Investment Climate in Garment Sector of Bangladesh: Analysis in the Framework of SDS based SEM

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Abstract

In this paper an attempt has been made to provide an analysis of Garment Sector in terms of factors of Investment climate (IC) and firm’s performances. While factors of IC are access to Finance, HR and infrastructure, firm’s performance is measured by growth in volume of sales, growth in profitability and growth in investment. However, IC factors have been measured on 5-point Semantic Differential Scale (SDS) and Performance has been measured on Ratio scale. The ultimate variable performance has been analysed in the framework of SEM. In addition to how HR and Infrastructure can be measured on SDS, one can also gather some idea about a particular scenario can been accommodated in SEM framework for better analysis. Several policy guidelines have emerged through study findings of which some are common for EPZ and non-EPZ garment firms. The study findings reflect the aspirations of firms owners very well. Such analyses will supposedly pave the ways for smoother and more fruitful operations of the garment sector and its contribution to national economy.

Key words: Investment Climate, SDS, SEM, EPZ

1. Introduction

A good investment climate is characterized by standard good governance requirements together with the availability of certain types of infrastructure, such as electricity, water, transportation, telephone lines etc. As stated by Hallward and Xu (2003), a productive investment climate is an environment where governance and institutions support entrepreneurship in order to generate growth. A country with bureaucratic and corrupted government, inefficient infrastructure and financial services would not expect much accumulation and growth as desired. Private sector development is the key to a country’s long-run economic growth and poverty reduction. Stable increases in investment and productivity underline the evolution of the private sector (Pernia and Salas, 2005). Investment and productivity largely depend on the quality of the investment climate (Pernia and Salas, 2005). Investment is the nucleus of an economy which plays a crucial role in the economic development and fluctuations in investment have considerable effect on long-term economic growth. Policy makers have also focused increasingly on the importance of a sound “investment Climate” for economic development (Stem, 2002).

For economic development in the private sector, export processing zone play a significant role as a major source of
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Investment in Bangladesh. Export Processing Zone (EPZ) is considered as important tools for attracting private investment and promoting exports both in developing and developed countries (FIAS and SEDF, 2006). Bangladesh, especially the EPZ, is offering facilities and investment opportunities to attract large number of investors. As stated by International Labor Organization (1999), EPZ is an industrial zone which offers special incentives to attract foreign investors. The Prime motivations for establishing EPZ were rapid industrialization, employment of human resources, transfer of technology and transfer of foreign exchange earning by boosting up export.

**Study rationale**

A suitable investment environment is especially important to attract investors. The government of Bangladesh has been putting continuous effort to improve its industrial growth. The EPZs in Bangladesh have been successful in attracting FDI primarily in ready made garments and footwear. Business within the EPZ offer a number of benefits over companies out of the EPZ as mentioned below.

1. Modern and efficient infrastructure
2. General fiscal and non-fiscal concessions to firms
3. Better governance due to single window facilities to ensure a business environment
4. Free from corruption and red-tapism.

The non-EPZ companies are doing business through their own initiatives which means they are privately owned and have self-designed policies and strategies to operate the business. They are not getting any tax facilities like the EPZ companies. Although many studies have been conducted on investment climate of EPZ and firms’ performance, no empirical comparative study, as far as our knowledge is concerned, has yet been done on the investment climate of the EPZ and non-EPZ garment firms in Bangladesh. The proposed study fundamentally focuses on the contributing factors to investment climate and its impact on firms performance especially in the garment firms under the EPZ as well as those outside of the EPZ (non-EPZ). The main goal of this study is to identify the variables that significantly influence investment climate and performance of the garment firms of EPZ and non-EPZ.

The plan of the paper is to present basic concepts of Investment climate in section 2 followed by an overview of garment sector in Bangladesh in sections 3. While section 4 includes aspects of methodology which include sample size and sample selection procedure, types of variables and aspects of SDS & SEM, section 5 presents research results and analyses. In the last section (6) we present some concluding remarks and policy guidelines.

**Objective of the Study**

Broad objective of the study is to investigate how investment climate impacts on firms performance.

**Specific objectives**

(i) Identify the key contributors to the investment climate in the EPZ and non-EPZ garment firms.

(ii) Identify the impact of the investment climate factors on performance both in the EPZ and non-EPZ garment firms.

(iii) Identify the factors that indicate the similarities or differences (if any) exist in these two groups.
of firms’ performance due to the investment climate.

2. Basic Concepts Related to the Investment Climate

   Investment Climate
   The term investment climate has been defined by different authors in different ways. According to Weingast (1995), Investment Climate indicates the policy, regulations, social and institutional factors that provide incentives to induce the private sector to invest in socially desirable projects. A good investment climate provides opportunities and incentives for firms of all sizes to invest productively, create jobs, and expand. It thus plays a central role in both growth of the organization and poverty reduction through such economic emancipation (World Bank Report, 2004). Hallward and Xu (2003) divides “investment climate” into three major types: (1) country level matters such as political stability, exchange rate policies, fiscal and monetary policies etc; (2) governance and institutions; (3) infrastructure such as transportation, telecommunication, electricity, water etc. Stern (2002) defines investment climate as the policy, institutional and behavioral environment, influences the returns and risks, associated with investment. Basically, a sound investment climate offers a supportive environment in which private enterprises thrive by investing and producing more and more.

   Governance
   “A countries general structure of governance and the instructions that govern interactions between business and governance determine the burden that firms face in complying with government regulations, the quality of government services and the extent to which corruption is associated with the procurement of these services: (World Bank and BEL, 2003, P.1.)

   Infrastructure
   Power, telecommunications and transportation play key role in any modern economy (NCAER, 2010). According to the study by World Bank and BEI (2003), infrastructure refers to the quality and quantity of physical infrastructure (such as power, transport and telecommunications) as well as the financial infrastructure (such as banking). Pernia and Salas (2006), defined infrastructure as the availability and quality of infrastructure, such as transportation (roads and ports), telecommunication, power and water supply.

   Access to Finance
   Availability of finance is an essential element of investment climate. Countries having well developed financial systems (Banks, stock and bond markets) tend to grow faster than countries having less developed systems (World Bank and BEI, 2003). The impact of better access or lower cost of finances on firms’ growth has been studied by a number of authors (Arerido et al; 2007).

   Human Resource
   As foreign affiliates are typically more skill intensive than domestic firms in developing countries, the increase in foreign investment may enhance the demand for skilled labor. Again, if foreign firms introduce new products or processes to the domestic market, domestic firms may
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Benefit from the new technology (Teece, 1977).

3. An Overview of Garment Industry

The garment industry has been playing a vital role in the economic development in many countries in the world such as China, Hong Kong, Sri Lanka, India, Vietnam, Mexico, etc. In Bangladesh, in particular, this industry plays a very significant role in the economic development in terms of employment generation.

Garment Industry in Bangladesh

Countries such as India, Pakistan, Sri Lanka, China etc. are now the main competitors of Bangladesh in the garments sector. Bangladesh has gained considerable attention from developed countries in manufacturing RMG due to the low labour cost along with quality in production. In terms of export, the country has been achieving a better place in the export sector in a continuous basis. For example, Bangladesh’s export of RMG increased from US$ 40 thousand in 1978 to US$ 6.4 million in 2004-05 (Rashid, 2006). In terms of employment also (as well), its contribution is substantial in that it employs over 3 million workers of whom 90% are women (Begum, 2001).

Companies under EPZ vs Companies out of EPZ

An EPZ can be defined as industrial zones with special incentives to attract foreign investment in which imported materials undergo some degree of processing before being exported again (ILO, 1998). In late 70s, Bangladesh Export Processing Zone (EPZ) has emerged to attract capital investment in the country.

In Bangladesh, there are three types of investments are allowed in the EPZs:

- 100% foreign ownership including ownership by Bangladesh nationals usually residents abroad-Type A.
- Joint venture project between foreign and Bangladeshi entrepreneurs-Type-B.
- 100% Bangladeshi entrepreneurs-Type C.

Presently there are about 6,000 export-oriented garment factories in Bangladesh. Nevertheless, the EPZ garment factories have some distinctive characteristics. First they are larger than their counterparts outside the EPZs and make a disproportionately large contribution to exports. According to Bangladesh Export Processing Zone Authority (BEPZA) information, garment factories, including knitwear manufactures in EPZs contribute 20.4% of the total garment and knitwear exports of Bangladesh. The second feature of EPZ garment units is that a higher proportion of them are foreign owned. Among the 119 registered garment enterprises in EPZs, fully foreign-owned companies account for 53.8% followed by local firms (27.7%) and joint venture (18.5%) (Kassim, 2009). Although there is no relevant information available concerning the entire garment sector of Bangladesh, it is commonly acknowledged that the overwhelming majority of the garment firms in the country are locally owned.

The Bangladesh Garment Manufacturers and Exports Association (BGMEA) is the apex trade body that represents the export oriented woven, knit and sweater garment manufacturers and exporters of the country (BGMEA members Directory, 2008).

According to the American center (2004) the factors essential for investment climate are: openness to foreign investment, conversion
& transfer policies, expropriation & conversion, dispute settlement, performance requirements & incentives, right to private ownership & establishment, protection of property rights, transparency of regulatory system, efficient capital markets & portfolio investment, political violence, corruption, bilateral investment agreements, labor, and foreign or free trade zones.

The following determinants of investment climate have also been identified by the experts of Bangladesh: competitiveness & regulations, labor law, enforcement of contracts, infrastructure investments, policy environment, SME environment, subcontracting for promotion of investment, productivity, governance, and incentive mechanism.

**Investment Climate and Firm’s Performance: Bangladesh and Bangladesh Garment Sector**

Bangladesh has a number of positive attributes that can attract the attention of foreign investors from both developed and developing countries. The increasing availability of skilled and unskilled labor at relatively low wages and the success in maintaining reasonably stable macro-economic environment are a few factors behind making the country an attractive destination for foreign investors. They are generally aware that the wages rates in Bangladesh are among the lowest in Asian countries. Bangladesh’s investment incentives and regulations for FDI are found competitive with those offered by similar other countries. From the literature it is obvious that growth in Bangladesh has been greatly slowed down by governance failures. Inefficiency, corruption, bureaucratic harassment and lack of transparency are common major barriers to improving the welfare of citizens. The activities of bureaucratese in some government agencies create problems in the implementation of the project.

The study by world Bank and BEI (2003) showed that Bangladeshi firms have reasonable access to formal finance compared to other low-income countries. The Investment Climate Survey reported that nearly 66 percent of enterprises having an overdraft facility compared with only 18 percent of enterprises in China and 23 percent in Pakistan (World Bank and BEI, 2003). Industrial policy of Bangladesh encourages local and foreign investors without making any distinction between these two. Foreign investors are mostly targeted for investment in EPZ (Aggarwal, 2005).

Studies indicate that investment climate as well as the firms’ performance varies across location (Dollar et. All., 2003). It must be noted that investment climates vary not only across countries but also within countries (Aggarwal, 2005) because of differences in the national policies. Even within a single location, the same conditions can affect firms differently depending on the activity they are engaged in and their size.

**4. Methodology**

Selection of Sample firms and Respondents
Study has been conducted on a stratified random sample of 120 firms. Sampling frames for both EPZ and non-EPZ firms were collected and a simple random sample from each stratum was chosen. Here strata are EPZ and non-EPZ. Distribution of sample size is shown below.

<table>
<thead>
<tr>
<th>Location</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPZ</td>
<td>50</td>
</tr>
<tr>
<td>Non-EPZ</td>
<td>70</td>
</tr>
</tbody>
</table>

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Study Respondents
From each selected firm a manager in the administrative capacity was interviewed.

Hypotheses of the Study
In the light of the review of the relevant literature and objectives of the study, the following hypotheses have been framed for verification through empirical investigation:

Hypothesis-1: Impact on firm’s performance due to Human resource is positive.
Hypothesis-2: Access to finance is positively related to firm’s performance.
Hypothesis-3: Infrastructural facility is positively correlated to firm’s performance.

Variables and measurement Scale.
Dependent variables:
Growth in sales volume, growth in profit and growth in new investment are the three dependent variables-Each one is measured on a Ratio Scale. Here growth has been measured over last 5 years value staking average geometric growth rate. Moreover, such growth has also been assessed qualitatively on 5-points SDS.

Independent variables:
There are three independent variables each of which has been measured on Semantic Differential scale (SDS) using 5-points between bipolar adjectives. The variables are Access to Finance, Human Resource & HRM and Infrastructure
For the present work we have adopted 5-points SDS for measuring different Investment climate factors as follows.

Human Resource (HR)
(1) Workers are capable in specialized work
   Very highly -----------------------------
   ---Not at all
(2) Workers are willing to acquire new skill
   Very much -----------------------------------
   --Not at all
(3) Workers can achieve target
   Very well-----------------------------
   ----Never
(4) Managers have enough management skill
   Enough---------------------------------------------
   --Not enough
(5) Trade union Impacts on Business
   Substantial ---------------------------------------------
   ---Minor
Average of points got by a firm has been taken as its score.

Access to Finance (AP)
(1) Have enough retained earnings as source of new investment
   Enough---------------------------------------------
   --------Scarce
(2) Have overdraft facilities
   Enough ---------------------------------------------
   --------Not at all
(3) Have line of credit facilities
   Sufficient ---------------------------------------------
   --------Not at all
Average of points got by a firm has been taken as its score.

Have Appropriate Infrastructural Facilities (IS)
(1) There is alternative source of power
   Sufficient ---------------------------------------------
   --------Not all
(2) There is independent arrangement for water supply
   Happy with water supply-------------------------------
   -------Very unhappy
(3) Transport is a problem
   Alright ---------------------------------------------
   -Very Problematic
Average of points got by a firm has been taken as its score.

Relation between Infrastructure (IS) and Access to Finance (AF)
A firm having easy access to finance (availability of finance) can afford to resolve & improve infrastructure facilities. Similarly, firms having good infrastructure can have more earnings & thereby have more AF.

**Relation between AF & HR**

Firms having better AF can manage better HR and better HR can manage more AF facilities.

**Relation between IS & HR**

Management of IS can be better archived by appropriate HR and with better IS a better HR can be expected. In the SEM framework we can accommodate the above relationships as follows. It has been constructed for each dependent variable separately.
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5. Results and Analysis

In this section we provide a lucid descriptive analysis followed by SEM results. At first we present the reliability and validity test results using Cronbach’s alpha.

Reliability and Validity Analysis

The reliability and validity analysis is an important issue when conducting empirical research because it helps the researchers to ensure whether or not question items measure what they are intended to measure (validity) and the degree to which question items would give consistent or repeatable results (reliability). In this research Cronbach’s alpha coefficient (1951) was calculated for each scale to evaluate reliability. Table 1 shows the Cronbach’s Alpha to test the reliability of the variables.

Table 1: Cronbach’s Alpha coefficient of the variables

<table>
<thead>
<tr>
<th>Item</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resource</td>
<td>.787</td>
</tr>
<tr>
<td>Access to Finance</td>
<td>.608</td>
</tr>
<tr>
<td>Power and Energy</td>
<td>.636</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>.625</td>
</tr>
<tr>
<td>Governance</td>
<td>.682</td>
</tr>
<tr>
<td>Trade Union</td>
<td>.738</td>
</tr>
<tr>
<td>Performance in sale performance</td>
<td>.537</td>
</tr>
</tbody>
</table>
The alpha coefficient as evident from table reveals that overall reliability test is highly acceptable. This study used the content validity.

**Human Resource**

Human resource (employees with sufficient education, skills and technological knowhow) is the most vital elements of the investment climate. Present study does not show much difference between the EPZ (overall mean score 4.27) and Non-EPZ (overall mean score 4.33) garment firms with respect to indicators of human resource. Respondents fairly agreed that workers are capable to perform task in their own specialized area. With respect to ``workers are ready to get necessary training on new skills”, EPZ firms agreed more strongly (mean score 4.5) than the non-EPZ (4.36) firms. Respondents from both the groups of firms fairly agree that workers always welcome new technologies.

**Access to Finance**

An easy access to finance is a crucial factor for investors. Respondents gave opinion that for the companies both in the EPZ and the Non EPZ, source of new investment (non-EPZ: 31.8%, EPZ:25.0%) as well as working capital (non-EPZ: 40.9%, EPZ: 25.0%) is retained earnings. Second option for the new investment and working capital is bank. For example, 72% of the non-EPZ firms and 62.5% of EPZ firms have bank as their source of new investment. It observed that EPZ firms have better access on both overdraft as well as line of credit facilities (25% and 75% respectively) compared to the non-EPZ firms (4.5% and 27.3% respectively).

**Infrastructure**

**Power and Energy**

Other studies such as (World Bank BEI, 2003,) showed the severity of deficiencies in power and energy in Bangladesh. The present study revealed that interruption in power supply is a crucial problem for firms’ operation. Respondents from both the EPZ and Non-EPZ firms opined power failure as a frequent problem. The mean score is 4.76. Both the EPZ (mean score 4.5) and the non-EPZ firms (Mean score 4.6) strongly agreed that compensating amount for additional time is very high. Obtaining a new electricity connection is revealed as a time consuming matter for half (50%) of the non-EPZ firms.

Firms operating outside of the EPZ confront more infrastructural problems such as supply of water, port problem, transport problem, high trucking cost etc. than the EPZ firms do. Compared to the EPZ firms (mean score 2.62), non-EPZ firms (mean score 4.22) face more water problem. While the majority (72.7%) of the non-EPZ firms have arranged deep tube well (mean score 4.22) to overcome the water supply problem, EPZ firms enjoy Water Treatment Facilities provided by the government. There is little difference in the opinion between the two groups of firms when they were asked about the time required in arriving and getting clearance in the port and custom during the time of export and import’. Both the groups moderately agreed (non-EPZ 3.65 and EPZ 3.62) that in the case of export and import it takes a long time for goods to arrive at the point of entry (port) and getting the clearance from the custom. Respondents of the non-EPZ firms fairly agreed (4.0) that higher port tariff always add additional cost to the product

**Governance**

---

**Table:**

<table>
<thead>
<tr>
<th>Investment</th>
<th>Performance in Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>.631</td>
<td>.580</td>
</tr>
</tbody>
</table>
Overall mean score of (3.69) indicates that respondents moderately agreed on governance problem. While a large number (90.9%) of the non-EPZ firms fairly agreed that informal payments are required to get things done, 62.5% of the EPZ firms also agreed this moderately (3.25).

**Trade Union**

Trade union has a large impact on the garment industry of Bangladesh. It is observed that while the EPZ firms fairly agreed that the trade union has substantial impact on firm’s performance, non-EPZ firms agreed poorly. In response to the question “the company suffers from production loss due to strike or other labor disputes, EPZ firms fairly agreed on it while the non-EPZ firms agreed moderately.

**Firms’ Performance Scenarios**

Overall firm’s performance has been measured by profitability, growth in sales, and growth in investment.

Among all the companies, nearly 31.8% experienced an increase of (3% to <7%) sales in the last five years whereas another 31.8% of respondents reported an increase around 15% of sales. However, 23% of the respondents told about an increase between 7% to <111%. Only a small portion (13.6%) of the respondents reported increase of sales in the last five years between 0% to <3%. The individual total mean score of the EPZ and non-EPZ firms showed a moderate response regarding the growth of sales performance (mean score 3.37 and 3.04 respectively).

Regarding the increase of the profitability in the last five years the overall response rate is very poor (overall mean score 2.96). Only 5% of the respondents reported a very small improvement in profitability (0% to less than 3%). Less than one third (27%) of the companies indicated a very fair growth (15% or more). The individual total mean scores indicated a slight better response of the non-EPZ firms (3.06) about the increase in profitability than the EPZ firms (mean score 2.95).

More than half of the respondents had reported a growth between 7% to <111% in investment in the last five years. Nearly one third (31.8%) of the respondents indicated the range between 3% to <7% and only 9% indicated more than 11%. In response to the growth in investment the Non-EPZ firms overall mean score (3.36) showed moderate responses while the response of the EPZ firms (mean score 2.25) were very poor.

**Relation of Investment Climate Factors and Firm’s Performance**

Before performing SEM analysis, some basic statistical relationship analysis namely, correlation & regression analysis namely, correlation and regression analysis were done. These are presented here.

**Correlation Analysis**

Access to finance has significant positive correlation with the firms’ performance variable growth in investment where $r=0.737$. If power and energy problem improves, firms’ performance will also be improved. Power and energy variable is positively correlated to the firm’s performance variable growth in sales ($r=0.203$). Result shows that infrastructure has positive correlation with the firms’ performance variable sales ($r=0.142$). Governance problem (corruption) as well as trade union are negatively correlated to the firm’s performance variable profitability where ($r=-0.269$) and ($r=-0.193$) respectively.

**Regression Analysis**

Multiple regressions taking Investment Climate variables as independent and the Firms’ Performance variable sales as dependent variable was run. No co-linearity problem exists in the model as evidenced by...
The adjusted $R^2=61.80$ percent indicates that independent variables combined contribute substantially to performance. This indicates that human resource, access to finance, power and energy, infrastructure, governance and trade union are the best set of determinants of investment climate. It is clear that human resource ($\beta = 0.310$) had positive contribution on Firms’ performance and this is statistically significant with p-value = .046. Access to finance ($\beta =0.766, P=.000$), power and energy ($\beta = 0.335, P=.032$) showed positive contribution on firm’s performance sales and the individual contribution of these variables were statistically significant. On the other hand, both governance problem ($\beta =-0.225$) as well as trade union ($\beta =-0.335$) showed negative impact with the firms’ sales performance and the individual contribution of these variables is statistically significant.

Regression analysis taking firm’s profitability as dependent variable was also done. In this case also positive contribution of access to finance, power and energy, transportation facilities on the growth of profitability have been obtained.

**Contributing Factors to the Investment Climate**

There is no remarkable variation found in opinion between EPZ and non EPZ garment firms in terms of having necessary skills and technological know how. Like the EPZ firms, all the surveyed on-EPZ firms are also export oriented. They both also have to ensure the skills and technological know-how to perform at the targeted level. To attract the foreign buyers both EPZ and the non-EPZ firms ensure worker’s skills and capabilities to sustain in the competitive market.

With respect to the indicator of investment climate “easy access to finance” EPZ firms are slightly better off compared to non-EPZ firms. For new investment the non-EPz firms are more dependent on bank than on retained earnings. Compared to the non-EPZ firms, the EPZ firms have better bank overdraft facilities as well as line of credit. Other study (World Bank and BEI, 2003) reveals that Bangladeshi firms have reasonable access to finance compared to many other low-income countries.

Regarding power and energy problem Non-EPZ firms appear to face more problem compared EPZ firms. This might be attributed to the special utility facilities provided by the government to the EPZ areas.

With respect to the important indicator of investment climate “infrastructure”, Non-EPZ firms have problem more than that of the EPZ firms. When for the supply of water the non-EPZ firms mostly depend on their own arrangement of tube well, EPZ forms can use water Treatment facilities. Such impact on firms’ performance is higher for EPZ firms than that of the non-EPZ firms’. The Non-EPZ firms’ improvement of performance in the last five years for investment and profit is slightly higher than that of EPZ firms (mean score 2.95). This difference is negligible.

Findings of the study indicate that investment climate factors such as human resource, access to finance, power and energy and infrastructure have positive correlation with the firms performance. This indicates that improvement of any one of this will improve the firms’ performance. On the other hand, governance and trade union bear negative correlation with firms’ performance. Such results have been used to
test those hypotheses mentioned before. These are presented below. However, we have conducted our investigation for performance indicators separately as discussed below.

**Performance Indicator Growth in sales.**

**Hypothesis -1: Impact on Firm’s Performance due to Human Resource is positive**

As revealed by the results of the present study, human resource is identified as one of the important factors and has positive correlation with the firms performance in growth in sales. where (r=0.211). It further reveals that marginal contribution of human resource as an important factor for firm’s performance is \( \beta =0.3310 \) with \( p=0.040 \). All these are in consistency with hypothesis-1.

Similarly, marginal contribution of human resource on growth in profitability is \( \beta =0.478 \) with \( P=.039 \). This is also positive and statistically significant.

**Hypothesis-2: Access to finance is positively related to firm’s performance.**

As supported by contemporary literature and as revealed by the results of the present study, access to finance is identified as another important factor that has significant positive correlation with firms sales performance \( r=.737, p=.000 \). In addition, study result reveals that access to finance is an most important factor and it contributes highly significantly to firms’ performance with \( (\beta =.766, p =.000) \). This is in confirmation of hypothesis-2).

**Hypothesis-3: Infrastructure facility is positively correlated to Firm’s performance**

It reveals that keeps positive contribution to the firms performance with \( \beta = .020, p = 89. \) Though the result is not statistically significant but it proved positive contribution on performance. All these confirm hypothesis-3.

**Comparison between the Performance of EPZ and Non-EPZ Garment Firms**

Results indicate that the combined contribution of investment climate (adjusted \( R^2=.672 \)) on the firms’ performance in the EPZ is slightly higher than the that in non-EPZ firms \( (R^2=.623) \) It also showed the individual contribution of independent variables on firm’s performance by the EPZ and non-EPZ firms. It was found that the contribution of human resource in the non-EPZ \( (\beta = .579) \) firms are higher than that in EPZ firms \( (\beta = .340) \) on firms sale performance. In the other hand, the individual contribution of access to finance \( (\beta = .771) \) and \( (\beta = .768) \) for both the non-EPZ and the EPZ firms respectively showed similar as well as high. The EPZ firms reported slightly higher influence of power and energy \( (\beta = .255) \) on firms’ sale performance than the non-EPZ firms \( (\beta = .165) \). Compared to the non-EPZ firms, EPZ firms showed very high negative association of governance \( (EPZ : \beta = -.255) \) and non-EPZ: \( (\beta = -034) \) on firms sales performance. In the case of trade union both group of the firms showed negative correlation with the firm’s performance. The \( \beta \) values \( ((Non – EPZ : \beta = -.558) \) and \( (EPZ : \beta = -.364) \) indicates that non-EPZ firms reported higher influence of trade union on the firms sales performance than the EPZ firms.

**SEM Results (Growth in Sales)**

Results of structural equations model (SEM) enable us to verify how far our proposed model of interrelationships is well enough to
account of causal and non-causal relatedness. By comparing sample covariance matrix (S) with an estimate of population covariance matrix (\(\hat{\Sigma}\)), we can evaluate model fit. For 4 variables in our model we have the symmetric matrix as

\[
S = \begin{bmatrix}
1.11 \\
.73 & 2.95 \\
.68 & .72 & 4.46 \\
.97 & .95 & .55 & 2.61
\end{bmatrix}
\]

We know for p variables there are always \(p(p+1)/2\) elements in the population covariance matrix. We have 4(5) \(2=10\) elements in the matrix. We have 4 variances and 6 covariance’s. Using the method of Maximum Likelihood we have got the following matrix.

\[
\hat{\Sigma} = \begin{bmatrix}
1.11 \\
.73 & 2.94 \\
.67 & .72 & 4.45 \\
.90 & .96 & .57 & 2.61
\end{bmatrix}
\]

Matrix of residual is,

\[
S - \hat{\Sigma} = \begin{bmatrix}
.00 \\
.00 & 0.01 \\
.01 & .00 & .01 \\
.01 & .01 & .02 & 0
\end{bmatrix}
\]

From above results we can feel happy that the data support the postulated model quite well. With a larger sample size one can expect a better results in terms of explaining roles of investment climate factors on performance indicators like growth in sale, profitability and new investment.

5. Conclusion and Recommendations

In this section we provide concluding remarks in association with policy guidelines as emerged from study findings. Although small scale, the present study is quite informative, study findings appear to provide some important horizons for policy making for future action for posthumous development of garment sector in Bangladesh which keeps enormous contribution to growth in GDP. Specifically, we can give following messages to policy makers in garment sector as an outcome of our study finding.

1. Garment firms in EPZ and non-EPZ differ in terms of contributing factors to performance indicators viz sales volume, investment and profitability. While power and energy appears to be major contributing factor for investment in non-EPZ firms, such factor for EPZ firms is human resource.

2. Both EPZ and non-EPZ firms show high correlation between investment climate factors like access to finance, infrastructural facilities with indicators of firms’ performance like growth in sale, growth in investment and growth in profit.

3. Although change in human resource shows similar impact on firm’s performance in both EPZ and non-EPZ firms, such impact due to other factors varies remarkably between the two types of firms.

4. For smooth functioning of the economically important sector (RMG), authorities in both in EPZ and non-EPZ firms should take care of hidden factors like well-being of employees.
5. More and more investment in RMG sector will supposedly contribute more and more for strengthening economic upliftment of the country. Thus, easy access to finance for RMG sector should be ensured.

Reference
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