner which will help the organization to increase productivity (R). It is strongly believed that if an organization does not treat its employees equally and show unfair and biased behavior, then the employees feel angry, frustrated and annoyed which can obviously decrease their performance (Kim, and Chung, 2019; Singh, and Singh, 2019; Harris et al., 2018). Therefore, practicing justice in the organization is important and plays a vital role to shape both the attitudes and behavior of employees according to the goal of the organization (Ponnu, and Chuah, 2010; Farooq and Farooq, 2014; Wolfe et al., 2018).

Organizational justice has its roots in Adams (1965) equity theory. Justice theory has remained an important area of inquiry in organizational sciences. Cropanzano et al. (2001) define organizational justice as the fairness perceptions of employees in organizational decision making. Individuals expect fairness in procedures and distribution of rewards and when these expectations are violated they may experience negative emotions (Barclay et al. 2005). Still there is a huge consensus about the conceptualization of organizational justice and feel the importance of research related to its antecedents and outcome in the organization (Yean, 2016). Justice was found as the predictor of different attitudinal such as job satisfaction (Ibrahim, and Perez, 2014), organizational commitment (Rahman et al., 2016), employee engagement (O'Connor, and Crowley-Henry, 2019), organizational trust (Jiang et al., 2017) and behavioral outcome employee performance (Kalay, 2016), employee turnover (George, and Wallio, 2017), citizenship behavior (Mohammad et al., 2019) of employees in the organization. Most of the research on organizational justices and employee performance linkage found the developed country context, whereas, little attention was found in the context of developing countries like Bangladesh.

The current study also focuses on employee commitment as a mediator between organizational justice and employee performance, which is a research gap in the earlier literature of organizational justice and employee performance. Moreover there is a paucity of research in the context of Bangladesh considering organizational justice and employee performance through the mediating effect of organizational commitment. Therefore, based on the previous literature support the current study tries to focus on this area and want to fulfill the literature gap.

2. Literature Review

2.1 Employee Performance

Employee Performance is a multi-component concept and on the fundamental level one can distinguish the process aspect of performance, that is, behavioral engagements from an expected outcome (Campbell et al., 1993). Employee performance is one of the dimensions of employee productive behavioral outcomes in the organization. Performance can be defined as the actual contribution of employees to the organization based on their job description. Rubel and Kee (2014) also support the conception stating that employee performance is the outcome of an individual's job behavior. Thus, performance can be defined as the aggregated value to an organization of the entire behavior of an employee contributing to the organization directly and indirectly (Campbell et al., 1993).

Employee performance can be defined based on in-role and extra-role performance. In-role performance refers to that behavior directed toward formal tasks, duties, and responsibilities assigned to individual employees as those mentioned in their job description (Williams & Anderson, 1991). In-role performance is directly related to the individual tasks and productivity through the involvement of individual employee in the organization. Furthermore, in the organizational context in-role performance can be termed as task performance which can be considered as the contractual understanding between a manager and a subordinate to accomplish an assigned task. On the other hand, extra-role performance is the outcome of employee involvement with the organization not directly stated in their job description. Extra-role performance refers to the activities that are essential for organizational effectiveness

but are discretionary such as, acting courteously, helping others; good relationships with colleagues and supervisors (Moorman et al., 1993). Researchers also define extra-role performance as organizational citizenship behavior (Colquitt et al., 2009).

In most of the earlier research employee performance was found as the outcome variable (Nazir, and Islam, 2017). Different researchers considered employee performance is the dependent variable in their earlier research such as, job satisfaction and employee performance (Siengthai, and Pila-Ngarm, 2016), HRM practices and employee performance (Hassan, 2016), organizational justice and employee performance (Reb et al., 2019; Kalay, 2016; Muqadas, 2017). Therefore, organizational justices also found one important dimension of assessing employee performance in the organization.

2.2 Organizational Justice

In an organizational context, the term justice is used to refer to the allocation of resources and rewards (Notz and Starke 1987). In any organization, the individuals can evaluate justice along several dimensions. Among the earlier works on organizational justice, the perceived fairness of decision outcomes was the main focus of research. Later, research demonstrated that individuals are not only concerned about the fairness in decision outcomes but also about the fairness of the procedures used to make those decisions (Bies and Moag 1986). Cropanzano et al (2001) define organizational justice as the fairness perceptions of employees in organizational decision making.

In literature, a distinction has been made between four dimensions of justice: distributive justice, procedural justice, interpersonal justice and informational justice (Colquitt et al., 2010). The current study tries to incorporate three dimensions of organizational justice such as, distributive, procedural and informational justice on assessing both employee commitment and performance. Most of the previous literature also explains organization justice by these three dimensions (Al-Zu'bi 2010; Fatimah 2011; Demirkiran, 2016).

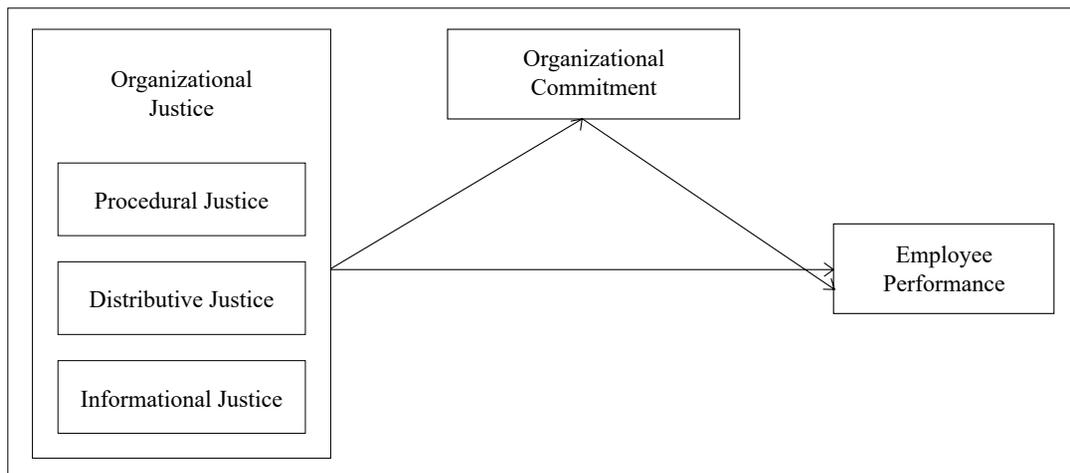
Distributive justice refers to the fairness of outcome distributions or allocations (Adams 1965; Colquitt et al. 2010) and procedural justice entails fairness of the procedures

used to determine outcome distributions or allocations (Colquitt et al. 2010). Lastly, informational justice is the act of communicating relevant reasons for the procedures used in appraising, and the rationale of the distribution of rewards to the employee in the organization (Greenberg, 1993). This justice has been identified to have a strong effect on the emotional attachment of the employee and the organization (Hassan and Hashim, 2011).

Thus, based on the previous literature support and the available gap the main focus of the current study is to see the effect of three-dimensional organizational justice on employee commitment with the mediating effect of organizational justice. In this study, organizational justice is considered the predictor, independent variable where, organizational performance is the dependent or outcome variable. Moreover organizational commitment is considered the mediating variable of the current study. Next section of the current study focuses on developing the relevant hypothesis among the variables.

2.3 Research Framework

The focus of the current research is to see the influence of organizational justice on employee performance through the mediating effect of organizational commitment in the context of RMG organizations in Bangladesh. Three dimensions are employed to explain organizational justice such as, procedural justice, distributive justice, and informational justice. Based on the literature gap both in global and local context, the current study proposes the following research framework to contribute to the organizational justice, organizational commitment, and employee performance literature.



3. Hypothesis Development

3.1 Organizational Justice and Employee Performance

The organization needs to ensure justice for its employees to increase organizational performance as well as employee performance. This is also suggested by (Kalay, 2016) that when employees find organizations are fairly treated their employees the consequential outcome is the enhanced performance. In a study conducted by Iqbal et al., (2017) in public sector organizations in Pakistan find both distributive justice and informational justice have a significant positive relationship with employee performance whereas, procedural justice finds an insignificant influence on employee performance. In an earlier study, Khan et al. (2015) see the influence of organizational on employee outcome in the organization. These authors find a significant influence of three dimensions of organizational justice on employee outcome (retention and performance), whereas found insignificant with employee job satisfaction. It is also supported by Khuong and Quoc (2016) and reveals that justice played a vital role to increase both performance and attachment of employees in the organization. These authors find both organizational justice and ethical leadership have a positive relationship with employee performance and commitment to the organization. Organizational have found significant dimensions of employee organizational trust as well as employee in-role performance (Biswas and Kapil, 2017). These authors researched organizational justice and employee in-role performance with the

mediating effect of organizational trust. The result of the study showed a significant positive relationship between three-dimensional organizational justices (distributive, procedural and informational) with employee in-role performance. Thus from the previous literature support, it can be proclaimed that if the employee finds organizations are applying fairness practices in all aspects in the organization the consequential outcome will be enhanced performance. Therefore, for the current study the following hypothesis can be considered.

Hypothesis 1a: There is a positive relationship between distributive justice and employee performance.

Hypothesis 1b: There is a positive relationship between procedural justice and employee performance.

Hypothesis 1c: There is a positive relationship between informational justice and employee performance.

3.2 Organizational Justices and employee Commitment

For attaining the success of an organization, it is essential to make the employee more attached to the organization and that is possible when the employee finds committed to their organization. For making the employee committed towards their organization researchers suggested different dimensions where organizational justice found one important (Ponnu and Chuah, 2010). It is also supported by Yavuz, (2010) and reveals that employee perceived justice practices help the organization to make them more committed and attached to the organization. These authors assessed the interaction between organizational justice and employee commitment. The result of the analysis showed a significant positive relationship between procedural justice with three dimensions of organizational commitment (affective, normative and continuance). Whereas, the other two dimensions of organizational justice found an insignificant relationship with all three dimensions of organizational commitment. Andrews et al. (2008) have exposed the importance of organizational justice on employee commitment. The study findings showed a significant positive relationship between three-dimensional organizational justice and employee affective commitment. Noor

et al. (2011) found that distributive justice and procedural justice did not affect significantly the organizational commitment. Only informational justice showed a significant positive relationship with organizational commitment. Thus from the previous literature support it can be clarified that to make the employee more committed to the organization it is essential to apply the justice or fairness practices otherwise the outcome will be negative for the organization. Therefore, for the current research the following hypothesis can be considered.

Hypothesis 2a: There is a positive relationship between Distributive justice and employee organizational commitment.

Hypothesis 2b: There is a positive relationship between procedural justice and employee organizational commitment.

Hypothesis 2c: There is a positive relationship between informational justice and employee organizational commitment.

3.4 Employee commitment and Employee Performance

Employee performance is considered as one of the important dimensions of employee behavioral outcomes in the organization which indicates the individual contribution to the organization. Employees will contribute as based on the contractual relationship therefore, it is essential to make them committed and attach with the organization (Rubel et al., 2018). Thus, focus on employee commitment is indispensable for devoting the employee towards the goal of the organization. Bhatti, and Qureshi (2007) conducted a study on telecom organization in the context of Pakistan and find a significant positive relationship between organizational commitment employee productivity and retention. These authors reveal that for ensuring employee attachment with the organization and increase their productivity the organization needs to make the employee committed first (Alfalla-Luque et al., 2015). Atmojo (2015) have researched leadership practices, organizational commitment and employee performance in hospital organization and find a significant positive relationship between organizational commitment and employee performance. Devece et al., (2016) find a significant positive relationship between affective and normative commitment with employee citizenship behavior

in the organization. From the findings of the analysis these authors concluded from their research that employee performance (extra-role behavior) also depends on the intention when they feel committed to their organization. Therefore, from earlier literature review it can reveal that employee contribution cannot be ensured by applying hard management practices rather it depends on their intention and it is possible when they feel committed to their organization. Thus, for this research the following hypothesis can be introduced.

Hypothesis 3: There is a positive relationship between employee organizational commitment and employee performance.

3.5 Employee Commitment as Mediator

A mediator can be defined as an intervening variable through which an independent variable is thought to affect a dependent variable (Iacobucci et al., 2007). For assessing the mediation effect, Baron and Kenny's (1986) basic approach for testing the empirical evidence is more commonly used. On the contrary, Hayes (2009) suggested a two-step approach for testing the mediation in SEM. Hayes (2009) revealed that if the indirect path is found statistically significant, it can be considered that the mediating effect exists. Both Baron and Kenny (1986) and Hayes (2009) concepts still used by the researchers for mediation analysis. Therefore, this study employs the mediation analysis based on the conception of Baron and Kenny (1986).

Organizational commitment also found as a mediating variable in earlier research. Availability of justice in the organization helps to increase employee's commitment to the organization which in turn increases employee performance. Reverte et al., (2016) have conducted a study on corporate social responsibility practices and organizational performance with the mediating effect of organizational commitment. The authors find organizational commitment significantly mediated between CSR practices and organizational performance. Atmojo (2015) confirmed the significant mediating effect of organizational commitment between transformational leadership and employee citizenship behavior as performance. In the preceding year Azim (2016) also confirmed the mediating role of organizational commitment between CSR practices and employee behavior in the workplace. Jang and Kandampully

(2018) have conducted a study on servant leadership practices and employee turnover intention through the mediating effect of affective organizational commitment. The result of the analysis showed that affective organizational commitment fully mediates the relationship between servant leadership practices and affective commitment of employees in the organization. Thus from the previous literature support we propose that each dimension of organizational justice has a positive relationship with employee organizational commitment that further increases employee performance. Therefore, for this the following hypothesis can be considered.

Hypothesis 4a: Organizational commitment mediates between distributive justice and employee performance.

Hypothesis 4b: Organizational commitment mediates between procedural justice and employee performance.

Hypothesis 4c: Organizational commitment mediates between informational justice and employee performance.

4. Methodology

The nature of the current study is cross-sectional where data were collected from operators working in the RMG organizations in Bangladesh. Operators were chosen because they are the majority (more than 60% of the entire population in RMG industry) of the employees in this industry as mentioned in the Bangladesh Bureau of Statistics (2019). Operators are those who are employed at the factory level and who perform their tasks by the hand. In the initial stage of the data collection process the researchers were communicated to the top 40 organizations listed in BGMEA. The researchers choose these 40 organizations because the management practices of these 40 organizations are the same. The researchers communicated to the HR department for distributing and collecting the questionnaires and took two months to complete the process. In total 600 questionnaires were distributed based on the judgmental sampling. The most important advantage of this sampling technique is to collect data from the individuals who can provide only which the analysts are looking for, either because they are the main people who possess it or only they can fulfill

the requirements set by the researchers (Sekaran and Bougie, 2010). Among these 600 questionnaires 307 were returned and 275 found usable for data analysis with a response rate of 45.83 %. This percentage is acceptable in the context of Bangladesh based on the previous research such Rubel and Kee (2014) found a response rate of 29% in the same industry.

4.1 Measurement Instrument and Data Analysis

In this research, three dimensions (distributive, procedural and information) were considered to measure employee perceived organizational justice as independent or exogenous variables. In total 15 items were adapted from the literature of (Cugueró-Escofet et al., 2019) for measuring these three dimensions of organizational justice. On the other aspect, employee performance was considered the dependent variable of the current study measured by 4 items adapted from the work of (Rubel and Kee, 2014). Lastly, five items scale of organizational commitment was used in the current study as mediator adapted from the literature of. All items in this study were rated on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

4.2 Data Analysis with PLS

Statistical Package for Social Science (SPSS) 21 version was employed in the current study for inputting the data and for descriptive statistics. Further, to investigate the research model, we employed the Partial Least Squares (PLS) in Structural Equation Modeling (SEM) approach. Based on the two-stage analytical procedures by Anderson and Gerbing (1988) we tested the measurement model as well as the structural model. SEM is a family of statistical models that seek to explain the relationships among multiple variables and also considered an important tool in applied multivariate analysis for theory testing and causal modeling (Hair et al., 2013).

5. Results

5.1 Demographic

The average age of the respondents in this study is 26.86 years ($SD = 3.86$) where most of the respondents are in the age group of 25-35 (59.3%). 24% of respondents are within 36-40 years old. Only 15.7 % of respondents are above 40 years. In this study, the gender distribution is quite higher for female. Of the 275 respondents, 192 respondents (70 %) are female and 83 (30%) are male. The majority of the respondents 203 (74%) are found married while the remaining 72 (26%) of the respondents are unmarried. Average work experience is found 4.85 years where the maximum is 13 years and the minimum is 1 year.

5.2 Measurement Model

In measurement model convergent validity and discriminant validity were used to examine the measurement model. Convergent validity was assessed by measuring reliability, composite reliability (CR) and the average variance extracted (AVE). The reliability of items was assessed by each item's loading on its corresponding construct. A rule of thumb suggests that the item loading should be 0.60 or higher (Hair et al., 2013). All the factor loadings of the present study variables were above 0.60 (Table 1). On the other hand, all CRs and AVEs are recommended to be 0.70 and 0.5 or higher (Hair et al., 2013). Table (1) shows that both CR and AVEs exceeded the recommended value. In the current study procedural justice showed the lowest value for both AVE 0.533 and CR 0.863. Hence, all the conditions of convergent validity were fulfilled.

Further, discriminant validity between constructs was assessed using Fornell and Larcker's criteria based on the concept of (Hair et al., 2013). Table (2) shows the diagonals number of the square roots of the AVEs. Off diagonal elements are the correlations among the constructs. All diagonal numbers are much greater than the corresponding off-diagonal ones indicating the satisfactory discriminant validity among the constructs.

Table 1: Result of measurement model

Constructs	Items	Loading	AVE	CR
Distributive Justice	R&S1	0.749	0.710	0.908
	R&S2	0.850		
	R&S3	0.921		
	R&S4	0.826		
Procedural Justice	T&D1	0.799	0.553	0.863
	T&D2	0.842		
	T&D3	0.703		
	T&D4	0.839		
	T&D5	0.763		
Informational Justice	PA1	0.701	0.665	0.915
	PA2	0.789		
	PA3	0.875		
	PA4	0.866		
	PA5	0.769		
Organizational Commitment	OC1	0.806	0.681	0.868
	OC 2	0.842		
	OC 3	0.819		
	OC4	0.811		
	OC5	0.798		
Employee Performance	EP1	0.775	0.759	0.919
	EP2	0.933		
	EP3	0.939		
	EP4	0.735		

5.3 Structural Model

The structural model indicates the causal relationship among constructs in a model (path coefficient and the R² value) (Hair et al., 2013). Table 3 and Figure 2 show the result of the structural model from the PLS output. The results show that the structural model explains 41.5% of organizational commitment, by three-dimensional organizational justice, whereas, 44.3% of employee performance explained by both organizational justice and employee organizational commitment.

Table 2: Discriminant validity of constructs

	DJ	EP	IJ	OC	PJ
DJ	0.841				
EP	0.543	0.823			
IJ	0.687	0.506	0.798		
OC	0.213	0.453	0.314	0.843	
PJ	0.570	0.623	0.578	0.269	0.788
Mean	3.76	3.81	3.79	4.12	4.05
S.D	0.75	0.69	0.81	0.79	0.82

Note: DJ= Distributive Justice; EP= Employee Performance; IJ= Informational Justice; OC= Organizational Commitment; PJ= Procedural Justice.

In the relationship between organizational justice and employee performance procedural ($\beta = 0.166$, $p < 0.01$), and informational ($\beta = 0.247$, $p < 0.01$), justice found significant positive relationship with employee performance. On the other hand, between the relationship of organizational justice and employee organizational commitment the same two dimensions such as, procedural ($\beta = 0.142$, $p < 0.01$), and informational ($\beta = 0.256$, $p < 0.01$), showed positive relation. Whereas, distributive justice found insignificant relation with both employee performance and organizational commitment. Lastly, among the direct hypothesis organizational commitment indicated a positive relationship with employee performance ($\beta = 0.405$, $p < 0.01$). Furthermore, the current study also considered organizational commitment as a mediator between three-dimensional organizational justice and employee performance. The result of the analysis showed the mediating effect of organizational commitment between three-dimensional organizational justice and employee performance. In mediating analysis organizational commitment found insignificant mediating effect between distributive justice and employee performance whereas, the other two mediating hypotheses found supported.

Table 3: Summary of the structural model

Direct Path	Std. Beta	Std. Error	t-Value	Decision
Distributive Justice > Employee Performance	-0.071	0.055	1.293	NS
Procedural Justice > Employee Performance	0.166	0.058	2.84***	S
Informational Justice > Employee Performance	0.247	0.071	3.46***	S
Distributive Justice > Organizational Commitment	-0.031	0.065	1.293	NS
Procedural Justice > Organizational Commitment	0.142	0.062	1.98**	S
Informational Justice > Organizational Commitment	0.256	0.075	3.46***	S
Organizational Commitment > Employee Performance	0.405	0.059	6.76***	S
Significant at ***P < 0.01, *p < 0.05 (based on one-tailed)				
Indirect Path (Mediation)	Std. Beta	Std. Error	t-Value	Decision
Distributive Justice > Organizational Commitment > Employee Performance	0.047	0.063	1.31	NS
Procedural Justice > Organizational Commitment > Employee Performance	0.182	0.083	3.24**	S
Informational Justice > Organizational Commitment > Employee Performance	0.198	0.073	3.74***	S
Significant at ***P < 0.01, *p < 0.05 (based on two-tailed)				

Note: S= Supported; NS= Not Supported

5.4 Discussion and Future Direction

The current study tries to fill the unexplored gap of the earlier studies in the context of organizational justice and employee performance relationship by incorporating organizational commitment as mediator. The study delivers the findings that the two dimensions of organizational justice such as, procedural and informational justice have a significant positive relationship with employee performance in the context of RMG industry in Bangladesh. Earlier studies also find the same relationship between procedural and informational justice and employee performance (Biswas and Kapil 2017). Positive findings of the current study suggest that procedures for providing support to the employees are fair. Therefore, the result is the higher commitment to the organization and increased performance. Based on the significant findings between procedural and informational justice Demirkiran et al. (2016) reveal that if employees find the procedures for all support organizations apply for their employees

are fair and share all the required information's equally among all employees, the consequential outcome will be higher commitment and enhance performance.

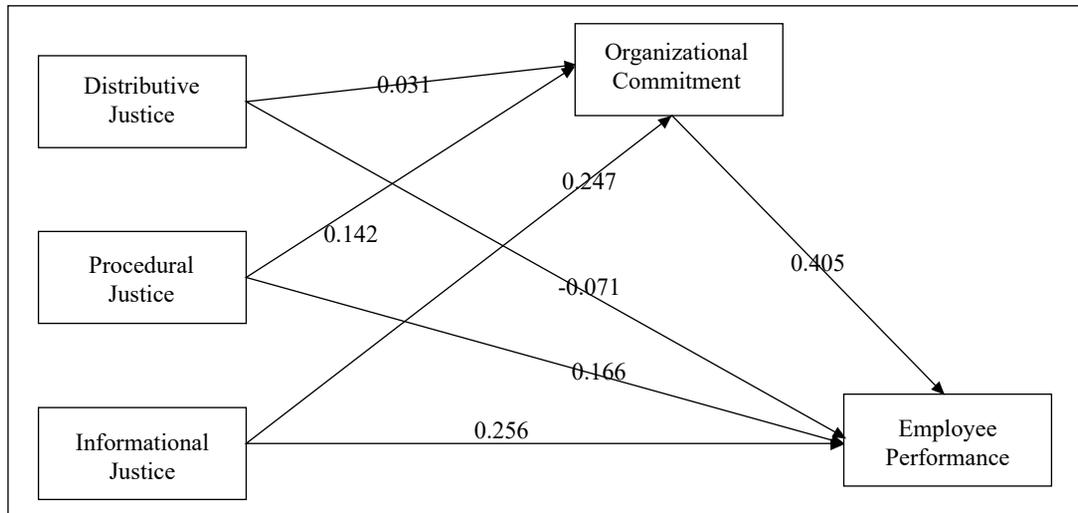


Figure 2: The structural model

On the other hand, the distributive justice of organizational justice showed an insignificant relationship with both employee performance and organizational commitment of employees in the organization. Previous studies also find the opposite relationship between distributive justice and employee performance (Hassan and Hashim, 2011; Farooq and Farooq, 2014) and distributive justice and organizational commitment (Ibrahim and Perez, 2014; Suifan, 2017). In the current study, this insignificant relationship found maybe for few reasons such as, it can be assumed that in the RMG industry the distribution of rewards is not fair among all employees in terms of the contribution. Moreover, it can also assume that employees in RMG industry are not getting all types of support equally based on the contractual relationship with the organization.

Therefore, based on the contextual justification the insignificant relationship between distributive justice, employee performance and employee organizational commitment can be accepted.

Another focus of the current study is to see the mediating effect of organizational commitment between organizational justice and employee performance. The result

of the analysis showed a significant positive mediating effect of organizational commitment between three-dimensional organizational justice and employee performance. Earlier study also finds the same significant mediating effect of organizational commitment. Thus, from the findings, it can be assumed that if an employee in the RMG industry perceived that organizations are concerned about the justice of the consequential outcome will be commitment and performance.

Thus, from the findings of the analysis, it can be postulated that management of the organization needs to give more attention to all aspect which are directly and indirectly related to justices of employees. If the employees find that organizations are giving proper concern on it the consequential outcome will be employee performance through higher commitment.

In this research, distributive justice found insignificant in all aspects therefore, in this context management of the RMG organization should provide extra effort on ensuring those are the factors related to distributive justice in the workplace. Furthermore, it can be suggested to future researchers to apply the concept of organizational justice in other different organizational settings such as, in the shipbuilding industry, construction organization and so on. It can also be suggested to the future research to incorporate other dimensions with organizational justice such as psycho-social safety climate, innovative behavior and employee engagement.

6. Limitations and Conclusion

Like other research the current study is not beyond its limitation. This study only employed operators as the respondents from the RMG industry which cannot prove the results obtained can be generalized for other levels of employees in the organization. Though the current study was only considered in the RMG industry, therefore, it cannot generalize for other manufacturing organizations in the context of Bangladesh. Therefore, from the ultimate perspective of organizational justice is essential to focus on the individual as well as overall organizational development through its proper utilization. Management of the organization should believe that well-designed justice practices is not the cost of the organization rather it can be considered as an investment whose return will enhance the performance of employee

through their enhanced commitment. Thus, it is of utmost importance for management to assure the employee perceived justice practices which will help the organization to retain their valued and skilled human resources in the organization. Further, it is clarified that if the employees find that organization has suitable justice practices the result will be more employee attachment and enhanced performance with increased commitment.

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“The effects of information technology capability and strategy on firm performance – A study on the garment industry in Bangladesh”

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Abstract

Capabilities are the ability of firm resources to obtain a competitive advantage for superior firm performance. Information technology capability can be termed as an information exchange regarding the production process, utilization of equipment and machine, market, and quality control of raw material suppliers, manufacturers, and foreign buyers. The objective of this study is to evaluate the effects of information technology capability and strategy on firm performance. The present study utilized a quantitative method and also recognizes Confirmatory Factor Analysis (CFA) to identify the relationship between observed variables and latent constructs. This study applies SPSS version 23 and Structural Equation Model (SEM) based on AMOS version 24 for analyzing the survey data in the 120 garment factories. The findings revealed that information technology capabilities and strategies are positively associated with firm performance e.g. return on assets (ROA), reduced cost, and improve productivity.

Keywords: Information capability, Information strategy, firm performance, garment industry, resource based view.

1. Introduction

Information sharing is vital to the coordination of the supply chain and important to supply chain success. The desire of managers to share information is an important component and information has to be a useful, accurate, and timely response to the partners of supply chain (Shang and Marlow, 2005). Logistics system reliance on the flow of information from both suppliers and customers. Information processing involves (EDI) electronic data interchange and important management decisions. EDI allows some industry to utilize electronic transactions rather than paper-oriented documents e.g. order invoices, purchase orders, and send customer documents (Tseng, 2004). By executing information technology capability, the firms can attain a competitive advantage, and organizations can intensify the level of their marketplace and realize their intents by advancing the information technology utilized (Saeidi, et al., 2019). Organizations can acquire the assistance from aggregate production, enlightening business performance, and providing additional competitive advantages by applying information technology capability (Liang and Li, 2008). Information technology develops to present new thoughts and revolutions of the businesses on the marketplace (Braojos, et al., 2019).

The economy of Bangladesh is heavily dependent on the readymade garments industry which is the foundation for creating job opportunities in the country. In a developing countries like Bangladesh, garment industry is the major driver for industrialization. The export of RMG is near about 27949.19 US million dollars that represent 83% of total export in Bangladesh (BGMEA, 2020). Bangladesh's ready-made garments industry has undergone a dramatic emergence in the last few years as one of the world's top manufacturing hubs for clothing shopping (Yasmin et al., 2020). It seems to be critical for the Bangladesh economy if Bangladesh loses the market share of the garments industry. In Bangladesh communication technologies and power supplies are far from global standards, which lead to reducing competitiveness of garment exporters inside the country (Adhikari and Weeratungee, 2007). There is a lack of a superior grade of infrastructure that leads to shipment delay from viewpoint of the owner (Saxena and Salze-lozach, 2010). Labor productivity is very low compared to other countries due to a lack of information sharing (Nuruzzaman, 2013). The

inadequate application of advanced technology in the production process is very time consuming and restricted to apply just in time concept in the process. (Islam and Pattak, 2017). The insufficient sharing of information restricts a firm's capability to leverage. Furthermore, fast improvements in technology and worldwide information arrangement mean that supply chain partners and firms must retain suitable, reasonable inter-organizational information systems if they are to maintain the ability to respond quickly and effectively to changing customer expectations and needs (Zhao et al., 2001). However, earlier research findings have limited focus on developing countries like Bangladesh but exceptional concentration on information technology capability and strategy on developed countries e.g. USA, UK. This research focuses on the Resource-Based View (RBV) to evaluate the relationship between information technology capability and strategy with the firm performance of the ready-made garment industry in Bangladesh.

1.1 Research questions

- a. What are the information technology capability and strategy on firm performance measurements?
- b. How do these capability and strategy are associated with firm performance?

2. Literature review

2.1 Theoretical discussion

Resource-based view theory (RBV) reveals that the capability of the firm is essential instrument for the better export performance of the firm. When firm capable to match resources and capabilities they are inclined to penetrate the new area whether domestic market or international market. In Bangladesh, readymade garment industries have resources and capability that assists to formulate strategy and achieve superior firm performance. So, resource-based view (RBV) is indispensable for sustainable competitive advantage on Bangladesh readymade garments.

Firms resource based view theory is related to economics that performance of the firm is the activities of capabilities and resources (Barney, 1991). To take competitive advantage and better performance, this theory emphasizes on the capabilities and

resources obtained by the entity. Various capabilities consist of technology, company reputation, all assets, organizational processes, knowledge, and information, firm attributes that provide firms to establish various strategies which in turn improve performance effectively and efficiently. Resource based theory developed many contributions to the area of diversification literature. This theory suggests an opportunity for further contributions and elaborating ways that diversification might be enriched with the help of resource based theory by integrating with new institutional economics, industrial organizational economics and ideas from organizational economics. The resource based view theory observed as a channel to examine the resources that required for international diversification and production. Theory recommended that subsidiary capability facilitates knowledge flows within the multinational operations. Managers possess global experience which represented firm particular tacit knowledge that is challenging to imitate. Furthermore, information resource in multinational company's effects behavior and skill of the workforce. This kind of information capabilities are connected to firm performance in terms of labor productivity.

2.2 Literature review and hypothesis development

Many researchers broadly clarified the information capability and strategy and their effects on firm performance (e.g., Akter et al. 2016; Hao and Song2016;Magutu et al.,2015;Marinagi et al., 2014;Parnell, 2011).

Information technology capabilities are complicated bundles of knowledge and skill applicable in information management to effective and efficient use of information's in organization. Information technology strategy ensures that information systems development plans are integrated with organizational and functional strategic plans (Peppard and ward, 2004). It Incorporate the potential of new and emerging technologies in long term business development (Peppard and ward, 2004).Shang and Marlow, (2005) identified that information capability could increase logistics integration, distribution performance and developing supply chain achievement through RBV. Notably, information sharing is vital to the coordination of supply chain and important to supply chain success. The desire of managers to share information

is an important component and information has to be a useful, accurate, and timely response to the partners of the supply chain. This study identifies that information technology capability didn't affect directly the financial performance but had indirect effects on financial performance through logistics performance.

Firms generate better performance that has already acquired technology than firms that fail to develop such technology owing to financial constraints (Immixai and Takashi, 2010). Samsul, (2012) recommended that technology up-gradation includes the acquisition of new technology and machinery that helps to improve product quality and quantity. This upgrading assists to sustain growth performance. In garment factories, firms invest in spreading machines, computerized cutting and bar code inventory systems. For export-oriented industries, technology capabilities show a critical role (Cao et al., 2014). Information technology provides effective and efficient production by enhancing collaboration and communication between the value chain activities e.g. raw material supply, product design, inventory, production, sales, and distribution. Information focused capability must use to create other specific which is difficult to imitate. Liu and Luo (2012) pointed out the affiliation among logistics capabilities, competitive advantage, and firm performance by utilizing process capability, flexibility capability, and information integration capability.

Hao and Song, (2016) examined technology-driven strategy on firm performance by mediating the strategic capability. The findings concluded that technology capabilities and information technology capabilities were significant relations to technology-driven strategy but marketing capabilities and market-linking capabilities were insignificant relations with technology-driven strategy. Besides, various categories of strategic capabilities are directly related to firm performance. The reason was that technological activities were more emphasized and due to improving the technological capabilities and maximum portion of available resources were distributed to the technological capabilities.

Inmyxai and Takashi (2010) observed that there was a positive relationship between information technology capability and performance. Yao, et al., (2009) Information technology capabilities are positively associated with firm performance due to strong

information connections that are vital to support organizational communications. Liu and Luo, (2012) found that there was no direct impact of Flexibility and information capability on firm performance. Hsu et al., (2008) investigate the sound effects of information sharing capability on buyer-supplier relationships and firm performance. Stank, et al.2001; Zhao et al., 2001 study found a similar answer. Stank, et al., (2001) revealed that customer-focused capability has a positive effect on firm performance whereas information focused capability has an indirect effect on firm performance. Sound operations were the prerequisite to understand customer needs supported by flexible processes. But information focused capability has direct effects on customer-focused capability which in turn improves firm performance. Uddin, et al., (2020) revealed that profitability is positively related to the adoption of information technology. Haseeb, et al., (2019) also identified the positive relationship between information technology strategy and firm performance.

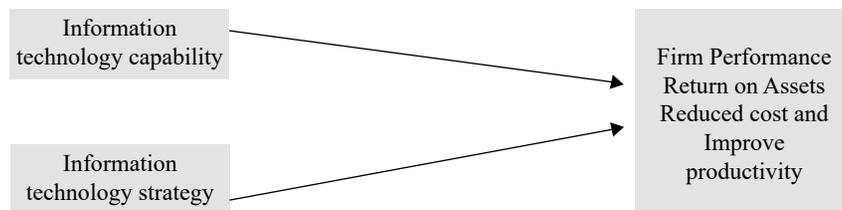


Figure 1: Developing conceptual framework

Liu and Luo, (2012) pointed out the affiliation among logistics capabilities, competitive advantage, and firm performance by utilizing process capability, flexibility capability, and information integration capability. There was no direct impact of Flexibility and information capability on firm performance. Wang et al., (2015) disclosed that all capabilities are influenced positively on the efficacy of external collaboration that leads to an increase in the firm's market and financial performance. In addition, within market turbulence, it was found that there were positive effects on innovation and information capabilities. Luo. J. (2014) explores a model to investigate how Information Technology (IT) capability influences internet-enabled supply and

demand process combination, which will ultimately increase firm performance. The study found that from IT capability manufacturing firms achieved many advantages in different ways. Ortega, (2010) studied to find out the moderating role of technological capabilities between firm performance and competitive strategies. The analysis revealed that technology has an important role as a moderator between firm performance and competitive strategies. Based on RBV the following hypothesis can be developed:

H1: Information technology capability has a direct and significant relationship on firm performance.

H2: Information technology strategy has a direct and significant relationship on firm performance.

3. Methodology

A questionnaire survey was conducted to the ready-made garment industry in the export processing zone area of Bangladesh. The above hypothesis was verified on 120 readymade garment firms. The senior managers of the garment were considered as a respondent owing to special knowledge about the IT environment of the firm. The element comprises the information and technology capability, information strategy and firm performance were reliance on earlier studies (e.g., Hao and Song, 2016; Wang et al., 2015; Luo, 2014; Liu and Luo, 2012). Likert scale based on five points was applied to identify the level of judgments. Respondents were asked to provide their perceptions on every question where 1 represents to 'strongly disagree' and 5 correspondents to 'strongly agree'. Data was collected in the year of 2018.

According to BGMEA, (2016), there were 237 garment factories available in the EPZ area where four or five senior managers are necessary to functioning properly. In this paper, simple random sampling has been used. The sample size of 385 has been identified by applying the Cochrun formula from $237 \times 4 = 948$ population. In the sample questionnaires of 385, few questionnaires were removed from the study due to extreme outlier. Table 1 identified the elaboration of demographic information. Demographic information reveals that forty-five percent of the firm had

>2000 employees (Table 1). Most of the firms were settled between 2001-2005 years. Senior managers were experienced more than ten years where respondents possessed bachelor and diploma degree.

Table 1. Respondents demographic information.

Characteristics	Explanation	Percentage
Employees	<1000	5%
	1000-1999	15%
	2000-2099	45%
	>3000	35%
Managers experience	<1 year	25%
	>1 year but <10 years	22%
	>10 years	53%
Year of establishment	<1995	20%
	1996-2000	13%
	2001-2005	40%
	2006-2010	27%
Qualification	Diploma	40%
	Bachelor	37%
	Masters	23%

Table 2. Descriptive statistics.

Items and latent variables	Mean	S.D	ITC	ITS	FP
Information technology capability (ITC) ^a			^c 1		
ITC1 My firm has sufficient infrastructure for flow of information.	^b 3.81	^b 0.86			
ITC2 My firm has skilled IT expert to convert output from input.	3.65	1.02			
ITC3 My firm uses ERP (enterprise resource planning) for production process.	3.04	0.89			
ITC4 My firm uses internet in every aspects of logistics activities.	3.56	1.12			
Information technology strategy (ITS) ^a			^{**} 0.71	1	

ITS1 My firm effectively utilised operational information between various departments.	2.98	0.96			
ITS2 My firm has strategy to use EDI (electronic data interchange) at all levels of industry.	2.94	1.04			
ITS3 My firm has strategy to buy product based on superiority of technology.	2.82	1.01			
Firm performance (FP) ^a			**0.82	**0.56	1
RC My firm able to reduce total cost by using IT effectively.	4.16	0.47			
FP My overall firm performance (return on assets) in 2017 was better than years 2015 and 2016.	3.53	1.10			
IMP My overall firm performance (improve productivity) in 2017 was better than years 2015 and 2016.	4.01	0.69			

^a Five-point Likert scale – strongly disagree (1) to strongly agree (5).

^b This is scale of composite value from set of variables calculated by taking average from the scale.

^{c**} Correlation is significant at the 0.01 level

3.1 Validity and Reliability measurement

Factor analysis was applied to find out the effects of information technology capability and strategy on firm performance. Factor analysis is broadly applied as a multivariable approach in statistics that adjusts low factor with correlated variables in numbers that were important as well. The results of the Bartlett analysis were noteworthy at $p=0.000$ levels and the identified values were 4332.045. The Kaiser Meyer Olkin (KMO) was adequate at the value of 0.745. The adequate value suggests that factor analysis is appropriate.

Table 3. Measurement table

Factors	Loading Estimated	Loading Standardized	Error of standard	Critical ratio
Information Technology capability ($\alpha=0.88$)				
ITC1	1.010	0.675	0.075	11.540
ITC2	1.144	0.876	0.078	11.432
ITC3	0.845	0.754	0.089	12.441
ITC4	0.675	0.870	0.082	9.997
Information Technology Strategy ($\alpha=0.81$)				
ITS1	1.000	0.731	0.068	11.553
ITS2	1.045	0.780	0.079	12.549
ITS3	0.856	0.685	0.087	10.123
ITS4	0.737	0.687	0.074	9.664
Firm performance ($\alpha=0.90$)				
ROA	1.453	0.754	0.090	8.453
RC	0.687	0.675	0.056	11.990
IMP	0.543	0.631	0.064	9.400

Factor analysis was attained by using factor rotation and $\text{varimax}^{\text{max}}$ was used to obtain the analysis of principal components. The study did not contemplate factor loading < 0.50 and < 0.65 in case of communality covariance. The first item information technology capability explains 6.35% of variance as a whole; the information technology strategy clarifies 7.845% of the total variance. Unidimensionality and validity convergent were recorded as a tolerable limit for the sake of the Tucker-Lewis index (0.876), the goodness of fit index (0.907), root mean square error of approximation (0.0678), comparative fit index (0.914), and the standard cut-off was also satisfactory. The study did not recognize any residual values based on standardized (Hair et al., 1998). Parameter changes were projected $< \pm 0.3$. Item reliability was obtained depend on

R^2 , variance extracted, and construct reliability. Multiple squared correlations were > 0.31 that recommends the supported reliability.

4. Results and Discussion

The bootstrap samples (Chi-square = 265.152; $df=102$) and the necessary elements for model expansion were satisfied. It fulfilled the fit indexes (CFI= 0.914; TLI=0.876 and RMSEA = 0.0678). Standardized residuals and modification indexes were evaluated after calculation of model fit. Modification indexes were not found larger and parameter changes are expected. There were no larger modification indexes and expected parameter changes.

4.1 Hypothesis Testing

Hypothesis (H1) identified that information technology capability significantly affected firm performance by suggesting a positive value 1.67 (Table 4). It revealed standard error 0.421, t-value 4.054, and p-value 0.001, which sustained the hypothesis. So, it can be enlightened that information technology capability has affirmative effects on firm performance.

Hypotheses	Structural relationship	t-value	p-value	S.C		Test of SEM	Rationalization
				Direct	Indirect		
<i>H1</i>	IT cap- FP	4.054	0.001	2.13	-0.460	Support	Reject Null
<i>H2</i>	IT stra- FP	1.532	0.001	0.87	-0.189	Support	Reject Null

Table 4. Hypothesis results

Hypothesis (H2) suggested that information technology strategy has a positive effect on firm performance. For this hypothesis, the indirect effect is -0.189, the t-value is 1.532, standard error 0.181, which is significant as $p>0.05$. It undoubtedly proposed that technology strategy has a positive relationship with firm performance and support the hypothesis (H2).

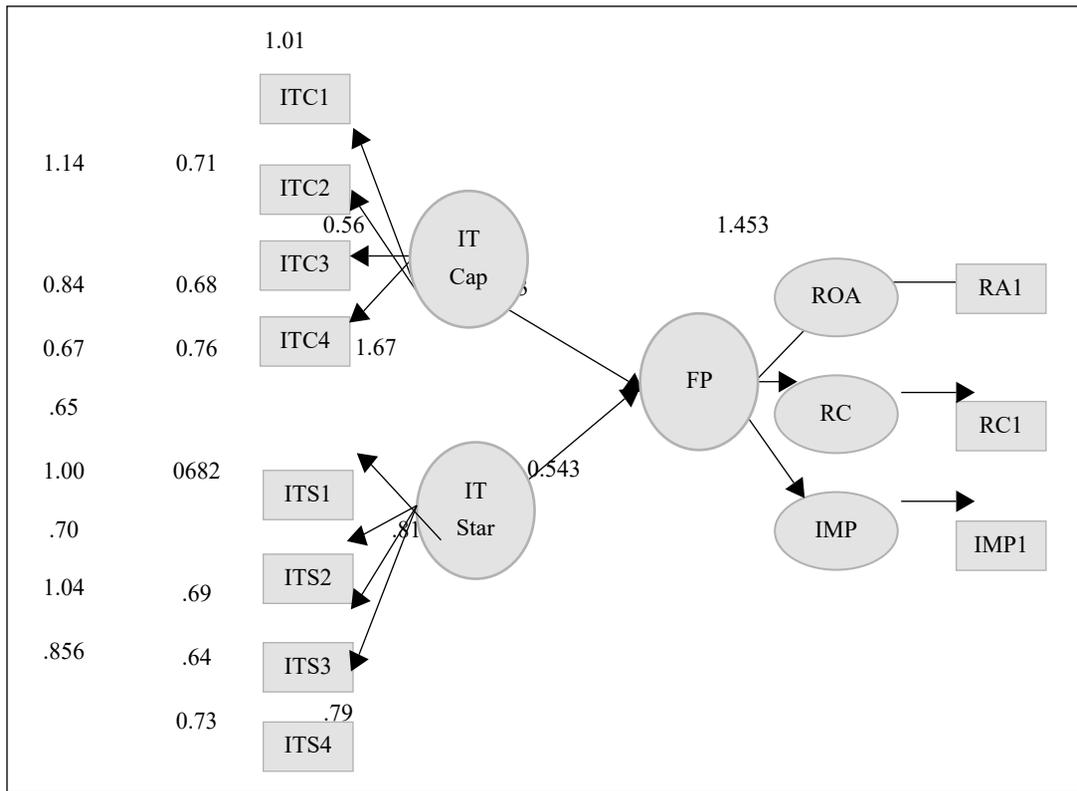


Figure 2. Findings summary

(Chi-square=265.152; df=102; CFI= 0.914; TLI=0.876 and RMSEA = 0.0678) (p < 0.05)

The hypothesis (H1) identified the positive (+ve) association ship between information technology capability and firm performance where $p \leq 0.001$, $t=4.054$, and $\beta= 2.13$. Many previous studies were supported this hypothesis by many researchers (e.g., Akter et al., 2016; Hao and Song, 2016; Immixai and Takashi, 2010). The reasonable clarification might be that information focused capability is used to create specific attributes which are difficult to imitate. Information technology was connected across the various department of the garment industry. There were other numerous drivers of buyer-supplier relationships through information technology capability. Technology capability may trim down cost, keep inventory level at the minimum level and lead time of production will reduce.

The hypothesis (H2) also indicated the positive (+ve) association ship between

information technology strategy and firm performance where $p \leq 0.001$, $t=1.532$, and $\beta=0.871$. Many previous studies were supported this hypothesis by many researchers (e.g., Hao and Song, 2016; Liu and Luo, 2012). The reasonable clarification was that there was adequate use of IT for the users of the garment industry. Firms were utilizing upgraded technology and the management of the garment industries were allocated budget for computer software and hardware installation (Nuruzzaman, 2013). To sustain the advanced technology, specialized persons were hired from other countries of the world. After purchasing the advanced technology, appropriate maintenance was taken.

Many contributions can be identified in the theory and practice of information technology capability and strategy. This research contributes to the innovative knowledge of the readymade garment industry and resource-based view researches. This study generates the sample from the readymade garment industry in Bangladesh, developing an opening to evaluate technology capability in a different context. For hypothesis analysis, this research applies a structural equation model that underpins the consistency of the elucidation of findings. This study highlights managers to dedicate watchful attention to the IT capability and strategy which may uphold condense costs that allow Bangladesh readymade garment industry to grip the position in the worldwide market.

The labor productivity can be increased by the assistance of information technology e.g. internet or email. The garment manufacturers require to handle materials and stock controlling activities through effective information technology for increasing return on assets and improve productivity. It is necessary for manufacturers to upgrade the information technology to influence foreign investors and develop sufficient infrastructure for the flow of information. Various stakeholders e.g. manufacturers, senior managers, initiators of industry are accountable for sharing information through IT practices or information sharing through face to face regarding garment industry. Managers need to careful consideration on the installation of machineries with local expertise. Therefore, this research contributes to an innovative framework to shape the unconventional expansion of the Bangladesh readymade garment industry.

5. Conclusion

With the lens of RBV, this research elucidates the ample view of information capability and strategy on firm performance. As an export-oriented firm, Bangladesh should give priority regarding the accessibility of information through the proper communication networks. Effective and efficient communication maintains the proper flow of information within local producers and foreign buyers. Information sharing capability is crucial to management for improving productivity, cost reduction, and return on assets. In logistics, the value of information contributes to developing better relationships, providing increased coordination and responsiveness. It generates relationships through information assimilations, business procedures and, decision arrangements for better firm performance. Information may be tactical oriented or strategic oriented e.g. customer's information. When the firm can access reliable information the manufacturers will modify the present plans or actions in near future.

For Bangladesh garment industry, information capabilities are explicit assets that provide firms to develop long term distinctiveness and complicated to progress and replicate by the competitor. Information capability and strategy can produce competitive advantages that lead to improving firm performance. Information/technology strategy has the full effects on industry variables and strategic positions e.g. economies of scale, cost-effectiveness, and power relationship with suppliers as well as buyers. It is important to recognize the existence of limitations. Some variables were restricted in the questionnaire e.g. improve productivity, total cost reductions, and return on assets. The results of this research were especially the garment industry with export-oriented firms exercising making, packaging, and cutting. The senior manager's opinion was used at the time of data collection using five-point Likert scale due to data confidentiality. Further research is required to investigate the firm's motives and the effects of technology adoption and what are the ways information capability can make value and reduce waste, what factors are advances, and restrict the use of technology.

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“Firm Characteristics and Foreign Investment in Equity in the Financial Industry in Bangladesh”

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Abstract

The purpose of this study is to examine what firm characteristics variables influence the investment decision of foreign investors in the equity of listed financial companies in Bangladesh. To this end, 238 annual reports (for the years 2014 to 2018) of listed banking and non-bank financial companies have been analyzed. The results show that several firm characteristics variables such as profitability, leverage, firm size, firm age and market-to-book ratio have significant influence on foreign investment in equity of listed financial companies of Bangladesh. These results imply that foreign investors place considerable weight on several firm characteristics variables in making their investment in equity in the listed financial companies in Bangladesh. These findings can be useful to top management of financial institutions and policy makers specifically to attract foreign investors to invest in the equity of listed financial companies in Bangladesh.

Keywords: Firm characteristics, Foreign ownership in equity, Listed companies, Financial Institutions, Bangladesh.

1. Introduction

The inflow of foreign investment in the form of equity in the emerging (International Monetary Fund, 2008) and developing economy (The Independent, 2018) like Bangladesh is crucial for several reasons including the injection of foreign currency and capital (Bekaert and Harvey, 2000; Doidge et al., 2004), to improve the liquidity of

capital markets (Doidge et al., 2004), and to uplift the confidence of local investors in the firm's stock (Bekaert and Harvey, 2000). Moreover, the inflow of foreign currency is considered a blessing to finance the import of machineries and heavy equipment (Bekaert and Harvey, 2000; Doidge et al., 2004; Mangena and Tauringana, 2007), and is critical for the smooth transition from a developing to a developed economy. Considering this importance of the foreign investment in equity, it is imperative to identify what firm specific factors essentially induce foreign investors to invest in the listed financial companies in Bangladesh.

Financial industry has been chosen for the present study on several grounds. First, this industry is subject to intense regulations, complex nature and high level of risk (Levine, 2004), and therefore require strong supports from the sponsor and capable investor. Second, this industry play critical role in an economy by financing short-term to long-term projects of other industries. Finally, substantial foreign investment in the form of equity in the financial industry can contribute positively to improve the liquidity of emerging capital market like Bangladesh.

Prior researches have attempted to find out the effect of various firm specific characteristics such as firm size, return on assets (ROA) and leverage on foreign equity ownership (Kang and Stulz, 1997; Jiang and Kim, 2004; Yeh, 2018). However, the effect of such factors on the foreign investment in equity in the context of financial industry in Bangladesh is almost scarce in the literature. Using the arguments of signaling theory, the present study attempts to demonstrate what aspects of firm characteristics (leverage, liquidity ratio, profitability, market-to-book-ratio, size, and growth) affect the perception of foreign investors in the listed financial companies of Bangladesh.

The remainder of the paper is organized as follows. Section 2 presents discussion on the extant literature and hypothesis development. Section 3 presents methodology of the study. Section 4 shows results and discussion of the findings of the study. Finally section 5 presents conclusion including the limitations of the study and avenues for further research.

2. Literature Review and Hypothesis Development

The differences in the level of access to information, culture, and familiarity with the legal and institutional framework underpin the challenges to foreign investors to invest in the non-home market (Ahearne et al., 2004; Yeh, 2018). Moreover, in several instances foreign investors experience considerable challenges to take part in the important board meeting due to short notice given by the companies in the non-home market (Rashid, 2018). Consequently, majority of the ownership stakes are held by local investors in majority of the emerging markets (French and Poterba, 1991; Ahearne et al., 2004; Mangena and Tauringana, 2007). To trim down the adverse effect of such information disadvantages and cultural differences, foreign investors may concentrate on a number of firm attributes including the firm's profitability, size and level of risks associated with its operation. Moreover, these firm characteristics such as profitability (return on assets), size (total asset), leverage, growth in revenue, and liquidity may provide useful signals to the foreign investors with respect to the firm's ability to alleviate risks associated with operations in the non-home market (Spence, 1973; Yeh, 2018).

According to signaling theory, a signal is an attribute or activity that can change the belief of others (Spence, 1974), and signifies the abilities and purpose of a firm management (Spence, 1974; Certo et al., 2001). As buyers have incomplete information on sellers' performance, they have to find out alterable attributes of sellers that can affect their performance (Bergh and Gibbons, 2011). Accordingly, this theory argues that these signals (observable and alterable characteristics that can affect the conditional probability of performance) tell about the abilities, actions and purpose of a firm's management (Spence, 1973).

Prior researches have examined the effect of several firm characteristics on foreign ownership in equity in the context of developed economies. For example, Kang and Stulz (1997) used leverage, current ratio, return on assets (ROA), beta, residual variance, market value of equity, and book-to-market ratio as proxy for firm characteristics in Japanese firms. Dahlquist and Robertsson (2001) replaced ROA with return on equity (ROE) in examining the relationship between the variables in

the context of Swedish firms. Covrig et al. (2006) employed debt-equity ratio and turnover in addition to the variables studied by Kang and Stulz (1997) using the data of 11 developed countries. Consistent with several of these prior studies, the present study uses profitability (ROA), leverage, market-to-book ratio, firm size, and growth in revenue to represent the firm characteristics variables.

With respect to the effect of profitability (measured by ROA) on foreign ownership in equity, prior studies showed a positive association between the variables. For example, Kang and Stulz (1997) demonstrated that foreign investors in Japan preferred to invest in firms with higher profitability (ROA). Dahlquist and Robertsson (2001), Covrig et al. (2006), Mangena and Tauringana (2007), and Rashid (2020) also confirmed a positive association between profitability and foreign ownership in equity. Accordingly, the uniformity of the association between firm's profitability and the extent of foreign investment in equity documented by several studies implies that foreign investors takes the firm's profitability as a useful signal in deciding where to invest funds in the oversea market. The findings of prior studies and the arguments of signaling theory motivate the present study to hypothesize a positive association between profitability and foreign ownership in equity. Therefore, the first hypothesis of the study is:

H1. Foreign ownership in equity is higher in firms with higher profitability.

Leverage increases the agency costs of a firm (Roll et al., 2009) and affects its credit worthiness adversely (Kao et al., 2018). Moreover, higher leverage is associated with the risk of incurring bankruptcy costs and underinvestment (Myers, 1977). In regard to the effect of leverage, majority of the prior studies (e.g., Kang and Stulz, 1997; Jiang and Kim, 2004) documented a negative association between the extent of leverage and foreign ownership in equity. However, financial industry is substantially different from other non-financial industry in terms of the effect of the extent of leverage on several aspects of firm performance. More specifically, higher leverage is welcomed in the financial industry as financial companies heavily rely on the depositors' money to lend and invest in large projects. Accordingly, to a certain level leverage is expected to have a positive effect on both the performance and perception

of foreign investor in the financial companies. However, as prior studies revealed mixed results with respect to the effect of leverage on foreign investment in equity, the present study does not assume any directional relationship between the variables. Rather, this study assumes a significant association between the variables. Therefore, the second hypothesis of the study is:

H2. Leverage ratio has significant effect on foreign ownership in equity.

The relationship between book value and market value of equity also provides useful information to investors and has been examined in the prior studies. Kang and Stulz (1997), Dahlquist and Robertsson (2001), and Jiang and Kim (2004) employed book-to-market ratio and documented an inverse relationship between book-to-market ratio and foreign ownership in equity. This result implies that foreign investors choose to invest in firms with low book-to-market ratio (Kang and Stulz, 1997; Dahlquist and Robertsson, 2001). In other words, firms whose market value of equity is greater than the book value of equity are preferable to foreign investors. These motivate the present study to hypothesize a positive association between market-to-book ratio and foreign ownership in equity. Therefore, the third hypothesis of the study is:

H3. Foreign ownership in equity is higher in firms with high market-to-book ratio.

With respect to the effect of firm's size (measured by total assets) on foreign ownership in equity, majority of the prior studies (e.g., Kang and Stulz, 1997; Dahlquist and Robertsson, 2001; Jiang and Kim, 2004; Mangena and Tauringana, 2007; Rashid, 2020) documented a significant positive association between the variables. For instance, Dahlquist and Robertsson (2001) demonstrated that larger firms are more attractive to the foreign institutional investors in Sweden. Moreover, larger firms are expected to have the ability to make heavy investment (Muttakin et al., 2015) along with extensive access to external sources for financing their activities (Muttakin et al., 2015; Kao et al., 2018). These favorable treatments by the supplier of funds can affect firm's performance positively (Muttakin et al., 2015; Kao et al., 2018). These motivate the present study to hypothesize a positive association between firm size and foreign investment in equity. Therefore, the fourth hypothesis of the study is:

H4. Foreign ownership in equity is higher in larger firms.

Changes in revenue over time are an important indicator of a firm's management capability. Consequently, a positive growth in revenue is expected to have a favorable effect on the capacity utilization rate of a firm and its ability to absorb of fixed overheads (Brush et al., 2000; Amidu, 2007). Accordingly, a positive change in revenue over time is expected to affect the perception of foreign investors positively. Unfortunately, the effect of revenue growth on foreign ownership in equity has not been studied extensively in the extant literature. However, in line with the arguments provided above, the present study hypothesizes a positive association between revenue growth and foreign investment in equity. Therefore, the fifth hypothesis of the study is:

H5. Foreign ownership in equity is higher in firms with higher growth in revenue.

The effect of firm age (*FAGE*), as a firm characteristics variable, has also been addressed in the prior literature. For instance Zou et al. (2016) documented a significant positive association between firm age and foreign investment in equity. However, Miletkov et al. (2014) showed a significant negative effect of firm age on foreign equity ownership using the sample of 58,287 firm years from 130 countries. Surprisingly, the significant effect of firm age disappears while the regression result is presented separately for banking companies. Therefore, the present study does not assume any directional relationship between the variables. Rather, the study assumes a significant relationship between the variables. Accordingly, the sixth hypothesis of the study is:

H6. Firm age has significant effect on foreign ownership in equity.**3. Methodology of the Study****3.1 Sample and Data**

Financial sector in Bangladesh comprises of bank, non-bank financial institutions (NBFI) and insurance companies. However, the diversified nature of insurance companies (e.g., life insurance, general insurance) makes it difficult to gather

information required to measure the selected variables of the study. Accordingly, the study focuses only on the listed banking companies and NBFIs. There are 30 banks and 23 NBFIs listed in the Dhaka Stock Exchange (DSE, 2020). The study attempts to include all the bank and non-bank financial companies listed in the Dhaka Stock Exchange (DSE) for the years 2014 to 2018. However, the primary assessment of the annual reports revealed that some of these companies do not disclose information in their annual reports required to meet the needs of the current study. These necessitate the elimination of several companies from the list of sample. This elimination makes the final sample size of the study 238 firm years (149 bank and 89 NBFIs) which covers about 90% of the population [$238 / \{(30+23)*5\} = 89.81\%$]. The study collects all data from the annual reports of sample companies. Share price data have been collected from Dhaka Stock Exchange.

3.2 Empirical Models and Variable Definition

To test the hypotheses (1 to 5), the study estimates the following ordinary least squares (OLS) regression model:

$$FOREIGN = \beta_0 + \beta_1 ROA + \beta_2 LEV + \beta_3 MTB + \beta_4 FSIZE + \beta_5 GROWTH + \beta_6 FAGE + \varepsilon_1$$

Where *FOREIGN* represents foreign ownership in equity and is measured as the proportion of shares owned by foreign investors in equity in the firm's capital structure (Kang and Stulz, 1997; Mangena and Taurigana, 2007; Yeh, 2018). All the variables used in the regression model are defined in Table 1.

Table 1: Description of variables included in the regression model

<i>Variable</i>	Definition
<i>FOREIGN</i>	Foreign ownership in equity, measured as the percentage of shares owned by foreign investors
<i>ROA</i>	Return on assets, measured as the ratio of net profit after tax to total assets
<i>LEV</i>	Leverage, measured as the ratio of total debt scaled by total assets
<i>MTB</i>	Market-to-Book ratio, measured as the ratio of year-end market value of equity to year-end book value of equity
<i>FSIZE</i>	Firm size, measured by natural logarithm of book value of firm's assets

<i>GROWTH</i>	Firm's growth, measured as percentage change in annual revenue. Annual revenue is measured as the sum of interest income and other investment income reported in the operating income section by banks and NBFIs.
<i>FAGE</i>	Firm age, measured by the natural logarithm of the number of years since the inception of firm

4. Results and Discussion

Table 2 shows descriptive statistics for all the variables used in the regression model. The average foreign investment in equity is 5.23% with minimum 0% to a maximum of 58.46% (with a substantial standard deviation of 11.83%). The proportion of foreign investment is considerably low as compared to other parts of the globe. For example, Dahlquist and Robertsson (2001) reported that 32.40% of ownership stake are held by foreign investors in the Swedish capital market. Yeh (2018) showed a 13.47% foreign equity ownership in Taiwan and Neupane et al. (2016) reported a 12.45% in India. The figure for standard deviation indicates a wide dispersion of foreign investment in the listed financial companies in Bangladesh. The proportion of foreign investment is comparatively higher in the non-bank financial institutions (NBFIs) (6.93%) as compared to banking institutions (4.22%).

Table 2. Descriptive statistics for variables used in the models.

Variables	Full sample (N=238)				Bank (N=149)				Non-Bank Financial Institution (N=89)			
	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max
<i>FOREIGN</i>	5.23	11.83	0	58.46	4.22	11.50	0	58.46	6.93	12.24	0	51.05
<i>ROA</i>	0.91	1.13	-5.96	3.63	0.76	0.77	-4.25	1.83	1.16	1.52	-5.96	3.63
<i>LEV</i>	0.92	0.14	0.69	1.96	0.95	0.16	0.87	1.96	0.86	0.06	0.69	0.96
<i>MTB</i>	1.14	0.83	-0.45	7.71	0.91	0.72	-0.45	7.71	1.54	0.86	0.09	4.58
<i>Fsize</i>	16880	15398	622	99795	25382	13505	1143	99795	2647	2138	622	10916
<i>GROWTH</i>	9.31	16.63	-44.25	87.64	6.89	9.98	-14.99	32.46	13.36	23.46	-44.25	87.64
<i>FAGE</i>	23.21	6.58	14	37	24.08	7.14	14	37	21.76	5.26	14	37

In regard to the firm characteristics variables, the average return on assets (ROA) is 0.91% with a minimum of -5.96% to a maximum of 3.63% (with massive standard deviation of 1.13). The figure for ROA demonstrates a very low profitability of the

listed financial companies of Bangladesh. Akin to the foreign investment in equity, the average profitability of NBF (1.16%) depicts a better position as compared to the banking institutions (0.76%). The mean value of leverage is 0.92 indicating a very high leverage of the financial companies in the market (with minimum 0.69 to maximum 1.96). These results indicate the possibility of bankruptcy of some companies as their liabilities are substantially greater than their assets. With respect to the industry difference, banking companies (0.95) are found with greater leverage than NBF (0.86). The average market to book (MTB) ratio is 1.14 which implies that the market value of equity, on average, is still greater than the book value of equity.

The picture of MTB ratio is also identical to ROA (on average) in terms of the difference between the sectors. With respect to the firm size (measured by the book value of total assets), the results show an average of BDT 16,880 crore with a minimum of BDT 622 crore and a maximum of BDT 99,795 crore. However, the average firm size of the banking companies (BDT 25,382 crore) is substantially large (about 10 times) as compared to the NBF (BDT 2647 crore). The average growth in revenue is 9.31% with 6.89% in the banking companies and 13.36% in NBF. This result indicates the supremacy of NBF over the banking institutions in terms of revenue growth. The average firm age of both the sectors is very close (24.08 years in banking companies whereas 21.76 years in NBF) to each other with insignificant variations.

Table 3 displays the correlation matrix among the variables used in the regression model. As can be seen in the Table, the matrix demonstrated that leverage, firm size, and firm age have significant association with foreign ownership in equity. For instance, leverage has significant (at 1% level of significance) positive association with foreign ownership in equity. However, the nature of relationship is negative and significant with firm size and firm age. Interestingly, ROA, revenue growth and MTB ratio do not display any significant association with foreign equity ownership.

Table 3. Pearson's correlation matrix.

<i>FOREIGN</i>	<i>FOREIGN</i>	<i>ROA</i>	<i>LEV</i>	<i>MTB</i>	<i>FSIZE</i>	<i>GROWTH</i>	<i>FAGE</i>
	1						
<i>ROA</i>	-.093	1					
<i>LEV</i>	.392**	-.557**	1				
<i>MTB</i>	.095	.201**	-.262**	1			
<i>FSIZE</i>	-.156*	-.012	.034	-.196**	1		
<i>GROWTH</i>	-.066	.325**	-.156*	.178**	-.082	1	
<i>FAGE</i>	.240**	-.070	.164*	-.061	.275**	.017	1

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

* Correlation is significant at the 0.05 level (2-tailed).

Table 4 presents the OLS regression results of firm characteristics variables and foreign ownership in equity. The coefficient of ROA is positive and statistically significant ($\beta = 2.575$, $p < 0.01$) which is in line with the hypothesis of the study. This result is consistent with several prior studies (e.g., Kang and Stulz, 1997; Dahlquist and Robertsson, 2001; Jiang and Kim, 2004; Mangena and Tauringana, 2007) which implies that foreign investors prefer to invest in companies with higher ROA.

With respect to the second hypothesis of the study, the result shows a highly significant positive relationship between the variables as the coefficient of leverage is positive and statistically significant ($\beta = 51.960$, $p < 0.01$). This result signifies that the second hypothesis of the study that there is a significant association between leverage and foreign ownership in equity is confirmed. This result is inconsistent with the findings of several prior studies (e.g., Kang and Stulz, 1997; Jiang and Kim, 2004). This result also supports the argument that high leverage is welcomed in the financial companies considering its favorable influence on the ability of a company to meet the needs of borrowers.

Table 4: OLS regression result of the relationship of foreign ownership in equity with firm characteristics variables

Variable	Expected sign	Dependent variable= Foreign ownership in equity			
		Coefficient	t-stat	Significance	VIF
ROA	+	2.575***	3.639	.000	1.603
LEV	+	51.960***	8.803	.000	1.531
MTB	+	2.394***	2.983	.003	1.125
FSIZE	+	-5.085***	-4.331	.000	1.142
GROWTH	+	-.091**	-2.235	.026	1.145
FAGE	+	.438***	4.463	.000	1.114
Constant	?	-31.382***	-3.886	.000	
Observations		238			
R^2		0.353			
Adjusted R^2		0.336			
F		20.908***			
Durbin-Watson		2.144			

*** Significance at the 1% level.

** Significance at the 5% level.

* Significance at the 10% level.

The third hypothesis of the study assumes a positive association between market-to-book ratio and foreign ownership in equity. The regression results showed a significant positive association ($\beta = 2.394$, $p < 0.01$) between the variables. This result implies that foreign investors place much weight on market-to-book ratio for investing in the Bangladeshi financial companies.

In respect of the fourth hypothesis, the coefficient of firm size displays a significant negative association ($\beta = -5.085$, $p < 0.01$) with foreign ownership in equity which goes against fourth hypothesis of the study. The nature of the relationship between firm size and foreign ownership implies that foreign investors do not prefer to invest in firms with large size. The underlying cause of such result might be that when a firm becomes excessively large, it may have to diversify its operations excessively which may enhance its agency and bureaucratic costs (Choi et al., 2007; Kao et al., 2018).

Unfortunately, the coefficient of growth demonstrates a significant inverse association with foreign ownership in equity, which is contrary to the fifth hypothesis of the study. So, *H5* is not confirmed indicating the failure of revenue growth to provide a valid signal to foreign investors in making investment decision in the equity of listed financial companies in Bangladesh. With respect to the effect of firm age, the results exhibit a significant positive coefficient implying that foreign investors choose to invest in old aged and familiar firms. Accordingly, the sixth hypothesis that firm age has significant effect on foreign investment in equity in the listed financial industry in Bangladesh is confirmed.

The model explains significant explanatory variations in foreign ownership in equity as the value of Adjusted R^2 of the model is 0.336 indicating that 33.60% of the variations have been explained by the model. Moreover, the model fit very well and significant since its F values is positive ($F= 20.908$) and significant at 1% level. The model is also free from the effect of multicollinearity since its VIF are all below 10 (the minimum value is 1.114 and the maximum value is 1.603) (Greene, 2008; Field, 2009). Table 4 also shows a value of 2.144 for Durbin-Watson statistic. The value of Durbin-Watson statistic between 1 and 3 implies that the values of the residuals are independent, and thus robust the reliability of the results.

5. Conclusion

The aim of the study was to examine the effect of firm characteristics variables on foreign ownership in equity in the listed financial companies of Bangladesh. The results of the study confirmed a significant influence of several firm characteristics variables on foreign ownership in equity. While a number of findings of the present study are consistent with several prior studies, some are contradictory with several other studies. For example, profitability (ROA) and market-to-book ratio are significantly and positively associated with foreign ownership in equity which is consistent with several prior researches (e.g., Kang and Stulz, 1997; Dahlquist and Robertsson, 2001; Jiang and Kim, 2004; Covrig et al., 2006; Mangena and Tauringana, 2007). However, in respects of other firm characteristics variables such as leverage and firm size, the study reveals contradictory results with prior researches. The underlying reasons for

such unexpected results may be attributed to the differences in the context in which the firms are operated.

The findings of the present study can be critical from the theoretical, practical and policy perspectives. The confirmation of a significant positive influence of ROA, leverage, and MTB ratio on foreign investment in equity indicates the preeminence of the arguments of signaling theory. From practitioners' viewpoints, the results can be used to maintain several firm characteristics in the directions suggested by the results of the study specifically to attract foreign investors. Policy makers can recommend firms to maintain particular figures and ratio within a relevant range to qualify for several transactions and sanctions.

The findings of the study must be interpreted in the light of a number of limitations. First, the study considers companies only from financial sectors. Further researches may be conducted by focusing on the annual report data of manufacturing sectors. Second, the study includes only the firm characteristics variables. Other firm-specific variables such as board characteristics may also affect the perception of foreign investors.

Despite these limitations, the present study expects to enrich the extant literatures on firm characteristics and foreign investment in equity by focusing on the listed financial companies of Bangladesh.

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“Critical Success Factors (CSFs) in Performance Measurement of Resort Business in Bangladesh”

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Abstract

Bangladesh as one of the countries of South Asia located in North-Eastern part has an enormous potential to develop resort business. It has attractive natural beauty and affluent cultural heritage. Flourishing resort business can add value toward the Bangladesh economy in current global competition. The aim of this paper is to identify critical success factors toward performance measurement of resort business in Bangladesh. Regarding this, the author has surveyed 45 resort businesses in Bangladesh by a structured questionnaire using Likert's 5 point scale. It has been observed that ensuring quality product and service is the most significant factor among the identified fourteen critical factors as it shows the highest consensus (Mean score = 2.18) in the selected sample. On the other hand environmental compliance has been given less emphasis in this survey. Finally the study would use rotated component matrix to explore four components to inspire the resort business to embrace the factors to measure their performance. The result indicates that these four components can be presented 78.185% of the total variance in the consensus among the sample. The resort business of Bangladesh can develop their performance by nurturing the identified factors in this study.

Key words: Critical Success Factors, Performance, Resort Business, Rotated Component Matrix.

1. Introduction

Resort business has been considered as the rapid growing industry in the tourism world. It has a vital encouragement toward economic development of a country. Bangladesh is a new tourist destination on the map of the world because of its eye-catching natural beauty and affluent cultural heritage. It is almost known about world's longest unbroken, clean sandy beach at Cox's bazaar, the largest mangrove forest of the world-the home of the majestic Royal Bengal Tiger and spotted deer at Sundarban and the hospitable and open hearted people of Bangladesh. Lonely Planet ranked Bangladesh as the best value destination for the year 2011 (Lonely Planet, 2010). Moreover the most notable feature of the country's topography is the diversity of its landscape; it is characterized by wooded marshy lands and jungles with deep forest regions in Sylhet, Rangamati, Khagrachhari and Bandarban hill districts, Sundarbans (the World Heritage site), Mymensingh and Tangail; rare beauty spot of sunrise and sunset in fascinating kuakata; the oldest archeological site in Mahasthangarh; the unseen relics of long forgotten Buddhist kingdoms, lush and lurid tea plantations; tribal groups with Burmese faces; glorious beaches that stretch for eternity; fresh water dolphins and deep water whales and many other delightful beauties of cultural and historical heritage. The possession of these type treasures brings an enormous blessing for the development of tourism in Bangladesh. There are lots of scopes to bloom Bangladesh as one of the notable tourist destination in the world. Researches need to be explored relating to the performance of this business.

Hence, the author has selected the resort business in this study as it is now lucrative sector in the economy of Bangladesh. And also research is lacking behind the performance measurement of this business. The main objective of this study is to observe critical success factors in performance measurement of resort business in Bangladesh. Regarding this the study has been structured as follows: firstly, the author has reviewed the related literature. Next section focuses on the objectives and methodology. Then the study has forwarded analysis and discussions. And finally conclusion with some distinguished recommendations has been drawn.

2. Literature Review

Critical Success Factor (CSF) is a tool to identify the key factors that organizations should focus on to be successful. Though the concept of CSF is introduced by Deniel (1961) at first, gradually it is now well known thought in the business and academic areas to measure the performance in an organization. The most common definition of CSFs has been given by Pinto and Slevin (1987). They defined CSFs as factors which if addressed, significantly improve project implementation chances. Also Leidecker and Bruno (1984) defined CSFs as characteristics, conditions or variables that, when properly sustained, maintained or managed can have a significant impact on the success of a firm competing in a particular industry. As a definition, critical success factors refer to “the limited number of areas in which satisfactory results will ensure successful competitive performance for the individual, department, or organization” [RapidBi (2011)]. Zawawia E.M.A et al. (2011) has focused on the conceptual framework of CSFs and its implantation process. This paper has investigated the current practices of maintenance management in the local authority organizations in Malaysia from strategies, rules and regulations to their future plan for the next generation. They have identified CSFs as a tool for measuring performance in an organization to achieve their mission.

Performance management, measurement and critical success factors are intrinsically intertwined. When discussing this relationship, Flanagan (2005) argues that critical success factors need to be identified in order to provide focus for performance management and measurement. Haktanir and Harris (2005) support their views and have highlighted the discernible link between critical success factors, industry context and performance measurement. For example, performance measurement frameworks and their associated performance measures provide the information needed to inform and support the critical success factors of the organization.

Critical success factors emerge from a number of aspects of the organization's operating context, such as its competitive strategy (Said et al., 2003), stage of the product life cycle (Andersen, Cobbols and Lawrie, 2001; Hoque and James, 2000), size (Hoque and James, 2000), culture, values and beliefs (Neely, 2004; Rejc, 2005), cost

structure, management style, location, position, competitor activity, financial strength (Flanagan, 2005). Brotherton, (2004:a; 2004:b) considers critical success factors to be combinations of activities and processes designed to support achievement of such desired outcomes specified by the company's objectives or goals. Consequently, they can be partially controlled by management and thus can potentially be managed. Chisambara, Peter (2010) noted that critical success factor is derived from goals and objectives of the organizations where certain factors and processes have to be in place. Under those conditions, factors and processes are essential in achieving breakthrough performance within the organization. Most organizations must have a list of outcome measures, also known as lag indicators of what they want to achieve, for example, increased profitability, improved market share, improved employee retention or increased customer satisfaction but do not have a strategy to achieve those measures.

Bergin (2002; 2003) identified critical factors such personal involvement, staff welfare and training, quality food and service, value for money, marketing and benchmarking best practice from the survey of Irish hotel and restaurant. According to Brotherton, (2004:a; 2004:b) critical success factors are those factors capable of providing the greatest competitive leverage upon which resources should be focused. For example, Flanagan (2005) has identified a critical success factor as a position where the organization's pricing is considered to be in the realms of competitive pricing and where the organization's technical capability can match or outstrip competition. He has identified CSFs to measure performance in the Irish hotel. These are the year-on-year sales growth, increased revenue as part of a growth strategy, management of costs, the improvement of the hotel's financial position, the need to win new and retain existing customers, improved satisfaction and quality ratings, gaining best value from existing customers, monitoring competitor activity, maintaining service and product standards, managing asset efficiency, managing staff efficiency, encouraging innovation, improving the capability of management and staff and organizational development.

Iglesias and Guillen (2004) advocate guest satisfaction as a critical success factor for survival in highly competitive markets. Antony, Antony and Ghosh (2004) propose service quality as the critical success factor in research they carried out in a UK

hotel chain and Daun and Klinger (2006) argue that critical success factors such as insights into market, customer requirements and brand management are important for organizational success. From the survey of Louvieris and Phillips (2005) on SME profitability, budgetary control, quality of service, customer relationship management, customer profiling, clear objectives, investment in staff, productivity and staff as drivers of innovation and teamwork have been identified as critical factors. Kobjoll (2007) has found CSFs as balance between operational and human resource management, expert position in the market and innovation from the survey of Irish hotel industry.

De Silva et al. (2008) identified 46 challenges/issues faced by the construction industry of Sri Lanka and grouped those under 10 major categories. Furthermore, 13 main motivators which could be used to improve the performance of the construction industry were identified. Among these motivators, some sub factors were more important than others. Gunasekera (2009) identified 30 critical success factors which affect construction project success in the context of Sri Lanka and proposed compensatory model for industry to increase project success. Though very important HR related factors have been identified he has not considered the relationship of these factors to project success and organizational success but he has grouped these factors under three traditional criteria: Time, Cost and Quality. Further, he has not considered moderating or mediating factors in this study.

From the survey of public construction projects in India Tabish and Jha (2011) has identified 36 success factors. The study has revealed that some factors are of generic nature and would be required to be present to ensure success against two-three performance criteria while some specific factors are required to be present to ensure success against a certain criterion. FardFarhadSanjari and MansorNur Naha Abu (2011) have investigated the critical success factors (CSF) for measuring performance in quality context in Malaysian SMEs in the manufacturing sectors for removing and decreasing the shortcomings and non-preciseness to the minimum rate. The outcomes of this paper will provide detailed review of CSF for organizations to consider when implementing quality measurements in a framework approach. Kazaz et al. (2012) determined the most predominant 10 causes of time overruns in

construction projects in Turkey and grouped them under 7 key factors. Further, they emphasize that considering the current construction atmosphere in Turkey in this respect, 40% of top rated factors belong to “financial factors”, while 30% of them are of “labor based factors”, 20% are of “managerial factors” and 10% are of “project-based factors”. Though they have elicited perception of project managers and site managers, other important players were not included for the sample.

Yong & Mustaffa (2012) identified 15 factors that are critical to construction project success in Malaysia and grouped under seven key headings. But sample is very small and not representative. However, the results suggest a strong consistency in perception between respondents in recognizing the significance of human related factors such as competence, commitment, communication and cooperation towards the success of a construction project. Mitra & Tan (2012) have identified 9 reasons for project delay was identified by through a case study in a specific construction project in Saudi Arabia. It is mentioned that the main causes of delay in project completion are mainly using of inferior tools and methods as well as having inexperienced staff in critical project coordination positions. Chen (2012) analyzed the longitudinal data of 121 capital projects and findings were that the scope, quality, team, communication, risk, and change variables not only significantly affect project success, but have a strong, stable, discriminatory power to predict project success and failure. Garbharran et al. (2012) identified 18 critical success factors in construction industry in South Africa and grouped according to four COMs model: comfort, competence, communication and commitment. The findings suggest that both project managers and contractors strongly support the critical success factors as significant in achieving project success.

Gudienė et al. (2013) presented a conceptual model with 71 factors for construction projects in Lithuania. It has described 7 major groups of factors. 20 factors causing the failure of construction projects in Vietnam were identified by Nguyen and Chileshe (2013) through a research and out of them top-ten factors were classified into 4 categories. This research established that, despite the all-round renovation process undertaken in Vietnam, the construction industry is still plagued by the same critical factors as identified from eight studies spanning a period of eight years from 2004-2012. The major critical factors were associated with knowledge and technical issues.

Alias et al. (2014) identified 5 variables of project performance through a literature review and it has specifically focused on project execution phase.

Financial statement analysis is necessary to forecast future about any business, Hales (2005). These statements represent the company to many stakeholders. The proper understanding of these statements is very important for the managers to collect financial information and make the right decision (Hales, 2011). Through a financial statement analysis investors determine financial feasibility, profitability, and growth. It ensures stakeholders' and company management to take a rational and relevant decision and to evaluate production trend, pricing strategy, and operational efficiency (Singh et al., 2015). Since 18th-century ratio analysis is widely used for the study of the financial data. Financial ratios assist the analyst to observe the financial condition of a company (Lawder cited in Asadullah&Rehman, 2015).

Roy et al. (2015) have tried to focus on the attractive tourist spots of Bangladesh and the contribution of tourism in the Bangladesh economy. The major concern of the writer is to highlight the factors by which Bangladesh can be one of the major tourists' attractive countries in the world in near future. Zidaneet al. (2015) identified 9 delay factors in the Norwegian construction industry through a qualitative study but with a fairly large sample. "Management and coordination", "quality issues and errors", "administration and bureaucracy", "decision issues" and "waiting" were the top five delay factors. The paper of Tarhini Ali et al. (2015) identifies a total of 51 CSFs in ERP implementation. In these 51 CSFs, top management support and commitment, training and education, project management, clear vision and objectives of the ERP system, careful change management and Interdepartmental communication were the most frequently cited as the CSFs to the successful implementation of ERP systems.

Tanvir et al. (2016) have uplifted the feasibility of hotel industry of Cox's Bazar of Bangladesh by using financial statement analysis technique of the five most popular hotel Hotel the Seagull, The Cox Today, The Ocean Paradise, The Sayman and The long Beach hotel. The findings show the performance of the hotel industry over the last five years. Here gradually hotel industry performing well compared to the previous years. Ratio analysis and trend analysis conducted to analyze the financial

position and feasibility of hotel industry.

Alharthi Salem Jraib (2016) has studied government organisations in the UAE with a view toward identifying the most important Critical Success Factors (CSFs) that support the successful implementation of performance management systems (PMSs). This study makes several contributions to the literature on CSFs that influence successful PMS implementation in the government sector, principally in the UAE and other developing countries. Silva Susil Kumara et al. (2016) have to identify critical success factors through a critical literature review with special attention on project execution stage of construction projects and to identify research gaps to be filled in the future. 40 external factors and 34 internal factors were identified. Pourhanifeh Gholam Hassan and Mazdeh Mohammad Mahdavi (2016) has intended to identify and prioritize the critical success factors, among other, factors influencing success of the organization, using hierarchical analysis and application of tools and related software.

Islam Dr. Nazrul et al. (2019) have aimed to explore the critical success factors of IT business entrepreneurs in Bangladesh. The results show that there are five critical success factors such as, family support, online business knowledge, government assistance in training and extension services, quality products and services and networking.

From previous studies of CSFs the author has tried to concentrate on fourteen CSFs (table- 1) in resort business in Bangladesh, as there is still paucity in implication of CSFs in the resort business sector. This study would help to assess the implication of CSFs in performance measurement of resort business in Bangladesh.

Table 1. Critical Success Factors (CSFs).

Factors	Description
F1	Ensuring Quality Product and Service
F2	Customer Satisfaction and Retention
F3	Adequate staff training
F4	Location advantage
F5	Inventory checking
F6	Cost Management system
F7	Application of Budgetary Control
F8	Profitability
F9	Delegation of Authority
F10	Promotional activities
F11	Political stability
F12	Tax Incentive
F13	Up-gradation of Technology
F14	Environmental compliance

3. Objectives of the Study

- To show the implication of identified critical success factors.
- To assess the level of these factors to measure the performance.
- To recognize the significant components those are desirable for improving performance.

4. Methodology of the study

This study is an exploratory research. Critical success factors have been used to investigate the phenomenon of performance measurement in resort business. In doing so, the author has selected randomly 45 resort businesses in Bangladesh as sample.

4.1 Data collection: The required primary data was collected during November 2019 to January 2020. A structured close-ended questionnaire based on 5 point Likert measurement scale (where 1 = very significant, 2 = significant, 3 = neutral, 4 = not significant and 5 = not very significant) has been given to each individual of the mid-

level management of the sample. Also different articles, websites and manuals have been reviewed for literature enrichment.

4.2 Data Analysis: At first this study has used mean and standard deviation (SD) to evaluate the implication of CSFs in the sample resort. Then factor analysis has been run to assess the level of CSFs in measurement of performance. Finally rotated component matrix has been used to recognize the substantial components that are desirable for improving performance.

5. Analysis and discussions

The main objective of this study is to explore the significance of critical success factors (CSFs) in performance measurement of Resort Business in Bangladesh. Mean score (table - 2) of the fourteen factors show the implication of CSFs. Among the factors 'Ensuring Quality Product and Service' shows the highest consensus in the sample i.e. mean score is 2.18 and standard deviation is 0.747. Next significant factors are Cost Management System (mean = 2.51) and Tax Incentive (mean = 2.54). All the identified factors other than 'Environmental compliance' indicate mean score below 3.00. The sample is not recognizing today's the mostly persuasive factor environment compliance (mean = 3.44).

Table 2. Mean and Standard Deviation of CSFs.

Critical Success Factors (CSFs)	Mean	Std. Dev.
Ensuring Quality Product and Service	2.18	0.747
Cost Management System	2.51	1.036
Tax Incentive	2.56	0.759
Application of Budgetary Control	2.71	1.014
Inventory Checking	2.73	1.074
Political Stability	2.74	1.062
Adequate Staff Training	2.78	1.106
Profitability	2.80	1.036

Up-gradation of Technology	2.89	1.112
Customer Satisfaction and Retention	2.91	1.083
Location Advantage	2.91	0.763
Promotional Activities	2.93	1.268
Delegation of Authority	2.93	1.372
Environmental Compliance	3.44	0.990

Then factor analysis has been to assess the level of CSFs in the measurement of performance of resort business. Table – 3 shows the total variance explained (Appendix - II) by the four components extracting from fourteen critical success factors to measure the performance. Here these components have been extracted in terms of eigenvalue of larger than 1.0. These four components can be explained at 78.18 percent of the total variability in the performance measurement of resort Business in Bangladesh. The first component consists of all most all the factors. This component explains 46.270 percent of total variation. Rest of the components loading with only one factor explain 11.470 percent, 10.442 percent and 10.003 percent respectively of the measuring the performance in the sample.

Table 3. Total Variance Explained.

Components	% of Variance	Cumulative %
1	46.270	46.270
2	11.470	57.740
3	10.442	68.182
4	10.003	78.185

Finally the study has used rotated component matrix (Appendix - I) to recognize the substantial components that are desirable for improving performance. Table – 4 shows component analysis from the extraction of fourteen factors. Component 1 consists of eleven factors. In component 1, delegation of authority (accountability)

shows the highest loading i.e. 0.864 and cost management system shows the lowest loading (0.639). The study has also found that each of component 2, 3 and 4 present only one factor as F4, F14 and F1 respectively. Moreover, this has been noticed that ‘Location Advantage’ (F4) shows the highest loading (0.952) among fourteen factors.

Table 4. Component Analysis.

Components	Factors	Title of the factors	Factor Loading
1	F2	Customer Satisfaction and Retention	0.664
	F5	Inventory Checking	0.755
	F6	Cost Management system	0.639
	F7	Application of Budgetary Control	0.800
	F8	Profitability	0.721
	F9	Delegation of Authority	0.864
	F3	Adequate Staff Training	0.861
	F13	Up-gradation of Technology	0.843
	F10	Promotional Activities	0.819
	F11	Political Stability	0.752
	F12	Tax Incentive	0.652
2	F4	Location Advantage	0.952
3	F14	Environmental Compliance	0.936
4	F1	Ensuring Quality Product and Service	0.913

6. Conclusion

Bangladesh is now going ahead to create attention of the tourists by developing resort business with eye-catching package. The present research on critical success factors act as the driving force the resort business in Bangladesh to attain their organizational goal. The research showed that the sample recognize their critical success factors although they may not be using the benefits these factors bring to their organization as a strategic tool. The critical success factors such as quality of product, employees, quality of service, customer satisfaction, location and the quality of the infrastructure

can be measured and benchmarked against the competitor in order to provide a sustainable competitive advantage and therefore should be part of the performance measurement process. It is also apparent from the literature that critical success factors need to be considered as part of an integrated model for performance management and measurement. Arguably, identifying appropriate critical success factors and choosing the right performance management frameworks is a very difficult task because of the fluid nature of the business and the continuing changing environment in this sector. Thus, performance management and performance measurement aligned with critical success factors is a complex and under-researched activity of resort business. But unfortunately, this sector has remained almost in the dark and failed to draw proper attention to the government and the policy makers. If Bangladesh attempts to highlight it as a tourist destination to the potential tourists properly, it can take some initiatives like taking an effective promotional measure, infrastructural facilities, and suitable access to different destination, building better image of country and ensuring safety and security of tourists.

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Appendix I : Rotated Component Matrix

Rotated Component Matrix ^a				
Factors	Components			
	1	2	3	4
F1	-.017	.012	-.010	.913
F2	.664	.182	.036	.511
F3	.861	-.080	.069	.095
F4	.161	.952	.069	.034
F5	.755	.166	.151	-.246
F6	.639	.433	.380	.108
F7	.800	.174	.326	.185
F8	.721	.030	.317	.343
F9	.864	.096	-.028	-.107
F10	.819	.353	.112	.120
F11	.752	.407	.117	-.051
F12	.652	.015	.410	.174
F13	.843	.327	.076	.111
F14	.117	.089	.936	-.041
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 5 iterations.				

Appendix II: Variance Explained

Total Variance Explained									
Compo- nents	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.610	54.359	54.359	7.610	54.359	54.359	6.478	46.270	46.270
2	1.275	9.108	63.467	1.275	9.108	63.467	1.606	11.470	57.740
3	1.057	7.550	71.018	1.057	7.550	71.018	1.462	10.442	68.182
4	1.003	7.168	78.185	1.003	7.168	78.185	1.400	10.003	78.185
5	.574	4.097	82.282						
6	.495	3.536	85.818						
7	.432	3.086	88.904						
8	.340	2.427	91.331						
9	.272	1.942	93.273						
10	.249	1.781	95.054						
11	.220	1.570	96.624						
12	.199	1.424	98.048						
13	.166	1.183	99.231						
14	.108	.769	100.000						

“Should We Focus on Female Labor Force for Sustainable Development?”**Farhana Rahman**

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Abstract:

The female human capital is undervalued and underutilized all over the world, though scholars suggested that proper investment on the female human capital would increase economic growth, reduce poverty, and enhance societal well-being to ensure sustainable development in each country. In this research we will examine the impact of female labor force on economic growth by considering GDP per capital as dependent variable, three subgroup of female labor force (female wage and salaried workers, contributing female family workers and female self-employed workers), female unemployment rate and output per worker as explanatory variables in model

1. In addition we will also analyze the determinants of the female labor force in model 2. The dependent variable is female labor force participation rate and explanatory variables are domestic credit to private sector by banks, women business and the law index score, cost of business start-up procedures (female), total time required to start a business (female), and gross female secondary school enrollment. We conduct multiple regression analysis on panel data sets ranging from 2005 to 2019 using STATA for both models.

In model (1) the research reveals that female wage and salaried workers and female self-employed workers have a strong positive relationship with GDP per capital which suggests that investment in females will increase the productivity of the economy which ultimately will help to attain sustainable development. On the other hand, output per worker has a positive significant relation with GDP per capital as expected, yet female unemployment has also positive relation which is not statistically significant and requires further investigation. So to ensure maximum use of female human capital, the policy makers should focus on the driving factors of female labor force participation rate which we have focused on model 2. Analysis in model 2

reveals that availability of credit in the domestic market and female education are the most important factors to increase the female labor force participation rate as they have significant positive relationships. On the other hand, the cost of start up a business by a female has a significant negative relationship that implies that the cost of start up a business as an entry barrier will reduce the participation of the female labor force in the market. Although we expect that the time of start up a business will have a negative relationship as a barrier for women to enter in the labor force but it shows significant positive relationship, in addition there is an ambiguity regarding the result of women business and law index score as it shows negative relationships, both findings require further investigation.

Keywords: Female Labor Force Participation Rate (FLFPR), GDP per capital, Economic Growth, Sustainable Development.

1. Introduction

The new development agenda of Millennium Development Goals (MDGs) is not only attaining economic growth but sustainable development, in a comprehensive and integrated manner which is the most pressing challenge for developing nations.

Sustainable development can only be achieved through long-term investments in economic, human capital and environmental capital (IMF 2018).

It is believed that the full participation of both men and women's labor force is critical for sustainable development hence only acknowledging men's participation will not be beneficial to sustainable development. Although abundant research suggests investment in human capital for sustainable development where both male and female labor force should equally emphasize but at present, the female half of the world's human capital is undervalued and underutilized in the world.

Better use of the world's female population would increase economic growth, reduce poverty, enhance societal well-being, and help ensure sustainable development in each country.

So it is logical to concentrate rigorously on the contribution of labor force participation in economic growth to ensure sustainable development.

Although the most common and widely accepted recommendation is to provide more formal education opportunities for women that would allow women to get a job in the market but, girls' education is not only one magic key that would unlock the door to women empowerment to ensure sustainable development. As a result female labor force researchers require in-depth research considering the global socio-economic condition where the world of the job market is changing spontaneously due to

technological progress, free trade, green revolution, shifting of human geographically, etc.

To provide insights on this critical economic and development challenge, this study provides a comparative review of the literature. In addition, this research attempts to discover the contribution of each group of female labor force in the economy by considering the GDP per capital as a proxy of economic growth. Along with that, this research finds out important determinants of female labor force participation rate, considering the global economic trends, so that the policy makers can focus and implement those factors proficiently to enhance female labor force participation rate to ensure sustainable development by improving economic growth. This paper is structured as follows: Section 2 reviews of literature on impact of female labor force on economic growth and its important determinants; Section 3 presents hypothesis development; Section 4 discusses methodologies, appropriate statistical analysis and findings, and Section 5 summaries contribution limitations and recommendation.

2. Literature review

The U-shaped hypothesis is a stylized description of the relationship between the female labor force participation rates with economic development, which is typically measured in terms of GDP per capital. Using this theory as a foundation, many studies found evidence that female labor force participation rates at first declined and then later rose with economic development in a U-shape way (Goldin 1995; Luci 2009; Tam 2011).

While this pattern holds true worldwide in broad terms, not all countries follow this U-shape. The relationship between female labor force participation rate and economic growth is in fact more complex, since many social and cultural factors may affect female labor participation rate (Islam and Islam 2013; Lechman and Kaur 2015; Klasen 2019). However, it is supported by most of the analysts that the female labor force has a significant impact on economic growth to ensure sustainable development. Perhaps Lucas (Lucas 1988) was the first to recognize human capital as a catalyst for economic growth where he emphasized that to enjoy constant marginal return in the economy, investment in human capital is an important factor as it attracts other factors such as physical capital, which also contribute to per capital income growth.

In addition Mohiuddin (Mohiuddin 2013) has figured out that continued improvement of labor through education and skill development can expand the production possibility frontier and believed that this productive labor can be a main driven factor for economic growth. On the other hand, high unemployment rates imply high costs in the economy and in such an environment, labor resources are underutilized and this may lead to adverse effects on growth potentials and development of the countries. There is general agreement that unemployment tends to cause workers to leave the

labor force (Schwietzer and Smith 1974). High levels of unemployment result in the underperformance of the economy through lost output and income (ACOSS 2003). Ozekek points out that an increase in the unemployment rate brings about “hidden unemployment” for females but not for male in European countries (Ozerkek 2013).

Female labor force participation rate has gained interest among researchers and development specialists worldwide due to their significant contribution to the economy. Recent research emphasizes that women’s economic empowerment is key for growth both through the direct impact of the size of the labor force on output and through the impact on productivity (OECD 2008; Cuberes and Teignier 2016; Verick 2018). Several researchers explore that there is a positive relationship between women empowerment and economic growth both directly and indirectly (Chaudhary and Verick 2014; Sohail 2014).

It is estimated that growth in GDP would be substantial, if female employment were raised to the male rate particularly in countries such as Japan. Similarly, a study in the United Kingdom found that the country could gain 2% of GDP by better harnessing women’s skills (WWC 2006). Women would account for more than half of GDP in the OECD area if the value of housework and childcare were included in national accounting and undercutting the contribution of women’s unpaid work to the economic growth of these countries (OECD 2008).

This scenario is even worse in developing countries, where failure to value women’s work is a significant barrier to reducing poverty and fostering economic growth. Ustaba and Gulosy point to a strong correlation between the rate of female labor force participation in industry and services sectors and economic development (Ustabaş and Gulosy 2017). Mammen and Paxson (2020) indicate that women’s participation in the labor force first declines and then rises with development.

Internationally, most of the researches support that there is a link between poverty alleviation in countries and the development of their female human capital. In contrast (Klasen and Pieters 2012; Lahoti and Swaminathan 2013; Rahman 2020) says female labor force participation rate does not play a major contribution towards economic growth.

To make the best use of their female populations, most countries are investing in female human capital to assure sustainable development. So along with the impact of female labor force participation in the economy it is also important to focus on the determinants that will scale up women’s participation in the job market.

The literature on determinants of female labor force mostly emphasizes the supply-side perspective – that is, the factors affecting households’ female members’ decision to participate in the labor market. Blau and Khan (2006) consider the impact on family income of wages of both women participants and their spouses while controlling

for income from other sources. Klasen and Pieters (2015) use the share of regular salaried employment household income earned and the number of underemployed men in the household. Mahmud and Bidisha (2018) include household head's education to capture the socioeconomic position of the household, and household head's occupational dummy (whether self-employed or not) in the analysis.

Kabeeret *al.* (2018) emphasize in family planning, education, microcredit opportunities and export-oriented industrialization of Bangladesh. Heintzet *al.* (2018) stress the role of migration, education, access to electricity and mobile phones, RMG, etc. in increasing the participation of young women in wage and self-employment. But most of the researchers suggest that education is the key factor to increase the supply and quality of the female labor force. Indeed educated women are successful in attaining employment, raising output and growth.

(Faridi et al. 2009; Sharma and Sahni, 2015). According to (Anxo 2009; Sharmila and Dhas 2010; Sharma and Sahni 2015), women's education, FLFP has a positive impact on development in India. In addition Sharmila and Dhas share the findings that the drop-out rate had a negative effect on women's education as a result on women empowerment. (Tansel and Gungor 2012; Hasan and Cooray 2013; Syomwene and Kindiki 2015; Aliet *al.* 2016) has found that female education positively and significantly affects the steady-state level of labor productivity.

Similarly Kamal and Zunaid (2004) mention that marital status and women secondary education is the most significant predictor of empowerment in Bangladesh. Mamen and Paxson (2020) find that women's education levels, and the education levels of their spouses, appear to be important determinants of women's labor market activities. On the other hand, despite increases in educational attainment, women's employment rates remain very low in the Middle East and North Africa (Selwaness and Krafft 2020). Along with education and health issues, gender inequality also gets significant attention from researchers in this female labor force issue all over the world.

The Gender Gap Index shows a positive correlation between gender equality and GDP per capital (WEF 2007; Cuberes and Teignier 2016). In addition King and Hill (1991) reveal that large gender disparities in education reduce gross national product. In this changing economy where economy is boosting up due to free trade, money transformation and money creation, financing is an important issue to start a business and to create new jobs.

Sundari (2020) notices that non-availability of jobs seems to be one of the prime factors accounting for decline in the FLFP in India. The availability of credit is a precondition to boost up the business. According to Kabeer *et al.* (2018) access to microfinance loans has the potentiality to increase female labor force participation. Islam and Islam (2013) explore rapid expansion of micro finance in rural areas has

supported women's employment in poultry and livestock other sectors are growing are either too small or are not employing women in large numbers.

The enormous challenges in the world of work make it more vital than ever to establish a clear picture of global employment hence, we need to understand which groups of female workers are contributing more and which one is less in the economy so that policy makers can understand where and what policy they should take and implement. Although many researchers examine the impact of female labor force but very limited number of research have been focusing on the impact of female labor force considering subgroup of female labor force especially in case of developing countries and this study is an attempt to minimize this research gap by addressing impact of each subgroup of female labor force on GDP per capital.

Similarly, abundant research have been done to find out the determinants of female labor force participation rate where majority are socio economic variables but there is a blurring scenario existing regarding excess of financial services, barriers of startup of business and legal issues such as rights to getting paid, managing assets, getting a pension and so on, which require conspicuous inquisition in the field of investment in female labor force and sustainability. This research aims to find out important deriving factors of the female labor force considering those issues so that the policy makers can concentrate to understand the role of women in maintaining economic growth as well as sustainable development.

1. Hypotheses Development

Impact of Female labor force on economic growth:

The tendencies which are observed worldwide advocated that there is relatively a more stable relation with female labor force participation rate and economic growth. Majority of researches show that the female labor force has a positive relationship with GDP per capital output after reaching a certain level. Some theoretical and empirical studies in the literature have concluded that female labor force participation rate has positive and strong links with economic growth (Fatima and Humera 2009). Based on those findings, we develop the following hypothesis considering each category of female labor force participation rate.

Hypothesis 1: Ceteris Paribus, there is a positive relationship between GDP per capital and female labor force participation rate.

The enormous challenges in the work environment make it more vital than ever to establish a clear picture to understand which groups of female workers are winning and which ones are losing. Sound answers to these questions can feed directly into the design of economic and social policies which is essential for a sustainable and inclusive path of development. ILO data on labor income demonstrate that, income

inequality is far greater than previously thought for all works, including self-employed worker all over the world which may reduce FLFPR but, Verick(2018) reveals that even when gender disparities in participation rates are low, women tend to earn less than men and are more likely to be engaged in unprotected jobs, such as domestic work. On the other hand, Schaner and Das(2016) mention that women increase their labor force participation through wage employment in urban areas where women decrease their labor force participation by opting out of informal, unpaid employment in rural areas.

There are positive effects of self-employment policies on employment status and personal income of former unemployed individuals. Although according to Raihan and Bidisha (2018) most women are trapped in unpaid or low-skill occupation but Mammen and Paxson(2000) implies that women move from work in family enterprises to work as employees as incomes rise. Another study of Dauda (2013) has found that in case of female labor force participation, women account for most unpaid work, and when women are employed in paid work, they are overrepresented in the informal sector.

Raihan and Bidisha(2018) point out that a significant percentage of women are even involved in unpaid activities on family farms, and such unpaid family workers in the labor force (mainly women) cannot be considered part of mainstream remunerative economic activities.

Sundari (2020) mentions that large-scale informal employment and most self-employment in the form of unpaid work are indications of women's disadvantaged position in the labor market. The empirical evidence of three categories of female labor force such as contributing female family worker, wage and salaried female worker and self –employed female worker and GDP per capital is mixed and based on that we develop the following hypothesizes:

Hypothesis 2a: Ceteris Paribus, there is a positive relationship between GDP per capital and female wage and salary workers.

Hypothesis 2b: Ceteris Paribus, there is a positive relationship between GDP per capital and female contributing family workers.

Hypothesis 2c: Ceteris Paribus, there is a positive relationship between GDP per capital and female self – employed workers.

Determinants of Female labor force participation rate:

Worldwide in most of the cases, some common socio-economic factors such as education, health –oriented issues, social norms and cultural issues and family oriented policies have been considered as the main driving factors of female labor

force participation rate by many researchers but in this competitive global economy where there are enormous challenges in the world of job market, to find out more appropriate determinants of female labor force participation is needed.

Countries credit levels, number of accounts, availability of initial finance for projects, cost of and time to start a business are deemed important deriving factors in fostering female labor force hence, are getting attention by recent researchers. The number of accounts and having a bank account is significant and important in boosting women's independence in India (World Bank 2012).

Similar findings are revealed in research of Sorsa et al, (2015), banking services, individual and household characteristics strongly influence the low female labor market participation in India. Financial depth and breadth positively affect the female labor force participation (World Bank 2012; OECD 2012). According to Sorsa et al, (2015), the availability of banking and ability to get funding for small-scale businesses raises female labor force participation in India.

According to (Heath and Jayachandran, 2017) programs seeking to improve women's earning potential such as microfinance or business skills training have had some success in increasing female labor supply making access to finance easier may also facilitate start-ups or self-employment among women. Countries having mandated and family-friendly fund policies encouraged more working women (OECD, 2012). Based on above discussion we develop the following hypothesis:

Hypothesis 3: Ceteris Paribus, there is a positive relationship between female labor force participation rate and availability of domestic credit to the private sector.

Recent research supports that female participation in labor markets tend to increase when the time-cost of unpaid care work is reduced. Indeed, the high cost of start up a business and more time required to start up a business can demotivate women to enter the labor market. Along with that these barriers will reduce the potentiality of becoming an entrepreneur as a result new job creation will not be possible which may affect female labor in the market. According to Sundari (2020), non-availability of jobs seems to be one of the prime factors accounting for decline in the female participation rate in India. Women are disadvantaged in the workplace by time poverty (OECD 2012).

According to (OECD 2012; Heath and Jayachandran 2017) reducing the burdens of home production (such as free child care) had some success in increasing female labor supply. Moreover minimizing entry barriers in the job market to increase female labor force is an important issue but limited research has been done specially in case of developing countries. In this study we assume that the cost of start up a business and time required to start up a business can negatively affect the female labor force participation rate which will slow down economic growth. The following hypotheses

are considered based on the above assumptions.

Hypothesis 4a: Ceteris Paribus, there is a negative relationship between female labor force participation rate and cost of start up a business.

Hypothesis 4b: Ceteris Paribus, there is a negative relationship between female labor force participation rate and time required to start a business.

Recent researches provide sufficient evidence that sustainable development cannot be achieved without gender equality in economic participation, education, health and political empowerment of women. Sustainable development requires the full and equal participation of women at all levels. According to Canan (2012), gender inequality negatively affects economic development. Recent researches focus on gender inequality even in different levels of organization both in public and private sector in management positions which reduces performance, innovation and effectiveness of firms and governments (OECD 2008). Based on those empirical analyses we develop the hypothesis.

Hypothesis 5: Ceteris Paribus, there is a positive relationship between female labor force participation rate and women business and the law index score.

2. Methodology

In this research, panel data sets have been used for investigations and the data set ranging from 2005 to 2019 have been collected from secondary data and the sources of data include World Bank Data indicator, ILO database, Bangladesh Bureau of statistics. Two models have been adopted. In model 1, along with finding out the impact of the female labor force with economic growth, we will investigate which type of female labor force will contribute more in economic development. In this model we have considered GDP per capital as a proxy of economic growth and expected a positive relationship of GDP per capital with explanatory variables, contributing female family workers, female self-employed workers, female wage and salaried workers. We also consider female unemployment rate and output per worker as explanatory variables.

In model 2, we will find out the determinants of female labor force participation rate, particularly to know is there any link among explanatory variables domestic credit to private sector by banks, women business and the law index score, cost of business start-up procedures (female) and total time required to start a business (female). We will also consider gross female secondary school enrollment as another independent variable. Where we expect a positive relationship with dependent variable female labor force participation rate with explanatory variables domestic credit to private sector by banks, women business and the law index score, gross secondary school

enrollment (female), and a negative relationship with cost of business start-up procedures and total time required to start a business.

We will perform panel data analysis using STATA software for this study to know its capability to separate the effects of specific interventions and treatments both across cross-sections and time-series. To avoid arbitrariness involved in accepting fixed effects (FE) and random effects (RE), we perform Hausman Test to choose between the fixed effect and random effects models. For diagnostic tests of the models we conduct the Wooldridge test for autocorrelation and to check cross-sectional dependence we conduct Pesaran test. Correlation analysis such as the Pairwise correlations between all continuous variables will also be done to check multicollinearity in this research. All the outcomes of this analysis will be presented in Appendix

A.

We select Bangladesh and India as a limited number of researches have been done considering the issues we have used in our analysis for both countries. Based on availability of data, social norms and cultural issues, we select these two countries. We consider GDP per capital as a proxy of economic growth as increasing GDP per capital is often seen as a most popular measure of welfare and economic success by policymakers and academics. However, recently it is often debated by scholars that some other alternative indicators such as HDI, HCI, SPI are adequate gauge of a country’s development but GDP per capital, while is not a comprehensive measure of economic well-being, but it is useful in and should provide a great deal of information that is closely related to welfare.

4.1 Model Specification, Results and Discussions

To understand the relationship within female labor force participation rate and GDP per capital, by considering three categories of female labor force, female wage and salary workers contributing female family workers and female self-employed workers, unemployment rate of female labor force and output per worker, we would like to form and work on the following model (1) using the collected data.

$$GDPPC_t = \beta_0 + \beta_1 OPW_t + \beta_2 CFWF_t + \beta_3 WASWF_t + \beta_4 SEF_t + \beta_5 UEPF_t + e_t$$

.....(1)

Where,

Y = $GDPPC_t$ = GDP per capital (constant 2010 US\$) in period t

X1 = OPW_t = Output per worker in period t

$X2=CFWF_t$ = Contributing family workers, female (% of female employment) in the period t

$X3= WASWF_t$ =Wage and Salaried Workers, female (% of female employment) in period t

$X4= SEF_t$ = Self-employed, female (% of female employment) in the period t

$X5=UEPF_t$ =Unemployment rate female in the period t

t= time and ε = Error Term

Table 1: Descriptive statistics for model-1

Variables	Obs	Mean	Std. Dev.	Min	Max	p1	p99	Skew.	Kurt.
GDPPC	30	1216.91	438.537	617.543	2169.14	617.543	2169.14	.634	2.487
OPW	30	3381.219	1371.062	1708.909	6460.043	1708.909	6460.043	.802	2.56
CFWF	30	43.407	14.734	27.636	66.435	27.636	66.435	.369	1.331
WASWF	30	22.434	5.923	16.408	43.771	16.408	43.771	1.889	6.862
SEF	30	79.759	6.452	67.644	89.315	67.644	89.315	-.364	2.385
UEPF	30	6.084	.856	4.44	7.609	4.44	7.609	.377	2.067

Descriptive statistics for the explanatory variables for model-1 is shown in table-1 where the average output per worker is 3381.21 units, the maximum value is 6460 units and minimum value is 1708.90 units, with a high standard deviation of 1371.06 units. The range of contributing female family worker is from 27.636% to 66.435 % and the mean value is 43% of female employment .On the other hand the mean value for female wage and salaried workers is 22.434% with a narrow range of from 16.408 % to 43.771 %. The average value of self-employed female workers is 79.759 % of female employment with a maximum value of 89.315 % and minimum value of 67.644 % and unemployment rate range from maximum 7.609 % and minimum 4.44% with a low standard deviation of 0.856 %.

Table 2: Pairwise correlations of variables for model-1

Variables	(1)	(2)	(3)	(4)	(5)	(6)		
(1) GDPPC	1.000							
(2) OPW	0.994*	1.000						
(3) CFWF	-0.827*	-0.787*	1.000					
(4) WASWF	0.014	-0.052	-0.142	1.000				
(5) SEF	0.076	0.142	-0.077	-0.885*	1.000			
(6) UEPF	-0.523*	-0.545*	0.524*	0.264	-0.471*	1.000		
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$								

Pearson correlation matrix has been used to examine the correlation of the dependent variable GDP per capital and each of the independent variables used in this study and has been presented in table-2. The statistical result shows that there is a positive correlation of female wage and salaried workers (0.0142) and self-employed female workers (0.0761) with GDP per capital. On the other hand contributing female family workers (-0.8274) has a strong negative correlation with GDP per capital.

Unemployment rate of female workers (-0.5230) also has strong negative correlation and output per worker (0.9937) has a strong positive correlation with GDP per capital as expected. The statistical value of correlation matrix within the independent variable shows that there is no severe correlation among the independent variables except self-employed female workers with female wage and salaried workers (-0.8855) and contributing female family workers with output per workers (-0.7868).

Before preceding the multiple regression analysis, the collinearity among independent variables should be investigated properly, that's why we also conduct the Wooldridge test for autocorrelation and the high P value (0.974) can ensure us that the model is free from multicollinearity and is a good fitted model.

Table 3: Result of Hausman Test for model-1

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----- Coefficients -----
|   (b)      (B)      (b-B)  sqrt(diag(V_b-V_B))
|   fe      re      Difference    S.E.
-----+-----
OPW | .3645702  .2866335  .0779367  .0145193
CFWF | -4.12393 -4.202787  .0788568  .
WASWF | 24.43405 -5.073892  29.50794  5.547759
SEF | 26.44172 -8.367687  34.80941  6.62739
UEPF | .9479786  -.364853  1.312832  .
-----+-----

```

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\begin{aligned} \text{chi2}(5) &= (b-B)'[(V_b-V_B)^{-1}](b-B) \\ &= 26.65 \end{aligned}$$

Prob>chi2 = 0.0001

(V_b-V_B is not positive definite)

As we know that Hausman test is a statistical test to select whether the most appropriate Fixed Effect or Random Effect model is used. If Result: H_0 : Select RE ($P > 0.05$) H_1 : Select FE ($P < 0.05$) that means if H_0 or P value > 0.05 then we should choose the Random Effect model which is also known as Generalized Least Square (GLS) model. On the other hand if the Hausman Test receives H_1 or P value < 0.05 we should go for the Fixed Effect model. In our analysis the P value (0.0001) of the Hausman test represents that we should select the Fixed Effect model for this panel data set.

After conducting the Wooldridge test for autocorrelation of this panel data the P value (0.0974) suggest to accept the null hypothesis of no first-order autocorrelation and along with that the average absolute value of the off-diagonal elements of Pesaran’s test of cross sectional independence (0.433) indicate that there is no cross sectional dependence of this panel data set. The value of overall $R^2 = (0.96)$ implies that the explanatory variables explains 96 % movement of the dependent variable. The value of F-statistics (1647.95) with a P value of (0.0000), implies that we reject the null hypothesis, which means all the explanatory variables explaining the dependent variable also indicate that this one is a good fitted model.

Table 4: Outcome of Fixed-Effect model-1

Fixed-effects (within) regression	Number of obs	=	30
Group variable: countryid	Number of groups	=	2

R-sq:	Obs per group:
within = 0.9972	min = 15
between = 1.0000	avg = 15.0
overall = 0.9616	max = 15

	F(5,23)	=	1647.95
corr(u_i, Xb) = -0.8602	Prob> F	=	0.0000

GDPPC	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
OPW	.3645702	.0157748	23.11	0.000	.3319375 .397203
CFWF	-4.12393	.4216143	-9.78	0.000	-4.996106 -3.251755

WASWF	24.43405	5.928201	4.12	0.000	12.17063	36.69746
SEF	26.44172	6.919017	3.82	0.001	12.12864	40.7548
UEPF	.9479786	5.444234	0.17	0.863	-10.31428	12.21024
_cons	-2499.663	743.3382	-3.36	0.003	-4037.375	-961.9509

sigma_u | 230.5802

sigma_e | 17.32367

rho | .99438705 (fraction of variance due to u_i)

F test that all u_i=0: F(1, 23) = 26.37

Prob> F = 0.0000

Using Fixed Effect regression analysis for our model (1), we get the following:-

$$GDPPC_t = -2499.66 + 0.36457OPW_t - 4.123CFWF_t + 24.43WASWF_t + 26.44SEF_t + 0.9479_t + e_t \dots \dots (2)$$

The value of the intercept term ($\beta_{0=}$ -2499.66) is negative, which implies that if the value of all explanatory variables are zero then the intercept for the dependent variable will be -2499.663 which is statistically significant at 1% significance level.

In this economic growth model 1 we expect a positive relationship between dependent variable GDP per capital and each category of female labor force participation rate. In our research the significant positive correlation coefficient of self-employed female workers (26.44) and female wage and salaried workers (24.434) implies that as female labor is an essential input in the production process such that increases in self-employed female worker and wage and salaried workers would lead to increase in GDP per capital. It also reveals that self- employed female workers are more positively correlated than female wage and salaried workers with GDP per capital.

On the other hand correlation coefficient of contributing female family workers is (-4.123) which is opposite of our expectation but supported by the research of

(Raihan and Bidisha 2018).According to themdecent work deficits are pronounced in the informal economy, especially for contributing family workers.

This one can be one reason behind these findings. Output per worker (0.364) also has a positive significant relationship with GDP per capital and this findings is in a line of (OECD 2008; Cuberes and Teignier 2016; Verick 2018). Although our literature on the relationship between unemployment and economic growth (Schwietzer and Smith 1974; ACOSS 2003; Ozerkek2013) expound that there should be a negative relationship between female unemployment and GDP per capital but our analysis implies that there is an insignificant positive relationship between these two.

To have a clear understanding on female labor force and its determinants, using the collected data we would like to form the following model (2):

$$LFF_t = \beta_0 + \beta_1 COBS_t + \beta_2 TRSB_t + \beta_3 SESF_t + \beta_4 DCPB_t + \beta_5 WBLI_t + \dots e_t \dots (3)$$

Where,

$Y = LFF_t$ = Labor force participation rate female (% of total labor force) in period t

$X_1 = COBS_t$ = Cost of business start-up procedures, female (% of GNI per capital) in period t

$X_2 = TRSB_t$ = Total Time required to start a business, female (days) in period t

$X_3 = SESF_t$ = Gross School enrollment, secondary, female (% gross) in period t

$X_4 = DCPB_t$ = Domestic credit to private sector by banks (% of GDP) in period t

$X_5 = WBLI_t$ = Women Business and the Law Index Score (scale 1-100) in period t

t= time and ε = Error Term

Table 5: Descriptive Statistics of model-2

Variables	Obs	Mean	Std. Dev.	Min	Max	p1	p99	Skew.	Kurt.
LFF	30	24.618	3.235	20.076	30.488	20.076	30.488	.201	2.003
COBS	30	33.153	21.727	7.2	78.4	7.2	78.4	.709	2.134

TRSB	30	32.959	17.093	16.47	93	16.47	93	1.956	6.761
SESF	30	62.783	11.095	46.998	79.345	46.998	79.345	-.001	1.532
DCP	30	44.532	6.669	29.03	52.386	29.03	52.386	-.882	2.843
WBLI	30	55.75	10.346	38.1	74.4	38.1	74.4	.103	1.792

Table 5 shows descriptive statistics of determinants of female labor force participation rate as analyzed in model-2.

The average cost of business startup is 33.15% of GNI per capital, where the maximum value is 78.4% and minimum value is 7.2%, with a high standard deviation of 21.727%. The range of total time required to start a business is maximum from 93 to minimum of 16.47 days and the mean is 33 days with a narrow range from 16 days to 93 days. On the other hand the mean value of gross secondary school enrollment is 62.783 % of gross school enrolment with a maximum value of 79.345% and minimum value of 46.99 % and domestic credit to private sector by banks range from maximum 52.386% of GDP and minimum is 29.03 % with a low standard deviation of 6.66%.

In case of women's business and law index score the average score is 55.75 out of 100 where the maximum is 74.4 and minimum is 38.1.

Table 6: Pairwise correlations for model 2:

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) LFF	1.000					
(2) COBS	-0.082	1.000				
(3) TRSB	-0.073	0.487*	1.000			
(4) SESF	-0.110	-0.639*	-0.677*	1.000		
(5) DCP	-0.326	-0.183	-0.581*	0.749*	1.000	
(6) WBLI	-0.672*	-0.047	-0.367*	0.568*	0.845*	1.000
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$						

Table 6 represents the Pearson correlation matrix of female labor force participation rate and its determinants used in this study. The statistical result shows that there

is negative correlation of female labor force participation rate with all independent variables such as with cost of business startup (-0.0824), time required to start up a business (-0.0735), gross secondary school enrollment (-0.1104), domestic credit to private sector by banks (-0.3259) and with women’s business and law index score (-0.6718). The statistical value of correlation matrix within the independent variables shows that there also have high correlation among most of the independent variables like cost of business startup with gross secondary school enrollment (- 0.6394), time required to start up a business with gross secondary school enrollment (-0.6774), domestic credit to private sector by banks with women’s business and law index score (0.8448) and some others which can mislead our findings. For clear understanding we also conduct the Wooldridge test for autocorrelation and the low P value (0.0170) can ensure us that the model is not free from multicollinearity and require replacement by a good fitted model.

Table 7: Result of Hausman test for model 2

hausmanfe re

---- Coefficients ----

	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
COBS	.1185395	.0278311	.0907084	.0201597
TRSB	.082466	-.0326502	.1151162	.0273224
SESF	.100186	.065958	.0342279	.
DCP	.44121	.2721375	.1690725	.
WBLI	.0917127	-.4154912	.5072039	.1382436

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\begin{aligned}\chi^2(5) &= (b-B)'[(V_b-V_B)^{-1}](b-B) \\ &= 12.60\end{aligned}$$

$$\text{Prob}>\chi^2 = 0.0274$$

(V_b-V_B is not positive definite)

The P value (0.0274) of the Hausman test represents that we should select the Fixed Effect regression model for this panel data set. Serial correlation is usually present both in time-series data and cross-sectional data. In our analysis we use Wooldridge test for autocorrelation in panel data where, H_0 : no first-order autocorrelation and have found that in model-2 the P value is (0.0170), which means we reject the null hypothesis of no serial autocorrelation that means autocorrelation exist in this data set.

According to analysts, the FGLS estimator is better than usual OLS estimator in that case. To solve this autocorrelation and heteroskedasticity problem we select Feasible Generalized Least Squares (FGLS) rather than OLS estimators and prove that the panel is homoscedastic and free from autocorrelation. On the other hand, according to the analysts FGLS is better than PCSE method when time series observation (T) > cross sectional observation (N).

Along with that the average absolute value of the off-diagonal elements of Pesaran's test of cross sectional independence (0.599) also indicate that there is cross sectional dependence of this panel data set. The value of within $R^2 = (0.569)$ implies that the model or explanatory variables explains 57 % movement of the dependent variable.

The value of F-statistics (6.07) with a P value of (0.0000), implies that we reject the null hypothesis, that none of the explanatory variables explains the dependent variable. The Wald χ^2 of FGLS model is (3777.75) with a P value of (0.000) also indicate that this one is a good fitted model.

Now we would like to interpret the outcomes we got from model-2 using FGLS estimation:

Table 8: Outcome of Cross-sectional time-series FGLS regression for model-2

Cross-sectional time-series FGLS regression

Coefficients: generalized least squares

Panels: heteroskedastic

Correlation: no autocorrelation

Estimated covariances	=	2	Number of obs	=	30
Estimated autocorrelations	=	0	Number of groups	=	2
Estimated coefficients	=	6	Time periods	=	15
			Wald chi2(5)	=	3777.75
Log likelihood	=	-43.2291	Prob> chi2	=	0.0000

LFF	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
COBS	-.0116116	.0070307	-1.65	0.099	-.0253916	.0021683
TRSB	.0158501	.0053784	2.95	0.003	.0053086	.0263915
SESF	.1498492	.0082106	18.25	0.000	.1337568	.1659416
DCP	.1363142	.0371107	3.67	0.000	.0635786	.2090498
WBLI	-.0187909	.0347443	-0.54	0.589	-.0868885	.0493066
_cons	13.1135	1.377921	9.52	0.000	10.41283	15.81418

Using Feasible Generalized Least Squares (FGLS) regression model for panel data we can write the estimated as follows:

$$LFF_t = \beta_0 + \beta_1 COBS_t + \beta_2 TRSB_t + \beta_3 SESF_t + \beta_4 DCPB_t + \beta_5 WBLI_t + \dots e_{tj} \dots (4)$$

$$LFF_t = 13.1135 - 0.0116116COBS_t + 0.0158501TRSB_t - 0.1498492SESF_t + 0.1363142DCPB_t - 0.0187909WBLI_t + \dots e_{tj} \dots (5)$$

The value of the intercept term ($\beta_0 = 13.11$) is positive, it implies that if the value of all explanatory variables are zero then the intercept for the dependent variable will be 13.11 which is statistically significant at 1% significance level. Female labor force participation rate and cost of business startup indicate negative relationships as we expected and it is statistically significant at 10% significance level. Cost of startup a business is considered as an entry barrier to participation in the labor force by women because whenever there will be high cost for women to start a business they will be demotivated or unable to start a business which will reduce the job opportunity and is supported by the research of Sundari (2020).

In addition, time required to start up a business indicates a very negligible positive relationship which is statistically significant at all usual levels so we need further investigation regarding this determinant. Female labor force participation rate and female gross secondary school enrollment (0.1498) is positive as we expected that female labor force participation will increase with the increase of female education and this finding is in line with those of (Anxo 2009; Sharmila and Dhas 2010; Hassan and Cooray 2013, Syomwene and Kindiki 2015; Sharma and Sahni 2015) and opposed by (Selwaness and Krafft 2020).

Women business and the law index Score (-0.0187909), indicates an insignificant negative relationship although in recent years this one is one of the main concern of consultants and suggested by (WEF 2007; Canan 2012; Cuberes and Teignier 2016) that countries with equal rights of men and women in working place has high possibilities to ensure sustainable development, hence require further investigations.

On the other hand domestic credit to private sector by banks (0.1363142) has a strong positive relationship with female labor force participation as expected, because recent studies suggest that if the financial benefits and availability of credits increase in the market at a low cost then more women will willing to participate in the labor market. These findings are in line with (World Bank 2012, OECD 2012; Islam and Islam, 2013; Heath and Jayachandran 2017; Kabeer et al. 2018)

3. Conclusion

The proposed model 1 successfully presents the impact of the female labor force on economic growth considering categories of female labor forces. Finding shows that the female labor force has a strong positive relationship with GDP per capital specially the self-employed and wage and salaried female worker. The findings of this research suggests that investment in females will increase the productivity of the economy, income level will go up hence will reduce poverty, will increase their bargaining power through participation in the economy which ultimately will help to attain sustainable development. As a result the policy makers should focus on female labor force for their maximum use and to do that they need to focus on the driving factors that will enhance the female labor force participation rate considering the changing global economic condition.

In model 2 analysis reveals that if the policy makers want to enhance the participation of female labor force then they have to create job opportunities where increasing country credit level and minimizing the entry barrier by reducing startup business cost should be a more focused area along with education and some other social and cultural issues.

One of the limitations of this study is to fail to gather more data on the nature of women's work in and out of the job market particularly for developing countries. Only two countries have been considered as samples for this research and due to this limited cross sectional observations, perhaps one reason is to have autocorrelation problems in model 2. Including other explanatory variables such as minimum monthly wage, wage gap, government expenditure on education, accessibility of technology, etc., may enrich this research to find out the determinants of female labor force participation rate.

We can also consider sector wise contribution of female labor force participation to identify the impact of the female labor force in the economy. Sustainable development consists of three dimensions such as economic development, human capital development and environmental development, but this research focuses mainly on economic development, hence has the scope to work on other dimensions of sustainable development. Moreover issues related to gender differential in wages, labor standards, working hours, safety and health in the workplace, freedom of

association and collective bargaining are remaining and have the scope to work in future.

Based on the analysis, this study suggests the following recommendation. As we have found that the contribution of female wage and salaried workers and female self-employed workers are contributing more to ensure economic growth, so that the policy maker should concentrate rigorously on the deriving factors that will increase the participation rate of them. According to our analysis, more financial services, adequate funds for credit and less startup cost may help women to become entrepreneurs and create more jobs. In addition the literature also suggest that accessing decent work, including care responsibilities, improving skills and safety issues may also increase the participation of self-employed female workers and wage and salaried female workers.

Although micro-financing plays a significant role to increasing the female labor force participation rate but it is not sufficient to ensure adequate supply of funds for women. Despite micro-financing, all financial institutions especially the specialized government financial institution should provide more funds for credit and easy access to financial services. The positive result of our analysis between female education and female labor force participation rate would like to suggest the policy makers emphasize more on female education and skill development as to ensure sustainable economic development.

Education opportunities are the one that would allow for higher bargaining power, more access to higher wages and would make it easier for women to get a job in the market. It is suggested from this research that the government should provide technical and vocational education to the women. The government needs to play the lead role in education and institutional aspects, while the private sector should need to work in development in industries and regions that can increase job opportunities for women in developing countries.

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Appendix A

Set the data as panel data:

panel variable: countryid (strongly balanced)

time variable: Year, 2005 to 2019

delta: 1 year

For model 1:

Result of fixed effect model:

Fixed-effects (within) regression Number of obs = 30

Group variable: countryid Number of groups = 2

R-sq:

within = 0.9972

between = 1.0000

overall = 0.9616

Obs per group:

min = 15

avg = 15.0

max = 15

F(5,23) = 1647.95

corr(u_i, Xb) = -0.8602

Prob> F = 0.0000

GDPPC | Coef. Std. Err. t P>|t| [95% Conf. Interval]

```

-----+-----
      OPW | .3645702 .0157748 23.11 0.000 .3319375 .397203
      CFWF | -4.12393 .4216143 -9.78 0.000 -4.996106 -3.251755
      WASWF | 24.43405 5.928201 4.12 0.000 12.17063 36.69746
      SEF | 26.44172 6.919017 3.82 0.001 12.12864 40.7548
      UEPF | .9479786 5.444234 0.17 0.863 -10.31428 12.21024
      _cons | -2499.663 743.3382 -3.36 0.003 -4037.375 -961.9509
-----+-----

```

```

-----+-----
sigma_u | 230.5802

```

```

sigma_e | 17.32367

```

```

rho | .99438705 (fraction of variance due to u_i)
-----+-----

```

F test that all $u_i=0$: $F(1, 23) = 26.37$

Prob> F = 0.0000

Result of Random effect Model(for model 1)

Random-effects GLS regression Number of obs = 30

Group variable: countryid Number of groups = 2

R-sq:

within = 0.9941

between = 1.0000

overall = 0.9973

Obs per group:

min = 15

avg = 15.0

max = 15

Wald chi2(5) = 9010.25

corr(u_i, X) = 0 (assumed)

Prob> chi2 = 0.0000

GDPPC	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
OPW	.2866335	.0061673	46.48	0.000	.2745459	.2987212
CFWF	-4.202787	.6042916	-6.95	0.000	-5.387177	-3.018397
WASWF	-5.073892	2.089484	-2.43	0.015	-9.169205	-.978579
SEF	-8.367687	1.987588	-4.21	0.000	-12.26329	-4.472086
UEPF	-.364853	7.799682	-0.05	0.963	-15.65195	14.92224
_cons	1213.616	246.9169	4.92	0.000	729.668	1697.564

sigma_u	0
sigma_e	17.32367
rho	0 (fraction of variance due to u_i)

Result of Hausman Test: (for model 1)

---- Coefficients ----

	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
OPW	.3645702	.2866335	.0779367	.0145193
CFWF	-4.12393	-4.202787	.0788568	.
WASWF	24.43405	-5.073892	29.50794	5.547759
SEF	26.44172	-8.367687	34.80941	6.62739
UEPF	.9479786	-.364853	1.312832	.

b = consistent under H_0 and H_a ; obtained from xtreg

B = inconsistent under H_a , efficient under H_0 ; obtained from xtreg

Test: H_0 : difference in coefficients not systematic

$$\begin{aligned}\chi^2(5) &= (b-B)'[(V_b-V_B)^{-1}](b-B) \\ &= 26.65\end{aligned}$$

Prob>chi2 = 0.0001

(V_b-V_B is not positive definite)

Result of Pesaran's test for cross-sectional dependency:(model 1)

Pesaran's test of cross sectional independence = -1.677, Pr = 0.0936

Average absolute value of the off-diagonal elements = 0.433

Result of Wooldridge test for autocorrelation (model 1)

Wooldridge test for autocorrelation in panel data

H_0 : no first-order autocorrelation

$$F(1, 1) = 42.029$$

Prob> F = 0.0974

For model 2 :

Result of fixed effect model:

Fixed-effects (within) regression Number of obs = 30

Group variable: countryid Number of groups = 2

R-sq: Obs per group:

 within = 0.5690 min = 15

between = 1.0000 avg = 15.0
 overall = 0.2159 max = 15

F(5,23) = 6.07

corr(u_i, Xb) = -0.9226 Prob> F = 0.0010

LFF | Coef. Std. Err. t P>|t| [95% Conf. Interval]

COBS | .1185395 .0346456 3.42 0.002 .0468697 .1902094
 TRSB | .082466 .0417127 1.98 0.060 -.0038233 .1687554
 SESF | .100186 .066926 1.50 0.148 -.038261 .238633
 DCP | .44121 .1320413 3.34 0.003 .1680619 .7143581
 WBLI | .0917127 .1551491 0.59 0.560 -.2292375 .412663
 _cons | -13.08083 13.20312 -0.99 0.332 -40.39357 14.23191

sigma_u | 8.8653963

sigma_e | 1.6507011

rho | .96649272 (fraction of variance due to u_i)

F test that all u_i=0: F(1, 23) = 12.42 Prob> F = 0.0018

Result of Random-effects GLS regression(model 2)

Random-effects GLS regression Number of obs = 30

Group variable: countryid Number of groups = 2

R-sq: Obs per group:

COBS	.1185395	.0278311	.0907084	.0201597
TRSB	.082466	-.0326502	.1151162	.0273224
SESF	.100186	.065958	.0342279	.
DCP	.44121	.2721375	.1690725	.
WBLI	.0917127	-.4154912	.5072039	.1382436

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\text{chi2}(5) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

$$= 12.60$$

$$\text{Prob}>\text{chi2} = 0.0274$$

(V_b-V_B is not positive definite)

Result of Pesaran's test of cross sectional dependence

Pesaran's test of cross sectional independence = -2.319, Pr = 0.0204

Average absolute value of the off-diagonal elements = 0.599

Result of Wooldridge test for autocorrelation:

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

$$F(1, 1) = 1399.117$$

$$\text{Prob}>F = 0.0170$$

Result of test for iglspanels(heteroskedastic)(model 2)

Iteration 1: tolerance = .07152456

Iteration 2: tolerance = .07654954

Iteration 3: tolerance = .0543058

Iteration 4: tolerance = .0419741

Iteration 5: tolerance = .04152169

Iteration 6: tolerance = .04253455

Iteration 7: tolerance = .05339696

Iteration 8: tolerance = .06813145

Iteration 9: tolerance = .08617492

Iteration 10: tolerance = .09700394

Iteration 11: tolerance = .08076475

Iteration 12: tolerance = .04227324

Iteration 13: tolerance = .01433297

Iteration 14: tolerance = .00384506

Iteration 15: tolerance = .00095242

Iteration 16: tolerance = .00023091

Iteration 17: tolerance = .00005569

Iteration 18: tolerance = .00001341

Iteration 19: tolerance = 3.230e-06

Iteration 20: tolerance = 7.776e-07

Iteration 21: tolerance = 1.872e-07

Iteration 22: tolerance = 4.507e-08

Result of Cross-sectional time-series FGLS regression (model 2)

Cross-sectional time-series FGLS regression

Coefficients: generalized least squares

Panels: heteroskedastic

Correlation: no autocorrelation

Estimated covariances = 2 Number of obs = 30
 Estimated autocorrelations = 0 Number of groups = 2
 Estimated coefficients = 6 Time periods = 15
 Wald chi2(5) = 3777.75
 Log likelihood = -43.2291 Prob> chi2 = 0.0000

LFF	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
COBS	-.0116116	.0070307	-1.65	0.099	-.0253916	.0021683
TRSB	.0158501	.0053784	2.95	0.003	.0053086	.0263915
SESF	.1498492	.0082106	18.25	0.000	.1337568	.1659416
DCP	.1363142	.0371107	3.67	0.000	.0635786	.2090498
WBLI	-.0187909	.0347443	-0.54	0.589	-.0868885	.0493066
_cons	13.1135	1.377921	9.52	0.000	10.41283	15.81418

“Religious Sentiment in Banking Sector: Relation with Customer Switchover to Islamic Banking”

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Abstract

The purpose of this study is to evaluate religious sentiment for which customer switchover from Commercial bank to Islamic bank. To find out what people search their banking activities through Islamic banking is the main objective of this study. This study is quantitative in nature. The statistical population consists some customers of Islamic Banks in Dhaka city whose age from 25 to 65 years & income per month from tk 10000 to above. A sample of 100 customers was selected by using stratified sampling method. The data were collected by using Likert Scale (5 item scale) through 22 standard questionnaires. Data analysis was done through Correlation test & R^2 of Regression model. Here also use SPSS software for analyzing this data set. The finding of this research showed that Religious concern about interest, Conceptual dilemma in proper investment & selection, Policy of profit & loss sharing, Customers loyalty towards Islamic banking have positive relationship with Customer switchover to Islamic banking. Finally this study will assist Conventional bank to enhance their understanding about employee service quality to the response to their work climate & also based on customer religious expectation.

Keywords: Customer, Islamic Bank, Conventional Bank, Interest Rate, Religion.

1. Introduction

The Muslim population in Bangladesh was over 146 million in 2011, which makes up 90% percent of the population in the country. The Constitution of Bangladesh declares Islam as the state religion and is the fourth-largest Muslim-populated country (Official Census Results 2011).

A significant portion of the population is demanding interest free banking for quite a long time. In august 1974, Bangladesh signed the charter of Islamic development bank and committed itself to recognize its economic and financial system as per Islamic Shari'ah. According to the Bangladesh bank, the central bank of the country, the total deposits of the Islamic banks and Islamic banking branches of the conventional banks stood at 265.4 billion (\$3.79 billion)at the end of June 2011.

This was 23.6% of the deposits of all private commercial banks and 14.3% of the deposits of the total banking system, total investment of the Islamic banks and the Islamic banking branches stood at tk. 286.5 billion (\$4.09 billion) at the end of 2012. This was 26.9 % of all private banks and 17.2 % of the total banking system of the country. The remarkable shifting or conversion of the conventional banks and their branches into the Islamic lines signals high acceptance of the interest-free banking by the public in general.

The Islamic banking industry continued to show strong growth since its inception in 1983 in line with the growth of the economy, as reflected by the increased market share of the Islamic banking industry in terms of assets, financial and deposits of the total banking system. Since there are no profit and losses bearing securities in Bangladesh, Islamic banks have been allowed to maintain their statutory liquidity requirement (SLR) with Bangladesh bank at the rate of 10% (recently made 11%) of their total deposit liabilities, whereas the requirement is 18% (recently made 19%) for conventional banks in Bangladesh.

Islamic banks like all banks are in the business of the management of money. The banks perform a socially useful function in transferring financial resources. Islamic bank give the profit. Actually, as religious sentiment people in our country believe

that they have to do better & positive activities by their income. While they deposit, invest, loan through the non Islamic commercial bank, they have to face some factor those are prohibited by Islamic rules and regulations. This study focuses on to find out main reasons to switch over customer towards the Islamic banking.

2. Objectives of the study

1. To find out the reason of customer switchover from commercial bank to Islamic bank.
2. To know out for what people search their banking service or activities through Islamic Banking.
3. To test whether religious concern about interest, conceptual dilemma of proper investment, the policy of loss-profit sharing & customer loyalty have any relationship with customer.

3. Literature review

Islamic banking stands for the use of money as a medium of exchange. Conventional banking, on the other hand, emphasizes the need for maintaining liquidity and hence requires an adequate amount of reserves. The basic principle of Islamic banking being PLS (Profit-Loss sharing) based financing and thereby having been exposed to increased risk; it would conceivably require higher liquidity and reserves. The reason is that its investment in assets has by nature lesser divisibility and reversibility. This means that reserve ratios for interest-free banking are to be calculated on the basis of risk calculation in various forms of investment.

Theoretical models of financial intermediation suggest that the principal-agent relationship affect the banks' activities that include screening and monitoring entrepreneurs (Stiglitz and Weis, 1981; Thakor and Lavack, 2003) and allocation of capital (King and Levine, 1993).

Abul Hassan (1997) an article Perspectives on Islamic Banking was indeed very interesting in making the common man aware of the facets of Islamic Banking. In this study it necessary to extend his view points from the corpus of present day economic development since no afford to lose sight of the current realities while dealing with

this important subject.

Paul Samuelson says that at the zero rate of interest, if we could ever quite reach this point on the horizon, the plateau of consumption would be as high as technically possible (Bokare, 1997). With the given labor, land and primary resources, it would be a kind of Golden age. Interest will on its own disappear if the downward trend of prices through ‘free-competition’ is administered by the state. Optimum production out of optimum employment, including self-employment, will engender abundant supplies of goods, services and capital resulting in the falling prices as secular trend in a competitive economy.

It is therefore requested that the Islamic countries should first establish free competition in the state in its true sense and enjoy benefits of interest-free banking instead of going through the process of interest-free banking as state programmed. The findings of this study show that there is positive relationship between prohibition of interest in Islam and customer switchover to Islamic banking system.

Economist Paul Krugman described moral hazard as “any situation in which one person makes the decision about how much risk to take, while someone else bears the cost if things go badly” (<https://www.indianeconomy.net/>, May 20, 2015. What is moral hazard problem?). Lending institutions need to take risks by making loans, and usually the most risky loans have the potential for making the highest return.

According to the Qur’an, *riba* is immoral, because it breaks the bonds of natural relationship between human beings, leads to iniquity between borrower and lender, enables the rich to continue to dominate the poor and inevitably leads to social unrest, (Akbar et al, 2010). The profit and loss sharing (PLS) as one of the modes of finance in Islamic banking, offers a difference concept in the banking system.

PLS is a contractual arrangement between two or more transacting parties, which allows them to pool their resources to invest in a project to share in profit and loss, (Abdul Qawi and Lynn, 2001). By contrast, under conventional banking, the investor is assured a predetermined rate of interest. In conventional banking, all risk is borne by entrepreneur and whether the project succeeds or not, the owner of capital gets

away with a predetermined return.

The role and functions of the banking system in a contemporary economy is of great significance to the development process and thus, it is often considered as the heart of every prosperous economy, (Mustafa et al. 2003). Islamic banking also has spread all over the world with wide acceptance received by both Muslims and non-Muslims, (Yvonne et al. 2011).

The customer perception is often identified by their level of satisfaction towards particular products or services. (Erol and El-Bdour, 1989) said “the most important criteria by customers while selecting Islamic Banks were the provision of fast and efficient services, banks reputation and image, and confidentiality.” (Hunnayan & Abdullah, 2016) have found out three important criteria perceived by Muslims in selecting Islamic banks which is provision of fast and efficient service, the speed of transaction, and the friendly bank personnel.

There are also other factors influencing consumer’s perception towards choosing banks. (Gerrerd and Cunningham, 1997) considered “parking space” and “interior facilities” as important issues related to customer satisfaction. (Jamal & Naser, 2003) said “among the most important service features used to measure customer satisfaction are convenience, competitiveness and location of service provider”. Outside of banking service this paper focus to find out some religious factors for which customer want to go to the Islamic bank from conventional bank.

CONCEPTUAL FRAMEWORK

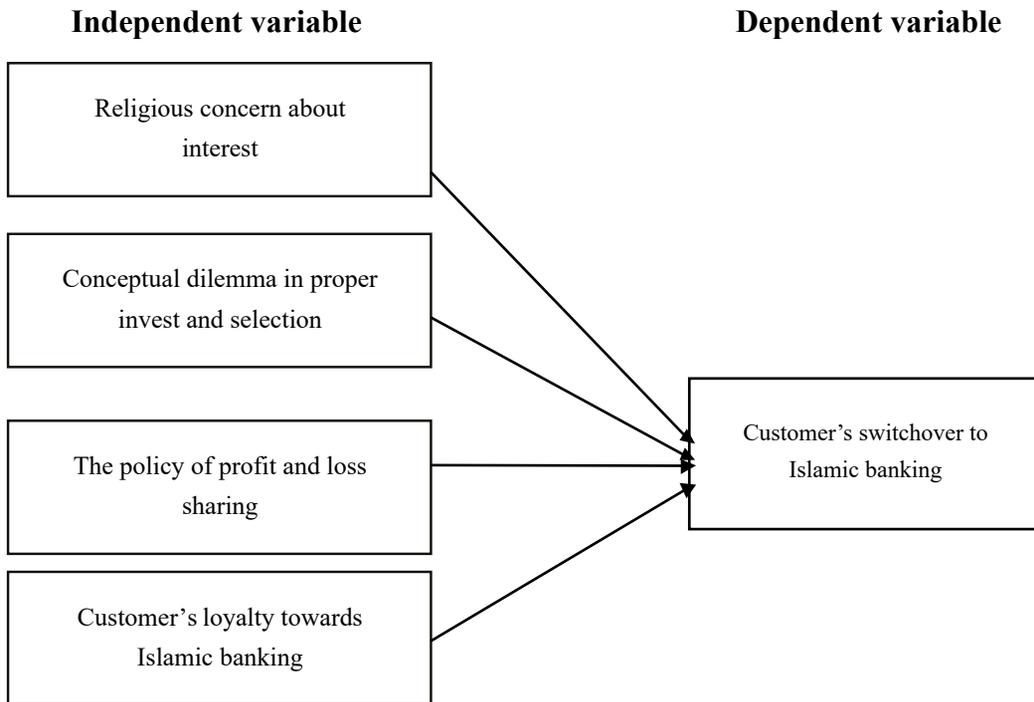


Figure 1. Conceptual framework of the study

This conceptual framework developed on the basis of evidence available in the above mentioned literature .Here dependent variable is customer's switchover to Islamic banking and independent variables are religion concern about interest, conceptual dilemma in proper investment, policy of loss-profit sharing and customer's loyalty towards Islamic banking. In this study research questionnaires have been created based on these independent variables because these four independent variables influence a customer to move towards Islamic banking.

4. Hypothesis

H₁ : There is significantly positive relationship between prohibition of interest in Islam and customer switchover to Islamic banking system.

H₁₀ : There is significantly negative relationship between prohibition of interest in

Islam and customer switchover to Islamic banking system

H2 : There is significantly positive relationship between the tendency of the customers to avoid conceptual dilemma, investment and switchover to Islamic banking system.

H₂₀: There is significantly negative relationship between the tendency of the customers to avoid conceptual dilemma, investment and switchover to Islamic banking system.

H3 : There is significantly positive relationship between the provision of giving interest free loan by the banks to the needy people, profit or loss sharing and customer switchover to Islamic banking system.

H₃₀ : There is significantly negative relationship between the provision of giving interest free loan by the banks to the needy people, profit or loss sharing and customer switchover to Islamic banking system.

H4 : There is significantly positive relationship between the customer loyalty towards Islamic banking and switchover to Islamic banking system.

H₄₀ : There is significantly negative relationship between the customer loyalty towards Islamic banking and switchover to Islamic banking system.

5. Methodology

In this study data analysis was done by using correlation test & R² of regression model. For correlation test set four hypotheses to show the relationship between the four independent variables with one dependent variable. Here, I also use SPSS software for analyzing this data set.

5.1 Sample

The reason for using stratified sampling method is it divides the population in to subpopulation or strata and then use simple random for each stratum. For this kind of study here need to control the sample size. So the sample size of this research was 100 respondents.

5.2 Instruments

The questionnaire consists of 22 questions excluding demographic questions. Here use 5 variables which are Customer switchover to Islamic banking, Religious concern about interest, and Conceptual dilemma in proper invest and selection, the policy of profit and loss sharing and Customers loyalty towards Islamic banking. Under these variables numbers of questions have been followed:

1. Customer switchover to Islamic banking: 3
2. Religious concern about interest: 4
3. Conceptual dilemma in proper invests and selection: 5
4. The policy of Profit and loss sharing: 4
5. Customers loyalty towards Islamic banking: 6

The scale of this study is- Strongly disagree, Disagree, Neither disagree or agree, Agree and Strongly Agree.

The demographic questionnaire includes information like Gender, Age and income per month.

5.3 Data Collection

In this research primary data was collected by using survey method by distributing questionnaires among the different consumer and have been given different answers. Primary data was taken from their answers.

6. Analysis & Findings

6.1 Reliability analysis

The questions of customer's switchover to Islamic banking, conceptual dilemma in proper invest and selection and customer's loyalty towards Islamic banking are reliable due to their Cronbach's Alpha .676, .656, and .993. This value is considered as strong or desirable. Because we know that a general accepted rule is that α of 0.6-0.7 indicates an acceptable level of reliability, and 0.8 or greater a very good level.

The questions of religious concern about interest and the policy of profit and loss sharing are not reliable due to their Cronbach's Alpha is .021 and .399.

6.2 Correlation Analysis

Correlation analysis was conducted on all variables to explore the relationship between measured variables. The guideline suggested by Rowntree (1981) was followed. His classification of the correlation coefficient is as follows:

0.00 to 0.2 Very weak, negligible

0.2 to 0.4 Weak, Low

0.4 to 0.7 Moderate

0.7 to 0.9 strong, high marked

0.9 to 1.0 Very strong, very high

The bivariate correlation procedure was subject to a two tailed of statistical significance at two different levels highly significant ($p < .01$) and significant ($p < .05$).

6.3 Hypothesis Testing

H1

There is Positive relationship between "Customer's switchover to Islamic banking" & value of "religious concern about interest". Because the value of $P = .198$ and the alpha .263 which is bigger than .05.

H2

There is positive relationship between "Customer's switchover to Islamic banking" & value of "conceptual dilemma in proper invest and selection". Because the value of $P = .130$ and the alpha .089 which is bigger than .05.

H3

There is positive relationship between "Customer's switchover to Islamic banking"

& “The policy of Profit and loss sharing”. Because the value of P= .020 and the alpha .143 which is bigger than .05.

H4

There is positive relationship between “Customer’s switchover to Islamic banking” & value of “Customers loyalty towards Islamic banking”. Because the value of P= 1.00** and the alpha .1.00** which is bigger than .05.

6.4 Regression Analysis

Linear regression analysis estimates the coefficients of a linear equation, involving one or more independent variables (that best predict the value of the dependent variable).

R - R is the square root of R-Squared and is the correlation between the observed and predicted values of dependent variable. R-Square - This is the proportion of variance in the dependent variable which can be explained by the independent variables. Adjusted R-square - This is an adjustment of the R-squared that penalizes the addition of extraneous predictors to the model. Adjusted R-squared is computed using the formula $1 - ((1 - R_{sq}) ((N - 1) / (N - k - 1)))$ where k is the number of predictors.

	1.	2.	3.	4.
	<p>D = Customer’s switchover to Islamic Banking</p> <p>I= Religious concern about interest</p>	<p>D = Customer’s switchover to Islamic Banking</p> <p>I= Conceptual dilemma in proper invest and selection</p>	<p>D = Customer’s switchover to Islamic Banking</p> <p>I= The policy of profit and loss Sharing</p>	<p>D = Customer’s switchover to Islamic Banking</p> <p>I= Customer’s loyalty towards Islamic Banking</p>
Regression	<p>R=0.198</p> <p>R²=0.039</p>	<p>R=0.130</p> <p>R²=0.017</p>	<p>R=0.201</p> <p>R²=0.020</p>	<p>R=0.160</p> <p>R²=0.013</p>

1. From the table, R value is 0.198^a.”R-Square” tell us that 3.9% of the dependent variable (Customer’s switchover to Islamic Banking) is explained

- by independent variables (Religious concern about interest).
2. From the table, R value is 0.130^a. "R-Square" tell us that 1.7% of the dependent variable (Customer's switchover to Islamic Banking) is explained by independent variables (Conceptual dilemma in proper invest and selection).
 3. From the table, R value is 0.201^a. "R-Square" tell us that 2.0% of the dependent variable (Customer's switchover to Islamic Banking) is explained by independent variables (The policy of profit and loss Sharing).
 4. From the table, R value is 0.160^a. "R-Square" tell us that 1.3% of the dependent variable (Customer's switchover to Islamic Banking) is explained by independent variables (Customer's loyalty towards Islamic banking).

7. Significance of this study

This study is significant for the following reasons: -

The findings of this research effort may have practical implications for service providers that strive to organize their service offerings in order to accomplish their corporate objectives.

- The study will help or assist companies to enhance their understanding about sentiment of customer and actual employee service quality to the response to their work climate, so it will be easy for the companies to make decision regarding internal marketing.
- This research may encourage further study and provide useful guidelines for these types of researches.

8. Conclusion

This study has exposed that customer turned to Islamic bank from commercial bank significantly owing to customer's religious sentiment. It is worth mentioning here that customer switchover to Islamic bank based of their religious concern about interest, conceptual dilemma in proper investment, policy of loss profit sharing and customer's loyalty towards Islamic banking. The result of this study also found that conceptual dilemma in proper investment and loyalty towards Islamic banking are most influential about this turnover to Islamic banking followed by religious concern

of interest and loss profit sharing policy. Finally Islamic banks are really doing well compare to conventional banks. People feel safe to make transaction with the Islamic banks and those who are more concern about the religious factors like halal or haram they are more interested to open account in the Islamic banks. This is caused by the fact that in Islam, taking interest is strictly prohibited.

9. Limitations & further research direction

Although the present study contributes significantly to literature, it has some limitations. The limitation of the study was that a very small sample size as well as a confined geographical area; therefore it is difficult to generalize the results of the study. So if the sample size and area of study is increased then the result will be more significant and accurate. There might be some sampling error because of convenience sampling process. Some of the respondent did not properly answer the questions due to language barrier. They had problem with understanding research word.

However the future study, customer from other city are more encourage to be involved and other more specific variable (such as - religious banking environment, satisfaction of particular product & service) may be considered to explain that customer move forward to Islamic banking system from commercial bank. This paper also helps to further research about customer satisfaction on Islamic banking.

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APPENDIX - 1

Research Questionnaire

Questionnaire

Personal information

1. Gender: Male
 Female

2. Age: 25-35
 35-45
 45-55
 55-65

3. Income per month:

10000-20000 TK
 21000-30000 TK
 31000-400000 TK
 41000-and above

1	Strongly Disagree	4	Agree
2	Disagree	5	Strongly Agree
3	Neither Disagree or Agree		

Please circle the answer, which most clearly responses to your thinking

Customer switchover to Islamic banking:_____

1	Customer service staffs are always courteous with customers.	1	2	3	4	5
2	People feel safe in the transaction with the Islamic bank.	1	2	3	4	5
3	When the Islamic bank promises to do something by certain time, it does do.	1	2	3	4	5

Religious concern about interest:_____

4	Banking system provides interest against deposit is doing better in Islamic sentiments.	1	2	3	4	5
5	Products are lunched through banking should be apart from interest that is prohibited in Islam.	1	2	3	4	5
6	Alternatives of interest (Riba) are positively accepted through Islamic regulations.	1	2	3	4	5
7	Taking interest is not preferred in Islam.	1	2	3	4	5

Conceptual dilemma in proper invests and selection: _____

8	“It is believed that people to make deposit in Islamic banking, it is accepted to use that money for Islamic activities purely.”	1	2	3	4	5
9	People invest in deposit to those sectors that are beneficiary for the people in accordance with Islam.	1	2	3	4	5
10	Loans are issued by Islamic commercial bank to those sectors are accepted by Islam.	1	2	3	4	5
11	Through the Islamic banking, investments are more safety than other non-Islamic bank.	1	2	3	4	5
12	The Islamic bank tells me exactly when services will be performed.	1	2	3	4	5

The policy of Profit and loss sharing: _____

13	People like to take types of loan from bank to which profit and loss would be shared by lender and borrowers.	1	2	3	4	5
14	In Islamic banking there is no interest rate for loan, that's why it is helpful for needy people.	1	2	3	4	5
15	Quard-e-hasan or interest free loan is provided to the poor and needy student through Islamic banking to follow the Islamic sentiment.	1	2	3	4	5
16	I believe that I can trust my current Islamic bank because the company will not try to cheat me.	1	2	3	4	5

Customer's loyalty towards Islamic banking: _____

17	Using the Islamic bank enhances my self-confidence.	1	2	3	4	5
18	My Islamic bank has the overall capabilities that I need.	1	2	3	4	5
19	My choice to use this Islamic bank was a wise one.	1	2	3	4	5
20	Using this Islamic bank has been a good experience.	1	2	3	4	5
21	I feel that I can rely on my current Islamic bank services to serve me well.	1	2	3	4	5
22	I am satisfied with this Islamic bank.	1	2	3	4	5

APPENDIX - 2**SPSS output****Descriptive analysis****gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	M	16	53.3	53.3	53.3
	F	14	46.7	46.7	100.0
	Total	30	100.0	100.0	

age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25-35	10	33.3	33.3	33.3
	36-45	13	43.3	43.3	76.7
	46-55	6	20.0	20.0	96.7
	56-65	1	3.3	3.3	100.0
	Total	30	100.0	100.0	
income per month					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10000-20000	2	6.7	6.7	6.7
	21000-30000	9	30.0	30.0	36.7
	31000-40000	11	36.7	36.7	73.3
	41000-50000	8	26.7	26.7	100.0
	Total	30	100.0	100.0	

Hypothesis testing & analysis

Customer switchover to Islamic banking:

Reliability Statistics

Cronbach's Alpha	N of Items
.676	3

Religious concern about interest:

Reliability Statistics

Cronbach's Alpha	N of Items
.021	3

Conceptual dilemma in proper invest and selection:

Reliability Statistics

Cronbach's Alpha	N of Items
.656	5

The policy of profit and loss sharing:

Reliability Statistics

Cronbach's Alpha	N of Items
.399	4

Customer's loyalty towards Islamic banking:

Reliability Statistics

Cronbach's Alpha	N of Items
.993	6

Correlation analysis

Correlations

		customers switchover to Islamic banking	religious concern about interest
customers switchover to Islamic banking	Pearson Correlation	1	.198
	Sig. (2-tailed)		.295
	N	30	30
religious concern about interest	Pearson Correlation	.198	1
	Sig. (2-tailed)	.295	
	N	30	30

Correlations

			customers switchover to Islamic banking	religious concern about interest
Spearman's rho	customers switchover to Islamic banking	Correlation Coefficient	1.000	.263
		Sig. (2-tailed)	.	.161
		N	30	30
	religious concern about interest	Correlation Coefficient	.263	1.000
		Sig. (2-tailed)	.161	.
		N	30	30

Correlations

		customers switchover to Islamic banking	conceptual dilemma in proper invests and selection
customers switchover to Islamic banking	Pearson Correlation	1	.130
	Sig. (2-tailed)		.495
	N	30	30
conceptual dilemma in proper invests and selection	Pearson Correlation	.130	1
	Sig. (2-tailed)	.495	
	N	30	30

Correlations

			customers switchover to Islamic banking	conceptual dilemma in proper invests and selection
Spearman's rho	customers switchover to Islamic banking	Correlation Coefficient	1.000	.089
		Sig. (2-tailed)	.	.641
		N	30	30
	conceptual dilemma in proper invests and selection	Correlation Coefficient	.089	1.000
		Sig. (2-tailed)	.641	.
		N	30	30

Correlations

		customers switchover to Islamic banking	the policy profit and loss sharing
customers switchover to Islamic banking	Pearson Correlation	1	.020
	Sig. (2-tailed)		.915
	N	30	30
the policy profit and loss sharing	Pearson Correlation	.020	1
	Sig. (2-tailed)	.915	
	N	30	30

Correlations

			customers switchover to Islamic banking	the policy profit and loss sharing
Spearman's rho	customers switchover to Islamic banking	Correlation Coefficient	1.000	.143
		Sig. (2-tailed)	.	.451
		N	30	30
	the policy profit and loss sharing	Correlation Coefficient	.143	1.000
		Sig. (2-tailed)	.451	.
		N	30	30

Correlations

		customers switchover to Islamic banking	customers loyalty towards islamic banking
customers switchover to Islamic banking	Pearson Correlation	1	1.000**
	Sig. (2-tailed)		.000
	N	30	30
customers loyalty towards Islamic banking	Pearson Correlation	1.000**	1
	Sig. (2-tailed)	.000	
	N	30	30

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

Correlations

			customers switchover to Islamic banking	customers loyalty towards islamic banking
Spearman's rho	customers switchover to Islamic banking	Correlation Coefficient	1.000	1.000**
		Sig. (2-tailed)	.	.
		N	30	30
	customers loyalty towards Islamic banking	Correlation Coefficient	1.000**	1.000
		Sig. (2-tailed)	.	.
		N	30	30

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

Regression analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.198 ^a	.039	.005	2.12405

a. Predictors: (Constant), religious concern about interest

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta			
1	(Constant)	21.634	3.053		7.087	.000
	religious concern about interest	.251	.235	.198	1.068	.295

a. Dependent Variable: customers switchover to Islamic banking

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.130 ^a	.017	-.018	2.14858

a. Predictors: (Constant), conceptual dilemma in proper invests and selection

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta			
1	(Constant)	22.136	3.968		5.578	.000
	conceptual dilemma in proper invests and selection	.174	.252	.130	.692	.495

a. Dependent Variable: customers switchover to Islamic banking

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.201 ^a	.020	-.035	2.16640

a. Predictors: (Constant), the policy profit and loss sharing

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	Std. Error	Beta			
B (Constant)	24.443	3.969		6.158	.000
1 the policy profit and loss sharing	.021	.194	.020	.107	.915

a. Dependent Variable: customers switchover to Islamic banking

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.160 ^a	.013	-.035	2.16656

a. Predictors: (Constant), customers loyalty towards Islamic banking

Coefficients^a

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	
					Std. Error
B (Constant)	25.140	3.177		7.913	.000
1 customers loyalty towards islamic banking	-.018	.203	-.016	-.087	.932

a. Dependent Variable: customers switchover to Islamic banking

“Universities’ Social Responsibility (USR) & Sustainability: Lessons from Higher Education Institutions (HEIs) in Bangladesh”

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Abstract

Universities are increasingly regarded as playing a broader role rather than fulfilling the responsibility of educating youth and developing knowledge. In 1998, a conference organized by UNESCO in Paris, highlighted that social responsibility is increasingly considered an intrinsic aspect of the higher education system, particularly of the universities. This issue is also included in policy statement of International Association of Universities (IAU, a membership-led non-governmental organization working in the field of higher education). Further, University Social Responsibility Alliance was also established in 2008 in San Francisco, for the development of USR in higher education level. In this rapidly changing environment the universities require to engage more in contributing to the betterment of society. However, the social practices of universities seem to be more voluntary-based which is still unexplored. It becomes urgent to reflect upon the role of Higher Education Institutions (HEIs) in the contemporary society. This study examines as to what extent the private universities in Bangladesh are committed to their social responsibilities.

This study uses qualitative technique and the data were collected through multiple methods like Panel Discussion, Direct Observation and Content Analysis. The study reveals that the most of the universities did not have clear guidelines and policies regarding USR & Sustainability. The findings also suggested that universities need to engage more in contributing to the betterment of society through the integration of social responsibility into their policies, institutional management, teaching, research, services and public activities.

Key words: Universities' Social Responsibility (USR), Sustainability, Higher Education Institutions (HEIs) in Bangladesh

1. INTRODUCTION:

Social responsibility is no longer confined to charitable or voluntary activity. It is in fact a broader and comprehensive concept, giving more contribution to organizations in sustainable development. Universities are increasingly regarded as playing a broader role rather than fulfilling the responsibility of educating youth and developing knowledge. In this rapidly changing environment the universities require to engage more in contributing to the betterment of society through the integration of social responsibility into institutional management, teaching, research, services and public activities.

However, the social practices of universities seem to be more voluntary-based which is still unexplored. It becomes urgent to reflect upon the role of Higher education institute (HEI) in the contemporary society. This leads authors to gain a better understanding about conceptual framework of USR and its effective role in achieving sustainable development.

2. CURRENT SCENARIO OF PRIVATE UNIVERSITIES IN BANGLADESH:

- The birth of private universities in Bangladesh has passed more than three decades. Now their existence is a visual reality with significantly successful stories in most of the cases and with the comparison of performance of our public universities.
- Now private universities are not a substitute for the public ones and they stand by

their own credentials.

- At the initial stage students opted for private universities in case of their failure to get enrolled in public universities but things have changed now proving the growing significance and standard of private universities.
- But, unfortunately most of the private universities have failed to provide the students with quality education and are not complying with Private University Act 2010 properly.

This study will zero in on the existing URS&S practices in private universities.

3. DEFINITION OF USR & ITS SCOPE:

The origin of USR (University social responsibility) concept has derived from Corporate Social Responsibility (CSR) literature. The importance of this concept has recognized by many international establishments. In 1998, a conference organized by **UNESCO** in Paris, highlighted that social responsibility is increasingly considered an intrinsic aspect of the higher education system, particularly of the universities.

This issue is also included in policy statement of International Association of Universities (IAU, a membership-led non-governmental organization working in the field of higher education). University Social Responsibility Alliance was established in 2008 in San Francisco, USA for the development of USR in higher education.

In defining USR, **Reiser, J., (2007)**, concentrates on the university management's impacts, saying that it is "a policy of ethical quality of the performance of the university community (students, faculty, and administrative employees) via the responsible management of the education, cognitive, labor and environmental impacts produced by the University, in an interactive dialog with society to promote a Sustainable Human Development".

This while **Vasilescu, et al. (2010)**, defines USR from the citizenship perspective, as "the need to strengthen civic commitment and active citizenship; it is about volunteering, about an ethical approach, developing a sense of civil citizenship by encouraging the students, the academic staff to provide social services to their local

community or to promote ecological environmental commitment for local and global sustainable development. But, the clearest definition of USR one may consider is the one proposed by **Harkavy (2006)** in the very beginning: “the socially responsible University is expected to be oriented towards actions and values that emphasize that it gives something back to society beyond its traditional outputs of education and research responsibilities”

4. LITERATURE REVIEW ON UNIVERSITIES’ SOCIAL RESPONSIBILITY FRAMEWORK:

Vallaey et al. (2009) emphasizes that universities create four different types of impact in their stakeholders: organizational, educational, cognitive, and societal.

Organizational impacts are about the way universities manage their daily operations in the campus with transparency and equity (including but not limited to work climate, student life, environment, suppliers, and all aspects concerning energy, waste, and safety).

Educational impacts refer to the curriculum design which includes ethical and social responsibility topics and projects.

Cognitive impacts that concern with building and producing knowledge, consolidating the relationship between technological and social context of science and the society.

And finally, **Social impacts** that concern with affecting society through fostering progress, building social capital, and preparing students for real world.

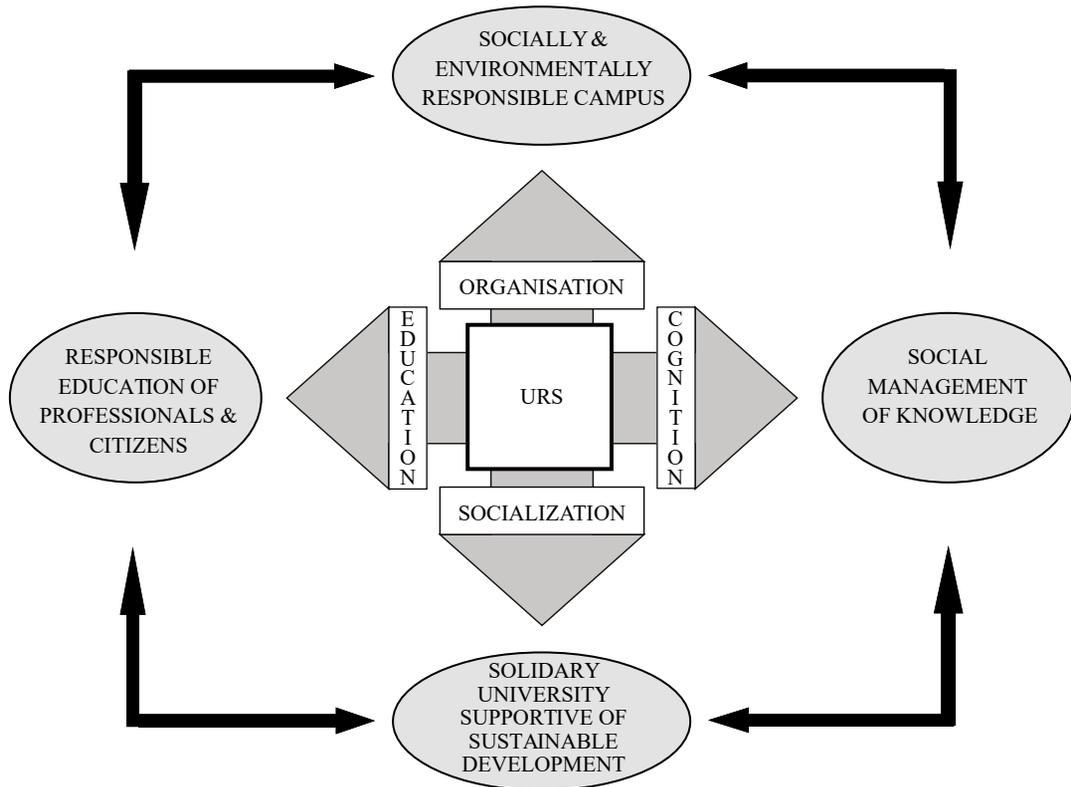


Figure-1: Valleay's Model of University Social Responsibility

In defining USR, **DomínguezPachon, (2009)**, emphasized a set of general principles and specific values, using 4 key processes: Management, Teaching, Research and Extension, through the provision of educational services and transfer knowledge following ethical principles, good governance, respect for the environment, social engagement and the promotion of values. The University has a direct impact on the future of the world for the training of professionals and leaders, but it is also a social actor, which can promote the education of students in accordance with the external social reality, and make knowledge accessible to all.

The practice of university social responsibility has also caught the attention of the Asian regions. The Association of Southeast Asian Nations (ASEAN) University Network (AUN, 2012) proposed an AUN University Social Responsibility and Sustainability conceptual framework with the following major components:

- (1) teaching and learning, research and academic services,
- (2) university's governance and administration,
- (3) community involvement, and
- (4) campus life in order to promote USR practice and address the social, economic, and environmental challenges facing in ASEAN Community.

Moreover, USR was founded in 2008 in Thailand to address from a level of true sincerity and friendship in order to fulfill the following, (1) bridging communities, (2) goodwill commitment and (3) sharing beyond border (Pookyaporn, 2011). Pookyaporn explained the common problems in the Thai context for USR practice includes: the environment, sufficient living conditions, mutual respect, integrity, gratitude, and true companionship.

The University of Manchester (2014) presents their strategy for social responsibility that includes commitments to pursue change across the priority areas: Research with Impact, Socially-Responsible Graduates, Engaging our Communities, Responsible Processes, and Environmental Sustainability. As a vision for the future, in 2011 they published the Strategic Plan for The University of Manchester (Manchester, 2020), a plan based on three core goals: academic values, research and social responsibility.

In alignment with the current bottom line for sustainable development, current research (Chen, 2015) has extended the framework to more dimensions based on the synthesis components of existing literature review. The USR components include social, sub-social, cognitive, organizational, philanthropic, economic, ethic, environmental, and educational (SCOPE).

Furthermore, Nejati, Shafaei, Salamzadeh, and Daraei (2011) stated that the top ten world leading universities have all taken social responsibility seriously in line with common CSR practices on their websites including the following areas:

1. organizational governance (accountability, transparency, providing facts and figures);
2. human rights (diversity);
3. labor practices (employment benefit and compensation, leaning and development, providing healthy work and life balance);
4. the environment (preserving the environment and offering specific academic program);

5. fair operating practices (responsible involvement with the public and promoting social responsibility);
6. student issues (providing sufficient information for current and prospective students); and
7. community involvement and development (providing grants for community projects, and providing funding and support to generate and preserve affordable housing).

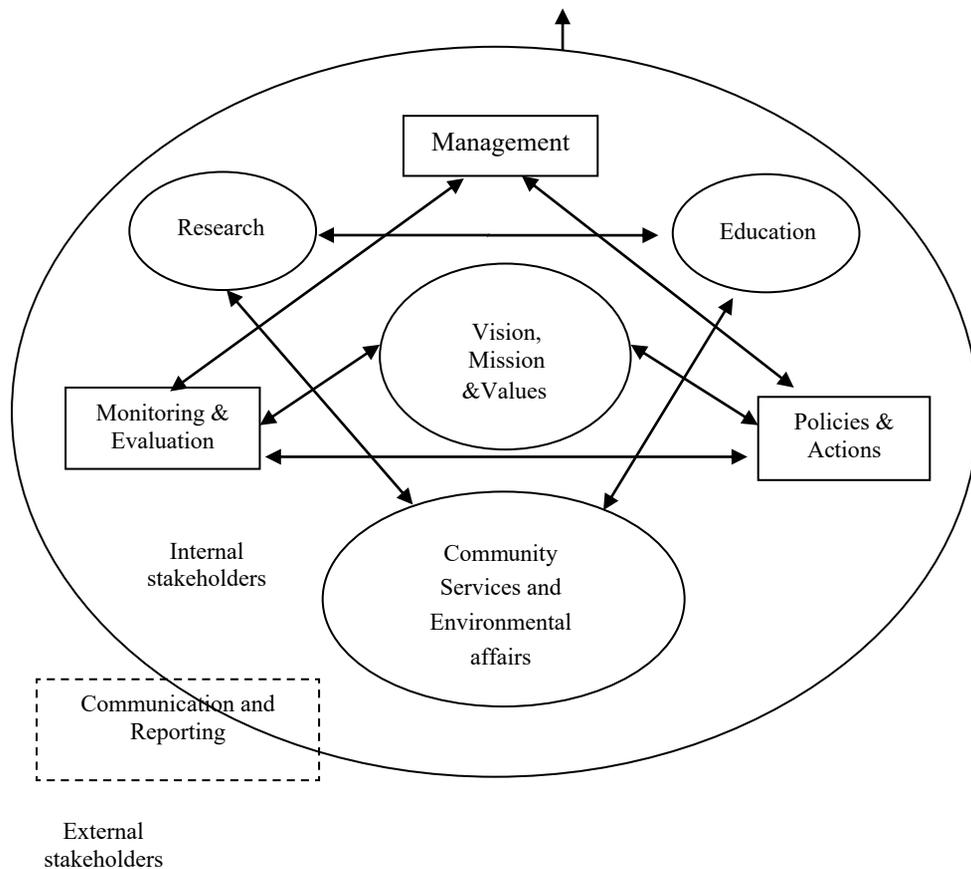


Figure-2: A framework of University Social Responsibility and Sustainability

Mohamed, Alaa Tag Eldin, (2015) proposed a conceptual framework of University Social Responsibility and sustainability. The proposed framework integrated social responsibility with strategic management through the establishment and maintenance of the vision, mission, values, goals and management systems; elaboration of

policies; provision of actions; evaluation of services and development of social collaboration with stakeholders to meet current and future needs of the community and environment.

5. FIVE INTEGRAL PARTS OF USR & S: (CONCEPTUAL FRAMEWORK)

USR & S recognizes a whole institution approach making those connections between research, teaching& learning and operations.

<p>Universities’ Governance:</p> <ul style="list-style-type: none"> • Vision & Mission • Policies • Strategic Planning • Institutionalization • Accreditation • Enforcing Private University Act 2010 • Accountability & Transparency (Providing facts and figures) 	<p>Teaching, Learning & Research:</p> <ul style="list-style-type: none"> • Curriculum, Content Design & Review • Academic Programs • Social Management of Knowledge • Research with impact • Research Project & funds • Socially responsible graduate
<p>Campus Life:</p> <ul style="list-style-type: none"> • Green University • Working conditions • Respect for Environment • Ecological habits • Supply chain • Waste Management / Circular Economy • Participation in Volunteer opportunities • Forums for social & environment purposes • Student Support Services 	<p>Climate Change:</p> <ul style="list-style-type: none"> • Strategy for climate change Mitigation & Adoption • Vision for Net Zero Carbon University • Reduction of Carbon emissions. • Supporting research project • Sustainable campus fund • Use of renewable sources for energy • Responsible Investment for sustainable development

<p>Stakeholders & Community Involvement:</p> <ul style="list-style-type: none"> • Internal Services Units • Academic freedom and an atmosphere of intellectual excitement • Faculty Learning & Development • Employee benefits & Compensation • Academic, Research and industry Collaboration • Community services • Communication & reporting 	
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MODEL OF UNIVERSITY SOCIAL RESPONSIBILITY & SUSTANIBILITY

6. STUDY OBJECTIVE & METHODOLOGY:

Research on USR & sustainability and its practices in the context of Bangladesh is at its very early stage. The objective of the study categorizes as: i) broad objective, ii) Specific objectives.

Broad Objective:

- To develop a conceptual framework for University Social Responsibility and Sustainability and its practice in Private university in Bangladesh.

Specific Objective

- To check international standard of USR & Sustainability practices in HEIs.
- To develop a conceptual framework for University Social Responsibility and Sustainability
- To what extent, the private universities in Bangladesh are committed to their social responsibilities.
- To provide recommendations for effective engagement in contributing to the betterment of society and its sustainability.

7. METHODOLOGY

- This study uses qualitative methods for generating primary data. Data are collected through multiple methods like In-Depth Personal Interview, Direct Observation, Panel Discussion and Content Analysis. One of the most suitable instruments to analyze contents of a website is content analysis. This study will also use a content analysis methodology to analyze the website of the 10 selective private universities in Bangladesh.
- Hence, 10 private universities are chosen, and 9 of them are from the list of “Top 20 Private Universities-2019” conducted by Org-Quest Research Ltd. in association with Dhaka Tribune and Bangla Tribune and the remaining one stands out of the list. All the interviewees (Director/Additional Director) are associated with the IQACs of the universities. A copy of Panel Discussion Questionnaire is

attached to appendix A.

- A conceptual framework prescribed earlier has been used to design Panel Discussion. The researchers chose the respondents / interviewees on the basis of proximity and availability.

8. SCOPE AND LIMITATION OF THE STUDY

- The total number of private universities in Bangladesh is 103, out of which 95 are officially functioning. This study only covers 10 selective universities in Dhaka City. The findings of this study provide valuable insights into the discussion over the practice of social responsibility in higher education in Bangladesh.

9. ANALYSIS & DISCUSSION

- Based on the conceptual framework, USR&S can be defined as a multidimensional approach that includes the establishment and maintenance of the vision, mission, values, goals, policies, strategies, and overall institutionalization. The integral parts USR&S includes: Universities' Governance; Teaching, Learning & Research; Campus Life; Climate Change; and Stakeholders & Community Involvement. The next part will focus on discussing and investigating the different dimensions of the proposed framework with application on private universities in Bangladesh.

Universities' Governance:

- Most of the university did not have well defined mission and objectives. During HEQEP they have written mission and objective. Some of the universities are found innovative because its vision & mission clearly addresses social issues and thus communicated to the stakeholders. One of the universities was found sharing their strategic planning document in their website.
- Vice-Chancellor, Board of Trustees (BOTs), syndicate and academic council are the powerful actors in the universities governance system. All the universities are found to have this system functioning. Few private university Vice Chancellors who are both academically and administratively sound are running the universities

efficiently.

- According to the private university Act 2010, institutions are bound to spend a major portion of their budget for carrying out research work. Private university bodies think that in a 100% private organization, there is no right to government representative to make any kind of representation.
- Very few of them are actively functioning to establish QA practices to meet the criteria for both national and international accreditation bodies. One of the universities has recently received an accreditation certificate named “**Accreditation Council for Business School and Programs**” (ACBSP) from the USA for 10 years without any conditions.
- Most of the universities lack adequate funds to implement social responsibility and solve environmental issues in campus. Very few universities have annual budget for their activities on further improvement.
- As for accountability and transparency, financial affairs in the most of the universities are found not accessible.

Teaching, Learning & Research:

- Most of the universities review their curriculum every 2/3 years, but they are yet to design outcome-based (OB) curriculum. In compliance with IEB (**The Institution of Engineers, Bangladesh**) accreditation few universities’ engineering departments (**Civil, EEE & CSE**) have managed to prepare **OB curriculum**. In the process of reviewing curriculum, eight universities have included an ‘**Industry Advisory Panel**’ comprising of minimum three professionals/experts. However, the universities also think of including the alumni as a major stakeholder in the process.
- Universities are mostly “teaching universities” that produce graduates for the job market in both public and private sectors. Since the private universities do not have UGC permission to run MPhil/PhD programs, they give just

professional degrees.

- Unfortunately, most of the universities' graduates are found to be lacking of global skills/soft skills, communication, leadership, critical thinking, team-building, problem-solving, time-management, self-esteem, empathy, resilience, integrity, sense of responsibility, self-motivation and so on. Some of them are related to personal competence and some are social competence. They are also called "life skills" which are much needed for the graduates to cope with the fast-changing society world.
- Research is an integral part of higher education because it makes teaching-learning effective and practice-oriented. Through research both the teachers and students can contribute to the sustainable development of the community/society as a whole. But, unfortunately research is seen as a neglected area in most of the universities. Within the universities, there is a distinct lack of interest in research and creating new knowledge. Very few universities have annual research fund for the faculties. One of the universities has "**Office of Research**" administered by a director, which offers internally & externally funded research projects annually in multi-disciplinary areas including Environmental science & management. This office also encourages faculties to publish articles in indexed journals (SCOPUS) and to attend international conferences/seminars. This division allocates funds annually. One of the interviewees claims that they have an '**Institute for Environment and Research & Development**' (IERD) that also offers funds to faculties for research and conferences. Another university has '**Center for Research & Training (CTR)**, which publishes Journal, multi-disciplinary research papers, Working Papers, and provides research facilities & grants as well as organizes knowledge sharing seminar. One of the universities has "**Institute for Advanced Research (IAR)**" establish in 2019, which awarded research grants for multidisciplinary Projects.

University Campus:

- Adequate physical facilities are an integral part of quality teaching-learning

activities in higher education institutions. The study finds that 8 out of 10 universities have established their permanent campuses, although most of them do not have playgrounds. Two universities are found well-equipped with IT facilities, and two of them lag behind, although the **IT integration** in teaching-learning activities plays a vital role nowadays.

- Students support services include academic counseling, extra-curricular activities, career & placement, alumni service and community services. The study finds that these services vary from university to university. Few universities regularly organize career fair, events for alumni, social activities as part of community services which enable the students to develop leadership & team-building skills.
- Through few studied universities have permanent campus; a lot of them do not have campus. Some universities already moved to their permanent campuses, but most of them have a plan to build and maintain a new purpose built, state-of-the-art green campus. This initiative will enhance the University spirit, thereby creating a healthy and positive environment for the students.
- One of the universities made a strategic movement as a “Green University” encourages their students, staff and faculty to work towards a pollution-free, carbon-neutral, eco-sustainable, and ‘go-green’ pioneer university campus.
- One of the Universities have Residential Semester (RS) that was unique among higher education experiences in Bangladesh. The program emphasizes on Creating a **strong sense of social responsibility** and an awareness of each others’ rights and responsibilities as members of society and citizens of a nation.
- A good number of universities have student services that cover Academic Advising, Co-curricular Activities and Career Services and Alumni Relations.
- Most of the universities carry out various social activities through different clubs and forums. The club activities include: Sports, language, Drama, Art &

Photography, debating, social welfare, sustainable development, anti-drugs etc.

- Some university has a policy of “Zero Tolerance” to sexual harassment of any kind.
- Students support services include academic counseling, extra-curricular activities, career & placement, alumni service and community services. The study finds that these services vary from university to university. Few universities regularly organize career fair, events for alumni, social activities as part of community services which enable the students to develop leadership & team-building skills.

Climate Change:

- It was observed that most of the universities have not taken the climate change issues seriously, rather a significant number of universities organize symposiums, conferences, and workshop to raise environmental awareness inside and outside campuses.
- The findings of study shows that none of the universities has clear policies or strategies regarding climate change. However, one of the universities has “Strategic-Plan-2017-2023” that sets targets to reduce energy consumption throughout the campus; reduce carbon emissions as a matter of urgency; reduce water consumption by harvesting rainwater; and increase recycling through a university wide plan of waste management.
- Most of the universities are facing a great deal of difficulties in finding external funds to support research projects related to climate change.
- Most of the universities do not have any departmental entity in the area of climate change. 2 out of 10 surveyed universities have Departments, namely “Department of Environmental science & Management”. Assessment of Physical Environment and Its impact on Human Health

- One of the universities has “***Centre for Climate Change and Environmental Research (C3ER)***” which has given special attention to research in the area of adverse impact of climate change on health, food security, poverty and livelihood, displacement and migration, loss and damage assessment, renewable energy, negotiation process, technology transfer, education and awareness, etc. Another university has “**Center for Sustainable Development (CSD)** support active research projects dealing with coastal eco-systems and climate change adaptation, climate change and migration, urban resilience, drought and land and forestry administration. One university has **IDSS (Institute of Development studies and sustainability)** specialize in organizing international conferences on sustainable developments.

Responsibility to Stakeholders & Community Involvement

- To understand the University’s stakeholders’ needs and fulfill these needs, universities should first identify these stakeholders. An analysis of the university in relation to internal and external stakeholders reveals that universities value their stakeholders (i.e. academic staff, students, non-academic staff, alumni and employers). Most of the universities have special unites, centers and facilities that serve students and faculties. Very few universities have students’ accommodation facilities and transport. None of the universities have faculty member accommodation, faculty clubs, Disables Centers or university recycling units.
- For effective governance, academic leadership/faculty freedom is very important. But unfortunately, the academic staff in most of the universities are to **encounter a sort of ‘regimented’ environment.**
- One of the universities has “**Professional Development Centre (PDC)** dedicated to promoting excellence in education through shared understanding and best practice. Another university had “**faculty development training**” under which some faculty members are nominated to go to conduct different courses (**Mevlana Scholarship, Erasmus Scholarship, Global Access Asia etc.**) at different

foreign universities, especially in Asia. Another one has got a “**Center for Excellence in Teaching & Learning**” (CETL) which holds trainings, seminars and workshops for faculties periodically. The study also finds a university having a two-week program called “**Improving Learning & Teaching Skills**” (ILTS) for newly recruited teachers. Another week-long program called “**Faculty Development Program**” for the new recruits (faculty) is also organized by IQAC of a particular university. Some university offer research grant for their faculties as a supportive environment in which researchers at every stage of their career can flourish.

- The study also finds that teachers at most private universities also lack other benefits enjoyed by staff at public universities, such as health insurance, pension schemes, holiday pay and funds to support research and scholarship – the latter inflicting long-term damage on careers, as well as undermining these institutions’ academic reputations.
- Although some research focus on issues related to various disciplines in the area of environment and social issues, there is a lack of connection between University and external stakeholders in industry and business sectors. Few universities have partnered with international academic and research institutions as well as government bodies. One of the universities has signed a MoU between the **Computer Science and Engineering Department** and **Grameen Phone** where such industry-academic collaboration will flourish.
- Higher education institutions are increasingly asked to be more responsive to the needs of community and to ensure that graduates are truly ready to face the challenges. The findings of the study raise concerns, stemming from lack of involvement in community services by the private universities in Bangladesh. Study findings show that recently, some universities organized a public awareness program to promote **the prevention of Dengue and Chikungunya**. One of the universities participated in “**Campaign for Sustainable Education by UNESCO Club**”. It was an event arranged to visit the rights-deprived and underprivileged children of Dhaka, who are part of the BRAC education program. External

stakeholders support and special funds of the university are mainly the sources of the current budget of community service and environmental affairs.

- The communication process will help in raising awareness across the University's stakeholders. As a result the concept of social responsibility and sustainability is gradually spread through the University and community. A moderate number of universities have formal communication campaign through social media, website, annual reports, leaflets, conferences and workshops etc. in raising awareness across the university's stakeholders such as business community, governmental and non-governmental organizations - resulted a gradual spread of social responsibility and sustainability through the university and community.
- The practice of reporting is neither regular nor structured in most of the universities.

10. CONCLUSION & RECOMMENDATIONS:

Understanding the changing environment of higher education institutes and involvement in this change can reshape the role of universities and gain reputation and competitive advantage. Private universities in Bangladesh need to continually rethink, question and reform their role to society promoting social co-operation and cohesion and change values and practices toward environment. Different models of USR found in the literature, however this study proposed a new USR&S framework that has multidimensional approach. Although universities increasingly recognize its social responsibility role to internal stakeholders, community and environment, it has yet to adopt a clear framework to manage practices. The recommendations for better practice are:

- Along with vision, mission, strategic planning, an institutionalization approach is required (like IQAC), to integrate social responsibility concept into university operations.
- According to the private university Act 2010, institutions are bound to spend a major portion of their budget for carrying out research work. But UGC has been unable to enforce it. The attempts of UGC to enforce the law need to be visible.

- The government should amend “Private University Act 2010” urgently by inserting certain provisions – guidelines for social responsibility; working conditions, initiative for climate change, employee welfare, research fund, and service rule etc. – so as to ensure quality education at the universities.
- Government may think of establishing a separate body like University Grants Commission to ensure research and quality of higher education in the private universities. An accreditation council must function immediately which should be independent, neutral and free from the government control and above all belong to both public and private universities.
- Definitely it must not be an agency of bossing or controlling or centre of education policies. It will be a world class organization to enhance research and quality of higher education. Accreditation council must be very
- VCs at private universities need to be more empowered to establish academic freedom and good governance; making financial affairs transparent and spending money on faculty development programs or allocating fund for research and etc.
- Some people say private university students are self -centered, has no social commitment or higher motivation outside their worldly wise pursuit of knowledge. Learning must be purpose oriented. Education doesn’t turn people into model citizens, the “Liberal Arts” do. We are in need of liberal arts education -- historical thinking, ethics, economic and political literacy, along with scientific literacy are a prerequisite for a good society.
- Students need to be aware of the University social responsibility, to learn their role and to acquire the necessary skills to engage in job market and develop community. Hence universities need to integrate social responsibility and environment issues in the curriculum of different faculties. Social & environmental issues need to be discussed seriously and sincerely in academia.

- Universities must be committed to establish green university concept, improving working condition & employee welfare, reducing carbon emissions, waste management, investing on renewable energy and supply chain management.
- Private universities are blamed for not doing adequate research work as is mandatory for a university. The Universities should be dedicated to fostering research collaborations across the world with research institutions, research agencies, funding bodies, industrial and commercial partners, sponsors and benefactors.
- There is no dearth of institutes, centres and trusts in our universities, but the effect of their work on society is neither too visible nor far-reaching. We should reverse this cycle and create an environment in which generating new knowledge will be actively encouraged.
- Universities should hold a yearly environmental week to create awareness.
- External stakeholders support and special funds of the university are mainly the sources of the current budget of community service and environmental affairs. Hence it is important to increase the budget of the sector to be able to implement the strategic plan of the university.
- For universities to be socially responsible, it must provide transparent information on the results that it has obtained in economic, social and environmental areas of interests identifying the public confidence.

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