

## **SMEs IN BANGLADESH- PROSPECTS AND CHALLENGES**

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### **ABSTRACT**

*SMEs are the driving forces of an economy for their significant contributions to the employment, national exchequer, fulfillment of demand of people of the society, alleviation of poverty, and lessening problems of income disparity, etc. Despite significant contribution, SMEs are struggling to sustain in the competitive market with profitable niche for many problems and challenges. In view of this, the study has been undertaken in order to evaluate prospects and challenges of SMEs in Bangladesh. The study has selected 51 SMEs purposively and used both primary and secondary data. It has also used descriptive statistics and Varimax Rotated Factor Analysis for data analysis. The study has found that SMEs in Bangladesh have most important problems & challenges: Capital and Regulatory Factor, Technological and Bureaucratic Factor, Entrepreneurial and Managerial Skills, and SME Policies and Support Services of Management in order of their magnitudes. The study has suggested some important policy measures such as credit programs for SMEs, effective SME policies, continuous improvement of entrepreneurial skills and professional skills through training & development, prolific support and infrastructural services for the growth and development of SMEs.*

**Keywords:** SME, Economy, Challenges, Sustainability and Improvement

### **STATEMENT OF THE PROBLEM**

Small and Medium Enterprises (SMEs) have been an integral part of economy of any country in the world for its significant contribution to the national exchequer, employment, distribution of wealth across regions & segments, supply of products & services to the people according to need, and alleviation of poverty. Besides, SME sector works as stepping-stone for more ambitious micro-enterprise entrepreneurs, local supply chain engagement for more established enterprises and in many areas & functions, acts as a buffer for Large Scale Enterprises to grow. Generally, SMEs employ intermediate technologies and tend to generate significant employment opportunities with modest capital inputs. In a developed economy, SMEs has a logical bottom up relationship with micro enterprises, and top down relationship with large scale enterprises as a chain of supply of

products, services, financial resources, human resources, and technology & soft knowledge. This seems to be a balanced SME business model for sustainable economy. The development of SMEs would therefore help provide income opportunities to a large number of people. Consequently, SMEs contribute significantly to the provision of productive employment opportunities, the generation of income and, eventually the reduction of poverty (Jasra, Khan, Hunjra, Rehman & Azam, 2011:275).

Most of the governments of the world have recognized importance of having effective & prolific SMEs in the sustainable economic development through policy, laws & regulations, fiscal & environmental supports, infrastructure supports, and administrative supports to the growth and development of SMEs. SMEs are the backbone of the economies of Asia, accounting for 98% of all enterprises and 66% of the national labor force on average during 2007–2012. SMEs contributed 38% of the gross domestic product or manufacturing value-added in Asia on average in 2007–2012, suggesting their contribution to the region's economies can be expanded further (Yoshino and Taghizadeh, 2016). SMEs influence trade. SMEs brought about 30% of the total export value in Asia on average in 2007–2012. In the People's Republic of China (PRC), SMEs accounted for 41.5% of total export value in 2012, up 6.8% year-on-year, while in Thailand they made up 28.8% of total export value with 3.7% year-on-year growth. SMEs that are part of the global supply chain have the potential to promote international trade and mobilize domestic demand (ADB, 2014). SME sector has played a vital role in economic development of some prosperous countries of Asia. The neighboring countries of Bangladesh have also given due importance on SME. Terming SME as 'employment generating machine' they stressed on SME development for higher economic growth, narrowing the gap of income inequality and poverty alleviation. The present government has also put much emphasis on the development of SME sector considering it as 'the driving force for industrialization' (Bangladesh Bank, 2016).

SMEs in Bangladesh like other countries are contributing to the national exchequer and generation of largest number of employment opportunities for unemployed people every year, employing more people per unit of investment as compared to large enterprises, producing products for low income people, reducing the resource earning disparity between people of urban and rural areas through income and allocation of capital, contributing to the growth in GDP and economic value, and finally alleviating poverty or hard core poor people. So, this sector has been the driver of economic development of the country. Despite being significant sector in economies, many units of SMEs are becoming sick and thereby rendering employed people unemployed especially in the sectors of

textile, leather, medicine, loom, food, chemical and rubber (Jahur and Quadrics, 2007). Some studies have found that SMEs become failure due to financial, technological and human limitations; and some other studies have found that shortage of capital or inaccessibility to finance for financing capital has led to the closure of SME units in different sectors (Chowdhury, 2007; Minto, 2006; Marsden, 1992; Steel, 1994). A survey has disclosed that Bangladesh has scored capital access index with a rank of 92 out of 122 countries indicating credit crunch of industrial sector of Bangladesh (James, et.al. 2007).

SMEs in Bangladesh are experiencing incredible problems in BRME due to credit crunch, poor technological know-how, and poor supply of efficient labor forces, insufficient fiscal and regulatory supports of the related agents of the Government. Although, the Government has SME policies, SME Foundation, SME Cells at MOC, SME Credit and Monitoring Department at Bangladesh Bank, and One Stop Services of BOI in place. Several Studies have found that high transactions costs, ineffective SME policies, and poor capability of SME entrepreneurs can be attributed to these constraints (Chowdhury, et al. 2013 and Khandaker, 2014). Khan (2004) has found some constraints to the growth of SME sector in Bangladesh: (a) shortage of skills at all levels (facilitating institutions and entrepreneurs, (b) lack of industrial organization, (c) limited size of the market and its low growth rate, and (d) lack of sound policy and constructive program, poorstate of Technology. Qudus and Rashid (2000) have identified those entrepreneurs in SME sector had to face a myriad of bureaucratic obstacles in their quest to start a SME enterprise. Begum (1993) in her study has found inadequate government efforts and poor fiscal and financial incentives to have retarded the process of SME growth in the nation. Lack of infrastructure facilities in Bangladesh is found to be another hurdles tor for the growth of SMEs in Bangladesh (McDowell, 1997).

The development of SMEs in Bangladesh like other developing economies depends on four important factors such as macroeconomic factor, business environment, growth opportunities, and historical determinants. Despite continuous endeavor on the part of Government and its agent to develop SMEs in Bangladesh, SMEs face problems and challenges in all four aspects specifically market and networking, technology, finance, poor infrastructure and policy support of government, and entrepreneurial professional and managerial credibility. In view of this, the present study has been undertaken in order to identify problems and challenges facing SMEs in Bangladesh in its growth and development

### OBJECTIVE OF THE STUDY

The primary objective of the study is to evaluate prospects and challenges for the Development of SMEs in Bangladesh. Following secondary objectives have been covered in order to accomplish the primary objective of the study:

- a) To analyze present status of SMEs in the economy of Bangladesh;
- b) To highlight policies, programs, and institutional supports for the development of SMEs in Bangladesh.
- c) To examine the potential growth and development of SMEs in Bangladesh; and
- d) To identify the problems and challenges in developing SMEs in Bangladesh; and
- e) To put forward a comprehensive set of policies and strategic measures for the development of SMEs in Bangladesh.

### SCOPE OF THE STUDY

The study has covered status of SMEs and problems & challenges facing 51 SME units of different sectors as follows:

**Table 1: Sample Small and Medium Enterprises of Different Economic Sectors**

SI No.	Small and Medium Industries	No of Sample SMEs	Percentage
1.	Food and Tobaccos	08	15.69
2.	Textile Manufacturing	02	3.92
3.	Ready to Wear Apparels	12	23.53
4.	Wood, Leather, and Paper Printings	07	13.73
5.	Education and Health Care	04	7.84
6.	Chemical and Plastics	03	5.88
7.	Non-Metallic Mineral Products	04	7.84
8.	Fabricated Goods, Electrical and Transports	04	7.84
9.	Mining and Manufacturing	00	0.00
10.	Personal Services	03	5.88
11.	Information Technology & Telecommunication	04	7.84

*Source: Survey Instrument.*

*Note: Data have been compiled by researcher*

SMEs are now normally defined in Bangladesh according to the definition used in the National Industry Policy of 2016, as follows:

Serial No	Sector	Fixed Asset other than Land and Building SE (Small Enterprises) & ME (Medium Enterprises)	Employed Manpower
01	Services	For SE: Tk. 1 Million to 20 Million & For ME: Tk. 20 Million to 300 Million	SE -16-50& ME -51-120
02	Industrial	For SE: Tk. 7.5 Million to 150 Million For ME: Tk. 150 Million to Tk. 500 Million	SE -31-120& ME -121-300; but for RMG/Labor Intensive Industry Maximum- 1000

*Source: National Industrial Policy, 2016*

The present study has taken definition of SMEs on the basis of manpower employed. The government prefers labor intensive industry for employment of more manpower.

## **RESEARCH DESIGN: METHODS AND TECHNIQUES**

The study has been an evaluative study with optimistic research philosophy and positive approach. The inferences of the study will be applied in the context of SMEs in Bangladesh. Both primary and secondary data have been used in the present study.

### **Selection of Samples**

The researcher has purposively selected 70 SMEs of different sectors operating in Dhaka and Chittagong.

### **Survey Instrument and Collection of Primary Data**

The researcher has prepared a structured open and closed end questionnaire on the basis of survey of existing literatures, pilot survey, and talking to the SME professionals. Then, researcher has conducted interview of SME Entrepreneurs or CEO of sample following direct approach, indirect approach, and e-mail. Finally, researcher has received 56 filled questionnaires and found 51 usable in the present study.

### **Collection of Secondary Data**

The study has collected secondary data by consulting existing literatures (Books, Articles, Reports, etc.) and websites of BBS and other related organizations of the country.

### **Analysis of Data**

The data thus collected have been tabulated first through processing of data for analysis. Researcher has used descriptive statistics, correlation; Varimax rotated factor analysis for analysis of data.

**Factor Analysis:** Factor analysis is a method of reducing a large number of variables (tests, scales, items, persons and so on) to a smaller number of presumed underlying hypothetical entities called factor (Fruchter, 1967). It tries to simplify and diverse relationship that exist among a set of observed variables by uncovering common dimensions or factors that link together the seemingly unrelated variables and consequently provides insight into the underlying structures of the data (Dillion & Goldstein, 1984). The purpose of factor analysis has mainly two folds: data reduction and substantive interpretation. In the present study, 'Principal Components Varimax Rotated Method' of factor analysis has been used in order to identify the factors influencing the sustainability of SMEs in Bangladesh.

Principal component factor explains more variance than the loadings obtained from any method of factoring. In order to define the group membership, an algorithm may be used to uncover a structure purely on the basis of the correlation structure of the input variables. Then the number of principal components to be retained in the study has been decided on the basis of Kaiser's criterion (1958) of Eigen value  $\geq 1$ . Principal components having higher reliability coefficients are more reliable in the sense that the corresponding factors would be replicable in other similar kind of studies. Then Community, symbolized by  $h^2$  are then worked out which shows how much of each variable is accounted for by the underlying factors taken together. Then, factor scores have been generated on the basis of weighted average of Principal Factor loadings and average of respective variables included into the concerned group. Ranking of each factor has been made on the basis of scores derived.

### **Validity of Survey Instrument and Reliability of Data**

**Validity of Survey Instrument:** Researcher has prepared drafts two times and conducted pilot survey and talked to the professionals about the questions and data to be derived. Besides, the study has gone through existing available literatures at home and abroad for the preparation of questionnaire. Finally, the survey instrument has been finalized and instrument validity has been tested.

**Reliability of Data:** The study has used ordinal scale (Five Point Likert Scale) in order to collect opinions of sample respondents. Then it has calculated Cronbach's Alpha Based on Standardized Items for every variable and all variables together. Average Cronbach's Alpha based on standardized items is found to be 0.775 and Cronbach's Alpha Coefficients for each variable are found ranges from 0.746 to 0.802. Since, Cronbach's Alpha Coefficient is found higher than acceptable level of 0.70, then it indicates reliability and consistency of data collected and used on five point likert scale in the present study. The study has also examined the

relevance of using Varimax factor analysis on the basis of Bartlett's Test of Sphericity. The test has been found significant indicating the relevance of using 'Varimax rotated factor analysis' in the present study.

### Sample Profile

The sample profile has been figured out in the Table 2 as follows:

**Table-2: Characteristic Features of Sample**

On Categories			On Forms of Enterprises		
Sector	NOFs	Distribution	Private Ltd.	43	84%
Manufacturing	32	63%	Public Ltd.	00	00%
Services	19	37%	Partnership	07	14%
			Sole Tradership	01	2%
Total	51	100%	Total	51	100%
On Manpower Employed			On Years of Operations		
16-30	18	35%	Less than 5	08	<b>16%</b>
30-50	07	14%	5-10 Years	07	<b>14%</b>
50-120	06	12%	10-15 Years	24	<b>47%</b>
120-300	20	39%	15-20 years	10	<b>20%</b>
300 Above	00	00	20 and Above	02	<b>03%</b>
Total	51	100%	Total	51	<b>100%</b>

*Source: Survey Instrument.*

*Note: Data have been compiled by Researcher.*

The study has covered almost 10 important sectors of SMEs in Bangladesh (see section 1.4) which are the most important sector for their contribution to economies and representing major part of SME sectors as well. It has been found from the analysis of Table 2 that sample SMEs is composed 63% manufacturing and 37% service sectors which constitutes 84% private limited companies. Besides, sample SMEs are found to be Labor intensive and most of them are operating for the last 10 to 15 years. All these features are truly exposing the real characteristics of SME sector in Bangladesh.

### ORGANIZATION OF THE STUDY

The present study has been organized into three sections. The first section covers statement of the problem, objective, scope, and research design: methods and techniques. The second session deals with findings and their analyses: statues of SMEs, SME policies & programs, and challenges & problems facing SMEs. The final section includes summary of the findings, policy implication, and conclusion.

## FINDINGS AND THEIR ANALYSES

The study has addressed prospects of SMEs and problems & challenges facing SMEs in Bangladesh. SMEs in Bangladesh have been backbone of the economy and recognized by Government for their expected role towards accomplishing their sustainable economy. By this time, the Government has come out with the broader framework for the development of SMEs through National Industrial Policy 2016, the 7<sup>th</sup> Five Year Plan, and perspective plans for long futures. All these efforts are found ineffective from salvaging SMEs from bankruptcy or making them most sustainable through having a profitable niche in the ongoing competitive market. The study has analyzed these issues in the following sub-sections on the basis of findings:

### Analysis of Status of SMEs in the Economy of Bangladesh

The study has examined status of SMEs with regard to number of establishments, manpower employment, investment, and indirect taxes. The general status statistics relating to all types of business sectors of economy have been shown in Table 3.1 as follows:

**Table 3.1 Status of SMEs in the Economy of Bangladesh**

Categories	Micro	Small	Medium	Large	Total
Total Number of Establishments	17384	15666	6103	3639	42792
Distribution (%)	40.62	36.61	14.30	8.50	100.00
Total Persons Engaged	271644	738801	1041220	2964272	5015937
Contribution (%)	5.42	14.73	20.76	59.10	100.00
Compensation of Employees (Tk. Mil)	27705	82375	109934	349053	569067
Distribution (%)	4.87	14.48	19.32	61.34	100.00
Fixed Assets (Tk. In Millions)	46528	283336	286901	571342	1188107
Distribution (%)	3.92	23.85	24.15	48.09	100.00
Industrial Costs (Tk. In Millions)	179396	810602	1028606	1744116	3762720
Allocation of Costs (%)	4.77	21.54	27.34	46.35	100.00

*Source: Economic Survey 2013, Bangladesh Bureau of Statistics.*

*Note: Data have been compiled by researcher.*



From the perusal of Table 3.1, it has been found that SMEs constitute 50.91% of the total number of micro-economic units in Bangladesh. This sector is found to have employed 35.49% of the total persons employed; contributed 33.80% of compensation of employees; invested 48% of total investment in Fixed Assets; and incurred 48.88% of total industrial costs in the economies. All these results indicate that SMEs have been playing an important role in creating employment opportunities through investment in both rural and urban areas and meeting the financial demand and non-financial demands of the people across country.

SMEs in Bangladesh keep on contributing to socio-economic development not only through employment generation; but also adding values to the economy which are shown in Table 3.2 as follows.

**Table 3.2 Contribution of SMEs to the Economy of Bangladesh**

Categories	Micro	Small	Medium	Large	Total
Gross Output(Tk. in Millions)	275818	1203267	1408342	2507478	5394905
Contribution (%)	5.11	22.30	26.11	46.48	100.00
Gross Value Added (Tk. in Millions)	920927	389974	363646	737235	1582947
Contribution (%)	5.82	24.64	22.97	46.57	100.00
Indirect Tax(Tk. in Millions)	2413	14343	14767	44349	75872
Contribution (%)	3.18	18.90	19.46	58.45	100.00

*Source: Economic Survey 2013, Bangladesh Bureau of Statistics.*

*Note: Data have been compiled by researcher*

It has been found from the perusal of Table 3.2 that SMEs in Bangladesh has contributed 48.41% to gross output: 47.63% to gross value added; and 38.36% to national exchequer in the form of indirect taxes. So, SMEs in Bangladesh have been found to have contributed relatively highest to the economic development of the Country. The role of SMEs also depends on the forms of ownership whether owned by government or private. The status of SMEs in Bangladesh has been articulated in Table 3.3 as follows:

**Table 3.3: Forms of Economic Enterprises in Bangladesh**

Details	Micro	Small	Medium	Large	Total	Percentage of SMEs
Government	00	00	48	55	103	46.60%
Private	17384	15666	5877	3304	42231	51.01%
Government and Private Jointly	00	00	14	21	35	40.00%
Joint Venture(Local and	00	00	75	85	160	46.88%

Foreign)						
Foreign	00	00	89	174	263	33.84%
Total	17384	15666	6103	3639	42792	50.87%
Distribution (%)	40.62	36.61	14.30	8.50	100.00	

*Source: Economic Survey 2013, Bangladesh Bureau of Statistics.*

*Note: Data have been compiled by Researcher*

According to the Economic Survey 2013, it has been found that SMEs in Bangladesh belong to all forms of ownership structure. The Table 3.3 shows that 46.60% of State owned enterprises, 51.01% of private enterprises, 50% of Joint ownerships, 46.88% of Joint Ventures, and 33.84% of the Foreign Ventures belong to SMEs. Interestingly, all state owned enterprises are either medium enterprises or large enterprises; and Foreign Investors have invested about 44% of their total investment in SMEs.

**Analysis of SME Policies, Programs, and Institutional Supports for the Development of SMEs in Bangladesh**

The government of Bangladesh has undertaken different institutional programs and regulatory framework for the development of SMEs in Bangladesh. These are briefly outlines as follows:

**a) Policy Framework:**

- I. Seventh Five Year Plan;
- II. National Industrial Policy 2016, and
- III. SME Policy 2005.

**b) Institutions for Supports:**

- I. One Stop Service;
- II. SME Foundations;
- III. Bangladesh Bank SME Credit and Monitoring Department;
- IV. BSCIC, and
- V. BASIC Bank

Different development initiatives and SME policies and programs being implemented by different agencies –Government, private/apex bodies, NGOs, and development partners in the country are shown as follows:

	<b>Initiatives, Programs, Policies</b>	<b>Public Sector Organizations/Donors</b>	<b>Private Sector Organizations</b>
<b>A</b>	<b>Promotion of Entrepreneurial Culture</b>		
<u>1</u>	SME promotional Councils/bodies	SME Cell SME Advisory Panel	

<u>2</u>	Entrepreneurship development promotional campaigns	Bangladesh Small & Cottage Industries Corporation	
<u>3</u>	Awards for Successful SMEs – “Small Business Entrepreneur of the Year”	Ministry of Commerce; Ministry of Industry	DCCCI, FBCCI,
<u>4</u>	Quality Awards for SMEs		
<u>5</u>	President/Prime Minister’s mention about entrepreneurship in his/her speeches/statements and budget statements	Prime Minister, in her speech, mentioned about SMEs.	
<u>6</u>	Entrepreneurship Development Action Plan at the national level	Very recently an Action Plan has been prepared and approved by the government	
<u>7</u>	Government’s vision promoting entrepreneurship, innovation and competitiveness at the national level	SME Policy Strategies have been adopted by the government	
<u>8</u>	Promotion of Entrepreneurship Profile for SMEs		
<u>9</u>	Promotion of benchmarking and best practice networks	To be done	Model beginning has been made on this score by the efforts of such private-sectors efforts as Katalyst.
<u>10</u>	Promotion of Women and Youth entrepreneurship	Government has been implementing different projects for women entrepreneurship development	Women trade bodies are working for women entrepreneurship development
<u>11</u>	Promotion of e-business and ICT development	Government has been implementing ICT projects	Private sector ICT business is growing fast
<u>12</u>	Promotion of technological innovation for SMEs		Trade bodies
<u>13</u>	Promotion of financial products and schemes for SMEs	ADB loan for SME lending  State-owned SME bank	Private commercial banks and financial institutions
<u>14</u>	Productivity promotional campaign for SMEs	National Productivity Organization	
<u>15</u>	Promotion and availability of SME database, SME publications, SME web-based portals for information and business matching	Bangladesh Bureau of Statistics  SME Website launched by SME Cell	Katalyst/SEDF/ GTZ/ JOBS/ MIDAS
<u>16</u>	Provision of infrastructural facilities	BSCIC Industrial Estates	

<b>B</b>	<b>Regulation and Policies</b>		
<u>1</u>	Laws/Regulations/Policies for SME development at the national level – Availability of a SME Framework	Industrial Policy 2005/2010/2016, and SME Policy Strategies 2005	
<u>2</u>	Policies /Regulations to support technological development		
<u>3</u>	Policies/Regulations for ICT development	<u>Project on ICT/web-portal is under implementation</u>	
<u>4</u>	Policies/Regulations for SME's access to markets		
<u>5</u>	Policies/Regulations for SMEs' access to financial facilities		
<u>6</u>	Policies/Regulations for Entrepreneurship Development (separate policy in addition to the SME Policy, if any)	Industrial Policy 2005/2010/2016,	
<u>7</u>	Bankruptcy laws which smoothens the exit of enterprises that are not sustainable or competitive	Bankruptcy Law 19==	
<u>8</u>	Labor Laws and employment regulations affecting SMEs	Yes	
<u>9</u>	Infrastructure facilities/exemptions provided to SMEs	BSCIC provides	
<u>10</u>	Specialized Prudential Regulations for financing to SMEs	Not yet	
<u>11</u>	Regulations on Financial Incentives for SMEs i.e. tax exemptions/benefits, duty concessions for SMEs	Nothing special	
<u>12</u>	Policy/Regulation for Productivity Development in SMEs	Not yet	
<b>C</b>	<b>Administrative Environment/Framework</b>		
<u>1</u>	Availability of permanent or ad-hoc units/cells mandated to represent SME views in the regulatory process	SME Cell under Ministry of Industries	
<u>2</u>	Councils/Consultative bodies/Task Force for SME development and/or to take SMEs' views into consideration while formulating policies and procedures	National Taskforce on SME Development	
<u>3</u>	Experts Advisory/Advisory Board/Specialized Boards set up to develop SMEs (in general or in specific sectors)	SME Advisory Panel	
<u>4</u>	Availability of Productivity improvement programs for the SMEs	yes	

<u>5</u>	Availability of Entrepreneurship Profile/Entrepreneurship Indicators for the country	Yet to be developed	
<u>6</u>	Systems/programs to monitor the entrepreneurial profile, entrepreneurial activity and entrepreneurial business environment (EBE)		
<u>7</u>	Programs/focus on developing Entrepreneurial Mind-sets, corporate vision and corporate entrepreneurship	Bangladesh Bank-the Central bank	
<u>8</u>	Procedures for development of SMEs:		
<u>a</u>	Registration of firms, formation of a new company, listing requirements	Yes	
<u>b</u>	Exit of uncompetitive firms	No	
<u>c</u>	Compliance and reporting	No.	
<u>d</u>	Licensing	No.	
<u>e</u>	Accounting standards	Yes	
<u>f</u>	IT driven communication through web portals	No	
<u>g</u>	Taxation	Yes	
<u>h</u>	Utilities	Yes, but patchy	
<u>i</u>	Standardization	No.	
<u>j</u>	Quality certificates, ISO certification	Essentially no	
<b>D</b>	<b>Entrepreneurship Training and Education</b>		
<u>1</u>	Entrepreneurship Curriculum at universities and colleges (covering start-up strategies, entrepreneurial behavior, application of marketing and finance to start-up, entrepreneurial finance such as venture capital and angel investors, intellectual property rights, franchising, corporate entrepreneurship/entrepreneur, prototyping, technology transfers, etc.)	Entrepreneurship is taught at some of the best private universities as part of BBA and MBA courses.	
<u>2</u>	Internship programs/attachment with enterprises for developing entrepreneurial skills	No	
<u>3</u>	Linkages between SMEs and colleges/universities	Very little	
<u>4</u>	Institute of Entrepreneurship – (separately discuss model of the institute and services provided, if applicable)	Bangladesh does not have any institute of entrepreneurship	

<u>5</u>	Entrepreneurship Training programs i.e. technical trainings, management trainings; trainings on corporate social responsibilities, entrepreneurship ethics, productivity and quality consciousness, use of information technology, ICT development, developing internal synergies and alliances with their employees, etc	Entrepreneurship development is included in courses offered by Bangladesh Institute of Management (BIM), which is under the Ministry of Industries. National Productivity Organization (NPO), also in the MOI, actively seeks to enhance the standards of quality-administration in practice in the country	
<u>6</u>	Other Skill Development Training Programs and Institutes (directed towards self-employment and entrepreneurship development, etc)	More than 100 Vocational Training Institutes (VTIs), which are variously under the administrative oversee of several ministries (Labour, Textiles, Education), exist to offer relatively short-term re-skilling training programmes	
<u>7</u>	Quality Standardization and Testing Institute	No	
<u>8</u>	Other Training Institutes for human resource development of SMEs	No	
<b>E</b>	<b>Network and Linkages for SME Development</b>		
<u>1</u>	Availability of Enterprise Cluster (separately discuss parameters and dynamics of the cluster model, if applicable)	There are between 30 and 40 clusters based on one or the other products, in the country.	
<u>2</u>	Availability of business development and business support service providers (Separately discuss specific models of these service providers, specific services are being provided, and how are these services marketed to the SMEs)	BSCIC used to perform a lot of profiling and then disseminating, among its own network of SCI entrepreneurs, of potentially viable business and industrial ventures. However, it essentially no longer does that, due to funding problems. Similarly, technology universities such as BUET is often approached by especially engineering industry owners for support in terms of assessing steel strength, and the needed degree of tempering in metals, for an agreed fee.	
<u>3</u>	Availability of business advisory/consultancy services for SMEs	No.	There are some consulting firms who sell such expert services
<u>4</u>	Strategic alliances and joint ventures within domestic and/or international markets in SMEs	No	No
<u>5</u>	Sub-contracting support for SMEs by larger enterprises		Yes, in apparel and knitwear industries

<u>6</u>	Availability of business incubators (separately discuss the model of incubators most commonly used)	No	No
<u>7</u>	Linkage programs for market access /programs, product development, technological access, etc for improving domestic and international market access for SMEs	No	No
<u>8</u>	Supply chain and value chain networks in the country and internationally	Yes	Yes
<b>F</b>	<b>Technology and ICT</b>		
<u>1</u>	Initiative for cross border technological cooperation (joint R&D, joint commercialization), regional association for technology-led enterprises	No	No
<u>2</u>	Technology business incubators	No	No
<u>3</u>	Availability of back-up/pilot and demonstration projects which foster innovation and technological development	No	No
<u>4</u>	Facilities for developing technopreneurs – availability of knowledge centers, research and development centers, and testing laboratories, etc	No	No
<u>5</u>	Facilitation of benchmarking exercises and sharing of best practices – Best Practice Networks	Benchmarking facilities exist in desultory manner in BUET and other technology universities	
<u>6</u>	Availability and facilitation of e-business and e-commerce practices, use of internet and other e-market, e-business methodologies		
<u>7</u>	Availability of web-based SME portals, SME database, information networks		
<b>G</b>	<b>Financial Support</b>		
<u>1</u>	Support and role of the Bangladesh Bank in providing financial access to SMEs	Yes, Bangladesh Bank has department and credit programs	NGOs
<u>2</u>	Availability of specialized Financial Institutions for SMEs		
<u>3</u>	Specialized financial products and incentives for small enterprises		
<u>4</u>	Availability of SME Fund, Technopreneurship or Intrapreneurship Fund, etc		

5	Availability of Venture Capital Funds or risk financing mechanisms, risk mitigation fund, credit guarantee schemes		
6	Grants for SMEs for technological assistance, market access, productivity improvements, research and development, innovations, product development, e-business, ICT development, supply chain networks, etc		

*Source: Miah, M.A. (2006), An Overview of SMEs in Bangladesh, A Project of SME Development Program under Ministry of Industries, Bangladesh.*

### Analysis of Potential Growth and Development of SMEs in Bangladesh

SMEs in any country can work as a strategic third party vehicle for both micro enterprises and large enterprises. SMEs in Asia have received attention of foreign investors, NGOs, supra-nationals, and Government. Government has recognized the importance of SMEs for its economic sustainability through different policy, programs, and support services. But these are found to be missing targets. Otherwise, SMEs could grow and develop at most fastest rate in every economy of the world.

**Table 4: Growth Opportunities of SMEs in Bangladesh**

Country	SMEs as % of all enterprises	Contribution of SMEs to GDP %	Contribution of SMEs to Employment %
Bangladesh	50.91	20.25% -	35.47%
India	97.60	80%	-
Pakistan	60.00	15%	80%
China	99.00	60%	92%
Japan	99.70	69.50%	72%
Hong Kong			61.50%

*Sources: Different Documents-Papers, Website, Report etc.*

It has been found from the analysis of Table 4 that the percentage of SME establishment of Bangladesh is 50.91% of all enterprises which is the least of all countries stated above. Besides, contribution of SMEs to GDP is higher than that of Pakistan and less than those of rest of the countries; and contribution of SMEs to the employment of Bangladesh is the least of all. All these indicate that SMEs in Bangladesh have highest growth and development potential in the days to come.



## IDENTIFICATION OF PROBLEMS AND CHALLENGES FACING SMES IN BANGLADESH

SMEs in Bangladesh has been facing many types of problems and challenges relating to management, finance, technology, marketing, profession skill, industrial infrastructures, regulatory & bureaucracy, etc in the process of growth and development in economies. The study has identified problems and challenges are facing SMEs in Bangladesh on the basis of review of literatures, content analysis, and talking to the professionals. Then, the study has analyzed the data collected over problems and challenges on five point scales applying sophisticated Varimax Rotated Factor Analysis. The analyses of findings have been made in the following sub-sections:

### Ranking of Problems and Challenges of SMEs in Bangladesh on Adjusted Mean Score

The study has attempted to identify the problems and challenges facing SMEs in order of their magnitudes with reference to adjusted mean score. In this case, researcher has determined adjusted mean score as a relative measure and then, ranked them according this relative measure as follows:

**Table 5: Ranking of Problems and Challenges of SMEs in Bangladesh on Adjusted Mean Score Basis**

	Problems and Challenges	Mean	Std. Deviation	Adjusted Mean Score	Rank
X15	Paucity of Fiscal Incentives	3.902	0.700	5.573	I
X2	Access to Finance/Capital	4.490	0.809	5.549	II
X8	Marketing Problems	3.745	0.688	5.441	III
X16	Lop-sided SMEs Development Policies	3.137	0.601	5.223	IV
X13	Lack of Professionals and Unskilled H Resources	3.863	0.749	5.158	V
X5	Multiple Taxes & Levies	3.922	0.821	4.778	VI
X1	Management Problems	3.941	0.858	4.593	VII
X14	Absence of Support Services	3.353	0.744	4.509	VIII
X19	Deficient Entrepreneurial, Managerial, and Technical Skills	4.020	0.905	4.440	IX
X6	Access to Modern Technology	3.686	0.883	4.175	X
X11	Deficient infrastructure and utility services	3.549	0.856	4.147	XI
X18	Entrepreneurial Capabilities	3.961	0.979	4.046	XII

X9	Non availability of Raw Materials Locally	3.137	0.872	3.597	XIII
X17	No Drive for Research Based Products and Idea	3.941	1.103	3.573	XIV
X7	Unfair Competition	3.765	1.088	3.461	XV
X20	Regulatory Compliance Before Set up	3.118	0.931	3.350	XVI
X4	Environmental Factors	3.431	1.044	3.286	XVII
X3	Policy inconsistencies and Govt. bureaucracy	3.569	1.100	3.244	XVIII
X 12	Lack of freehold land	2.863	0.939	3.050	XIX
X10	Deficient legal and regulatory framework	2.980	1.010	2.952	XX

*Source: Survey Instrument and output derived from using SPSS Version 16.*

*Note: Data have been compiled by Researcher.*

It has been found from the perusal of Table 5 that paucity of fiscal incentives, access to finance/capital, and marketing problem are three most important problems and challenges facing SMEs in order of their magnitudes. It has also been found that these three problems are followed by lop-sided SME development policies, lack of professional skills, multiple taxes & levies, and management problems in order of their importance. This is how; the study has presented all the problems and challenges facing SMEs in Bangladesh in Table 5.

### **RANKING OF PROBLEMS AND CHALLENGES ON WEIGHTED FACTOR SCORE**

In this section, the study has followed a scientific procedure for calculating weighted score and ranking factors of different clusters on weighted factor score. So, the analyses of findings are subject to zero-order correlation matrix, principal component analysis, and rotated factor matrix.

#### **Analysis of Zero Order Correlation Matrix of Problems Facing Sample SMEs**

The results of zero-order correlation matrix have been shown in Appendix I. From the perusal of this appendix I, it has been found that Variable X16 has been found to have significant relationship with variables- X1, X3, X6, X10, X12, and X13; Variable X18, with variables-X2, X4, X5, X11, and X12; and Variable X20, with variables with variables-X9, X11, and X18 at 1% level of significance. The significant underlying relationship between variables would lead to the construction of different unrelated factors.

### Identification of Factors on Principal Component Analysis

The Principal Components derived from the iteration of zero order correlation matrix have been shown in Appendix-II. It has been found from the perusal of this appendix that the Eigen value is 1.287 at factor variable six which has led to the construction of six factors. These six factors are orthogonal factors which indicated that all six factors are unrelated factors. It has also been found that all these six factors have accounted for 81.44% of the total variation.

### Analysis of Categorical Problems of Factors

The rotated factor matrix derived from analysis of principal factors has been shown in Appendix III. According to the basic wisdom, the study has selected variables belong to a particular factor on the basis of factor loadings of 0.50 and above. All these six factors have been analyzed in the following sub-sections:

#### Factor One: Entrepreneurial and Managerial Skills

Variable	Entrepreneurial and Managerial Skills	Factor Loadings
X4	Environmental Factors	0.684
X12	Lack of freehold land	0.711
X13	Lack of Professionals and Unskilled H Resources	0.643
X18	Entrepreneurial Capabilities	0.868
X19	Deficient Entrepreneurial, Managerial, and Technical Skills	0.834
<b>Variation Accounted For</b>		<b>19.45%</b>

It is evident from Factor One that Variable X18, X4, X12, X13, and X19 have been found to have significant association. The factor loadings of these variables range from 0.643 to 0.868. This factor has accounted for 19.45% of the total variation. Finally, these have constituted an important factor relating to problems and challenges facing SME enterprises in Bangladesh. Therefore, this factor can be recognized as factor of Entrepreneurial and Managerial Skills.

#### Factor Two: SME Policies and Support Services of Management

Variable	SME Policies and Support Services of Management	Factor Loadings
X1	Management Problems	0.696
X14	Absence of Support Services	0.564
X15	Paucity of Fiscal Incentives	0.712
X16	Lop-sided SMEs Development Policies	0.855
<b>Variation Accounted For</b>		<b>15.99%</b>

From the analysis of Factor-II, it has been found that Variables-X16, X15, X1, and X14 have higher factor loadings and led to the constellation of second most important factor with 15.99% variation. So, this factor can be recognized as factor of SME Policies and Support Services of Management.

#### **Factor Three: Research Based Products and Taxes**

<b>Variable</b>	<b>Research Based Products and Fiscal Measures</b>	<b>Factor Loadings</b>
X5	Multiple Taxes & Levies	0.836
X7	Unfair Competition	-0.682
X8	Marketing Problems	0.784
X17	No Drive for Research Based Products and Idea	0.682
<b>Variation Accounted For</b>		<b>15.67%</b>

The study has found from the analysis of factor three that Variables-X5, X8, X7, and X17 have been found to have higher to highest factor loadings and significant association. This factor has accounted for 15.67% of total variation. This has led to the constellation of third important factor. This factor can be recognized as factor of Research Based Products and Taxes.

#### **Factor Four: Infrastructural and Compliance Factors**

<b>Variable</b>	<b>Infrastructural and Compliance Factors</b>	<b>Factor Loadings</b>
X9	Non availability of Raw Materials Locally	-0.556
X11	Deficient infrastructure and utility services	0.604
X20	Regulatory Compliance Before Set up	0.834
<b>Variation Accounted For</b>		<b>10.37%</b>

It has been found from the examination of factor four that variables X20 has positive relationship with Variable X11, and negative association with X9. The factor loadings of these variables range from high to higher with 10.37% of the total variations. So, this has been the fourth most important factor and can be named after Infrastructural and Compliance Factor.

#### **Factor Five: Capital and Regulatory Factor**

<b>Variable</b>	<b>Capital and Regulatory Factor</b>	<b>Factor Loadings</b>
X2	Access to Finance/Capital	0.821
X10	Deficient legal and regulatory framework	0.757
<b>Variation Accounted For</b>		<b>10.002%</b>

The fifth important factor is composed of two variables: X2 and X10 with higher factor loadings. This has accounted for 10.002% of the total variation. This has led to constellation of another dimension-Capital and Regulatory Factor.

#### **Factor VI: Technological and Bureaucratic Factor**

<b>Variable</b>	<b>Technological and Bureaucratic Factor</b>	<b>Factor Loadings</b>
X3	Policy Inconsistencies and Government	0.597
X6	Bureaucracy Access to Modern Technology	0.913
<b>Variation Accounted For</b>		<b>9.96%</b>

From the observation of Factor VI, it has been found that variable X3 (Policy Inconsistencies and Government Bureaucracy) and variable X6 (Access to Modern Technology) have constituted an important factor: Technological and Bureaucratic Factor. This has accounted for 9.96% of the total variation.

#### **Ranking of Factors of Problems on Factor Score**

The study has computed weighted factor score in order to rank the factors. These have been shown in Table 6 as follows:

**Table 6: Ranking of Factors**

<b>Factor No.</b>	<b>Factor</b>	<b>Factor Score</b>	<b>Rank</b>
1	Entrepreneurial and Managerial Skills	2.75	III
2.	SME Policies and Support Services of Meng.	2.50	IV
3.	Research Based Products and Taxes	2.20	V
4.	Infrastructural and Compliance Factors	1.25	VI
5.	Capital and Regulatory Factor	3.50	I
6.	Technological and Bureaucratic Factor	3.20	II

*Note: Data have been compiled by author*

It is evident from the perusal of Table 6 that weighted factor score of Factor Five is the highest of all. This indicates that this factor- Capital and Regulatory Factor is the most important factor of problems and challenges facing SMEs in Bangladesh. This factor consists of two important variables- Access to Finance/Capital and Deficient legal and regulatory framework. In practice, SMEs in Bangladesh have a little access to Finance and acts and regulations of SMEs are found mostly ineffective. So, this is reflecting the real scenario of different SME sectors of Bangladesh. The second most important factor of problems and challenges on weighted factor score is 'Technological and Bureaucratic Factor'. This factor is composed of problems and challenges-Policy Inconsistencies and Government Bureaucracy and Access to Modern Technology. These findings are

consistent with the findings of earlier studies in Bangladesh. This implies that SMEs in Bangladesh are mostly Labour intensive and facing problems of complex administrative process and poor governance in the process of establishing SMEs and working of SMEs. The very third important factor on weighted factor score is 'Entrepreneurial and Managerial Skills'. This factor comprises of problems and challenges- Environmental Factors, Lack of freehold land, Lack of Professionals and Unskilled H Resources, Entrepreneurial Capabilities, Deficient Entrepreneurial, Managerial, and Technical Skills. This is reflecting the true scenario of poor skills of human resources in the area of SMEs in Bangladesh. The other important factors of problems and challenges are SME Policies and Support Services of Management, Research Based Products and Taxes, and Infrastructural and Compliance Factors in order of their magnitudes.

### **SUMMARY, POLICY IMPLICATION AND CONCLUSION**

SMEs in Bangladesh have been experiencing problems and challenges relating to Finance, Technology, Skills of workers and capability of entrepreneurs, regulations and SME policies, complex bureaucracy, and poor infrastructural supports. Despite significant contribution to the economy of Bangladesh, SMEs are continuously struggling to sustain with a profitable niche. In view of this, the study has been undertaken aiming at identifying problems and challenges facing SMEs in Bangladesh. The study has selected sample of SMEs purposively and collected primary data by conducting interview of 51 entrepreneurs/relevant personnel of 51 SMEs of ten sectors. The study has tested the validity of survey instrument, and found data collected and used as most reliable. Besides, the study has examined the relevance of employing 'Varimax Rotated Factor Analysis' and found most relevant.

#### **Summary of the Findings**

The study has attempted to address size of SMEs in Bangladesh Economy, Contribution of SMEs to economy; SMEs support services and programs, and problems & challenges of SMEs in Bangladesh. The summary of the findings has been outlined as follows:

- a) SMEs in Bangladesh are creating employment opportunities through investment in both rural and urban areas and meeting the financial demand and non-financial demands of the people across country.
- b) SMEs in Bangladesh have contributed 48.41% to gross output: 47.63% to gross value added; and 38.36% to national exchequer in the form of indirect taxes. So, SMEs in Bangladesh have been found to have contributed relatively highest to the economic development of the Country.

- c) 46.60% of State owned enterprises, 51.01% of private enterprises, 50% of Joint ownership, 46.88% of Joint Ventures, and 33.84% of the Foreign Ventures belong to SMEs.
- d) The contribution of SMEs in Bangladesh to GDP and employment, and percentage of SMEs of the total establishment are found to be the lowest as compared other countries in Asia. This indicates potential growth opportunity of SMEs in Bangladesh.
- e) The SME policy, related laws & regulations, and SME programs & support services are found to be not target oriented.
- f) The study has found that SMEs in Bangladesh have most important problems & challenges: Capital and Regulatory Factor, Technological and Bureaucratic Factor, Entrepreneurial and Managerial Skills, and SME Policies and Support Services of Management in order of their magnitudes.

### **Policy Implications: Policies and Strategic Measures**

Research has forwarded following measures for resolving problems and addressing challenges of SMEs in Bangladesh:

- a) The Government of Bangladesh should adopt following measures for the development of SMEs in Bangladesh:
  - I. SME policy needs to be revised and updated to be most effective;
  - II. All agents of Government like SME Foundations, SME Cell, BASIC, BSCIC, Bangladesh Bank should be integrated through uniform policy for the development of SMEs through target programs-credit, skill development, management & bureaucratic support, infrastructural supports, etc. Besides, SME entrepreneurs are not aware of many government programs due to absence of awareness program and non-professional behavior of state agents.
  - III. Government should provide both fiscal incentives on fixed investment and investment in R &D.
- b) Apex Bodies can undertake following programs for the development of skills of workers and capability of SME Entrepreneurs:
  - I. Arranging training programs for both managers and entrepreneurs on need basis;
  - II. Ensuring the effective use of state programs for the development of SMEs;
  - III. Advocating for SMEs in the upper house of government; and
  - IV. Marketing of SME products through trade fair and enabling SMEs to get information as to the potential market outside Bangladesh.
- c) SMEs in Bangladesh can adopt following measures for their sustainability with profitable niche in the competitive market:

- I. Development of competent work force and entrepreneurial capability;
- II. Enhancing management efficiency;
- III. New technology for better product at least cost; and
- IV. Investment in R &D for better product and ideas.

### Conclusion

SMEs in Bangladesh has potential to grow and can contribute more to the economy if problems and challenges are properly addressed. This requires combined efforts of Government, Apex Bodies, Agents, FIs, and SME entrepreneurs for the growth and development of SMEs. The measures suggested are expected to bring a real change in growth and development of SMEs in Bangladesh.

### REFERENCES

1. Asian Development Bank (ADB). (2014), *Asia SME Finance Monitor 2013*. Manila: Asian Development Bank.
2. Bangladesh Bank (2016), *Small and Medium Enterprise (SME) Credit Policies & Programmes*, Dhaka, Bangladesh Bank.
3. Begum, R., (1993), 'Entrepreneurship in small industries: a case study of engineering units' *Dhaka University Journal of Business Studies*, 14(1): 159-168.
4. Chowdhury, M. S.A., MdKazi Golam Azam, M.G. and Islam, S. Islam (2013), "Problems and Prospects of SME Financing in Bangladesh" *Asian Business Review*, Vol. 2, No. 2
5. Chowdhury, M., (2007), 'Overcoming entrepreneurship development constraints: the case of Bangladesh' *Journal of Enterprising Communities*, 1(3): 240-251, Emerald.
6. Dillion, W.R. and Goldstein, M. (1984) *Multivariate analysis: Methods and Applications*, London: John Wiley and Sons
7. Frucher, B. (1967) *Introduction to Factor*, London: Von Northhand.
8. James R. B., Tong L., Wenling L., Triphon P., and Glenn Y. (2008), *Capital Access Index 2007: Best Markets for Business Access to Capital*, (Santa Monica, Milken Institute.
9. Jasra, J.M., Khan, M.A., Hunjra, A.I., Rehman, R.A.U. & Azam, R.I. (2011). Determinants of Business success of small and medium enterprises. *International Journal of Business and Social Science*, 2(20):274-280.
10. Kaiser, H.F., (1958), 'The Varimax criterion for analytic rotation in factor analysis' *Psychometrika*, 23: 187-200.
11. Khan, A., (2004) 'Development of Small and Medium Scale Enterprise in Bangladesh: Prospects and Constraints (April 1, 2010)' Available at SSRN: <http://ssrn.com/abstract=1583707> or <http://dx.doi.org/10.2139/ssrn.1583707.992>. 'African Entrepreneurs-Pioneers of Development' *Small Enterprise Development*, 3(2):15-25.



12. Khandker, A. (2014), "Constraints and Challenges of SME Development in the Developing Countries: A Case Study of India, Pakistan and Bangladesh", *International Journal of SME*, Vol. 1, No. 1, April 2014.
13. McDowell, S.D., (1997) 'Globalization, Liberalization and Policy Change: A Political Economy of India's Communication Sector' New York: St. Martin Press.
14. Minton, A.A., (2006) 'SMEs in Bangladesh' *CACCI J.*, 1(1): 12-19.
15. Quddus, M. and S. Rashid, (2000) 'Entrepreneurship and Economic Development: The Remarkable Story of Garment Exports from Bangladesh' The University Press Limited, Dhaka.
16. Steel, W.F., (1994) 'Changing the Institutional and Policy Environment for Small Enterprise Development in Africa' *Small Enterprise Development*, 5(2): 4-9.
17. Yoshino, N. and Taghizadeh-Hesary, F., (2016), Major Challenges Facing Small and Medium-sized Enterprises in Asia and Solutions for Mitigating Them, No. 564, Manila: ADB Institute

APPENDICES

Appendix 1:  
Zero Order Correlation Matrix of Variables (Challenges and Problems of SMEs)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20	
X1	1.00																				
X2	0.07	1.00																			
X3	0.10	0.22	1.00																		
X4	-0.26	0.36	0.37	1.00																	
X5	0.16	0.09	0.23	-0.36	1.00																
X6	0.24	0.06	-0.20	0.06	-0.45	1.00															
X7	0.07	-0.14	0.05	-0.53	0.61	-0.35	1.00														
X8	0.21	0.16	0.01	-0.15	0.42	0.00	0.29	1.00													
X9	0.36	0.36	0.21	0.11	0.13	0.34	-0.24	0.36	1.00												
X10	0.16	0.53	0.39	0.62	-0.07	0.17	-0.48	-0.24	0.25	1.00											
X11	0.02	0.07	0.47	0.36	0.18	-0.60	0.06	0.11	-0.13	0.45	1.00										
X12	0.19	0.12	0.29	0.33	0.14	0.14	-0.13	0.19	0.05	0.52	0.47	1.00									
X13	0.39	0.11	0.12	-0.10	0.60	0.12	0.30	0.55	0.27	0.23	0.34	0.26	1.00								
X14	0.36	0.14	0.05	0.19	-0.05	0.20	-0.22	0.34	0.32	0.17	0.22	0.36	0.20	1.00							
X15	-0.21	0.05	0.39	0.09	0.12	-0.15	-0.16	-0.26	-0.24	-0.09	-0.01	-0.29	-0.26	0.30	1.00						
X16	0.44	-0.10	0.45	0.19	-0.06	0.42	-0.26	0.09	0.15	0.40	0.16	0.57	0.40	0.05	0.13	1.00					
X17	0.00	0.12	0.37	0.01	0.30	-0.43	0.59	0.09	-0.43	-0.05	0.48	0.09	0.21	0.03	0.33	-0.62	1.00				
X18	0.12	0.36	0.21	0.60	-0.40	0.15	-0.31	0.01	0.01	0.57	0.53	0.54	0.05	0.18	0.05	0.28	0.33	1.00			
X19	-0.26	0.21	0.31	0.63	-0.32	-0.24	-0.32	-0.31	-0.31	0.50	0.71	0.36	-0.06	0.14	0.29	0.07	0.30	0.61	1.00		
X20	0.33	0.19	0.04	0.46	-0.04	0.02	-0.31	-0.26	0.28	0.77	0.49	0.41	0.05	0.34	-0.07	0.44	-0.05	0.40	0.33	1.00	
X1	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20	
X2																					
X3			0.06																		
X4			0.02	0.00	0.00																
X5				0.05	0.00																
X6					0.06	0.00															
X7						0.00	0.00	0.01													
X8							0.00		0.02												
X9								0.01	0.05	0.00											
X10									0.00	0.05	0.04										
X11											0.00										
X12												0.00	0.00								
X13													0.05	0.01	0.05						
X14														0.06	0.01	0.06					
X15															0.02	0.04	0.02				
X16																0.00	0.00				
X17																	0.07				
X18																		0.10		0.02	0.01
X19																			0.02	0.02	0.00
X20																				0.00	0.01

**Appendix 2:  
Principal Component Analysis**

Total Variance Explained								
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings	
	Total	% of Variance	Cumulative %					
1	5.284	26.420	26.420	5.284	26.420	26.420	3.890	19.449
2			3.358	3.358	16.789	43.208	3.198	15.991
3	3.069	15.343	58.551	3.069	15.343	58.551	3.134	15.669
4	1.776	8.882	67.433	1.776	8.882	67.433	2.073	10.366
5			1.514	1.514	7.572	75.005	2.000	10.002
6	1.287	6.433	81.438	1.287	6.433	81.438	1.992	9.961
7	0.954	4.768	86.207					
8	0.740	3.700	89.907					
9	0.610	3.048	92.954					
10	0.444	2.219	95.173					
11	0.308	1.542	96.716					
12	0.247	1.237	97.953					
13	0.177	0.886	98.839					
14	0.074	0.370	99.209					
15	0.062	0.312	99.521					
16	0.049	0.244	99.765					
17	0.027	0.135	99.900					
18	0.015	0.073	99.973					
19	0.004	0.018	99.991					
20	0.002	0.009	100.000					
Extraction Method: Principal Component Analysis.								

**Appendix 3:  
Rotated Factor Matrix**

	<b>Problems and Challenges</b>	<b>F-1</b>	<b>F-2</b>	<b>F-3</b>	<b>F-4</b>	<b>F-5</b>	<b>F-6</b>
X1	Management Problems		0.696				
X2	Access to Finance/Capital					0.821	
X3	Policy inconsistencies and govt bureaucracy						0.597
X4	Environmental Factors	0.684					
X5	Multiple Taxes & Levies			0.836			
X6	Access to Modern Technology						0.913
X7	Unfair Competition			- 0.682			
X8	Marketing Problems			0.784			
X9	Non availability of Raw Materials Locally				- 0.556		
X10	Deficient legal and regulatory framework					0.757	
X11	Deficient infrastructure and utility services				0.604		
X12	Lack of freehold land	0.711					
X13	Lack of Professionals and Unskilled H Resources	0.643					
X14	Absence of Support Services		0.564				
x15	Paucity of Fiscal Incentives		0.712				
x16	Lop-sided SMEs Development Policies		0.855				
X17	No Drive for Research Based Products and Idea			0.682			
X18	Entrepreneurial Capabilities	0.868					
X19	Deficient Entrepreneurial, Managerial, and Technical Skills	0.834					
X20	Regulatory Compliance Before Set up				0.834		

*Source: Survey Instruments*