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Constraints to the Development of Small and Medium Sized Enterprises in Bangladesh: An Empirical Investigation

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Abstract: This study investigates the factors that influence the growth and development of small and medium-sized enterprises (SMEs) in Bangladesh and the implications these factors have for policy. The expositions of problems that may impact the growth of SMEs form the conceptual basis for the design of the research instrument used for this study. Therefore, in order to capture the information relating to research objectives we developed a questionnaire. The variables in the survey instrument were derived from a review policy, exploratory research and the relevant theoretical and empirical literature. Factor analysis was used to reduce a large number of variables to a smaller set of underlying factors that summarize the essential information contained in the variables. This research study uses varimax orthogonal rotation method developed by Kaiser (1958). The results indicate that variables related to finance, infrastructure, market, technology experience and political influence are highly perceived as growth inhibitors. Limitations and future research direction were discussed.

Key words: SMEs, entrepreneurs, model, growth constraints, infrastructure.

INTRODUCTION

Various types of small and medium sized enterprises (herein referred to as SMEs) such as village handicraft makers (weaving, embroidery etc) potteries, dying, small machine shops, restaurants, plastics, knitting, small dairy process, toys, leather goods, live stocks, fisheries, chemical, transport, constructions are common in Bangladesh. Since these are labor intensive products, SME sector has gained momentum in the past few years. Entrepreneurs from Hong Kong, Japan and Korea have taken advantage of Bangladesh's cheap and easily trainable labor and its infrastructure facilities to manufacture products for the export market. Thus SMEs are becoming increasingly important and recognized as the engine of growth in this country. It may be mentioned here that SMEs are widely regarded as the driving force for economic growth of both developed and developing nations. The important contribution that SME sector can make to employment and income generation is worldwide recognized, and in particular in Bangladesh. It is now an accepted fact that the country's more than six million SMEs –firms of less than 100 employees have a significant role in generating growth and jobs (ADB, 2004).

The United Nations Industrial Development Organization (UNIDO) defines SMEs in terms of number of employees by giving different classifications for industrialized and developing countries (see Elaian, 1996). The definition for industrialized countries is given as follows:

- Large - firms with 500 or more workers; Medium - firms with 100-499 workers; Small - firms with 99 or less workers.

The classification given for developing countries is as follows:

- Large - firms with 100 or more workers; Medium - firms with 20-99 workers;
- Small - firms with 5-19 workers; Micro - firms with less than 5 workers.

It is clear from the various definitions that there is not a general consensus over the definition of SME. Definitions vary across industries and also across countries. It is important now to examine definitions of SMEs given in the context of Bangladesh. SMEs in Bangladesh are defined for purposes of industrial policies by the Ministry of Industries (MOI). Historically, this definition has been in terms of fixed-investment brackets.

Small enterprises are those who have fixed capital investments of greater than 100,000 Taka (1,750 USD) but less than 100million Taka (USD 1.75 million) as opposed to medium-sized enterprises whose fixed capital investments range from 100 to 300 million Taka (USD 1.75million - 5.25 million). Taka is the name of Bangladesh currency. Small Enterprise has less than 50 employees and /or less than 15 million Taka in Fixed Capital Investment. Medium Enterprise has 51-99 employees and / or Fixed Capital Investments between 1.5 million and 100million Taka.

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In Bangladesh, the SMEs account for about 45 percent of manufacturing value addition, 80 percent of industrial employment, 90 percent of total industrial units and about 25 percent of total labor force. Their total contribution to export earnings ranges from 75 percent to 80 percent, according to a recent economic census. The SMEs make up 75 percent of the domestic economy, as reported in the Daily Star (2012).However, Small and medium enterprises, including the tiny and 'micro' enterprises comprise virtually all (about 99.85%) of all business enterprises outside agriculture in Bangladesh. Large Enterprises account for only 0.15% of the said enterprises.

Therefore, SMEs are potent instrument in the economic development of a poor nation like Bangladesh. Needless to mention that SMEs in Bangladesh have pre-occupied the minds of researchers, academia and the government as a special significance to poverty reduction and potential contribution to the overall economic growth of the country. Bangladesh SMEs contributing to 15% to Gross Domestic Product (GDP) of the country (Narain 2003 cited in Chowdhury 2007). Though different government and non-government organizations (NGOs) are actively engaged in promoting the development of SMEs, they have not been able to unleash the development and growth of SMEs throughout the country. Thus in our view, it is important that the growth constraints be identified when developing SMEs in Bangladesh. It is against this background that this study was undertaken.

This study investigates the factors that influence the growth and development of small and medium-sized enterprises (SMEs) in Bangladesh and the implications these factors have for policy. The study is justified for a number of reasons. Most importantly, since its independence, the Bangladesh government and non-governmental organizations (NGOs) have been spending a sizable amount of money obtained from external funding institutions for entrepreneurial and small business development programs, which have generally yielded plethora of agriculture and petrochemical raw materials and huge domestic market in Bangladesh, there is a little progress in terms of export orientation, employment creation and regional development. It, therefore, becomes pertinent to identify the factors that impede small business development in the country.

All these issues are complex and not enough studies in the context of Bangladesh exist on the topic, the present study constitutes a field study and will hopefully contribute to better understanding of constraints that affect the growth and development of SMEs in Bangladesh. Thus the study constitutes an aid to the policy makers, researchers, business and the government for improving the various growth aspects of SME sector in this country. Therefore, our research question is:

Research question:

1. What are the factors that impede the SME sector development in Bangladesh?

Objective of the Study:

1. To identify constraints that SME sector in Bangladesh faces to grow and sustain.

Literature Review:

The literature on growth constraints to SME in Bangladesh is very sparse. Though, there is not much of a common body well-founded knowledge about the constraints that effect the growth of SMEs, a good number of studies (e.g., Bannock *et al*., 2002; Batra and Tan, 2003; Chowdhury, 2007) find that SMEs face challenges frequently. SMEs are different in characteristics like resource limitations (financial, human, and technological), informal strategies, and flexible structure (Hudson *et al*, 2001; Quian and Li, 2003). One might argue that SMEs have higher failure rate because of the financial, technological and human limitations. Several studies (e.g., Chowdhury, 2007; Mintoo, 2006; Marsden, 1992; Steel, 1994) have supported this argument. Capital shortage is a deterent to the growth of SME sector. The most important that frustrates the expansion and development of SMEs is the acute scarcity of required capital (Chowdhury, 2007). Human capital pertains to one's formal level of education and general experience (Chowdhury and Amin, 2011), Shapero and Sokol (1982); Gnyawali and Fogel (1984) reported that SME sector in developing countries are subject to hordes of hurdles like inadequate training facilities , absence of good skills in starting and managing SME businesses. Those SMEs who have more skilled and experienced workers with higher education are likely to be more efficient (Hewitt and Wield, 1992; Batra and Tan 2003). Other studies (e.g., lee, 2001, Yousuf , 2003, Camp and Anderson, 2000) found low technological capabilities as a major constraint in SME development whereas technologies enhance SME efficiently.

Khan (2004) revealed for the following constraints to the growth of SME sector in Bangldesh: (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, poor state of Technology. Qudus and Rashid (2000) reported that entrepreneurs in SME sector had to face a myriad of bureaucratic obstacles in their quest to start a SME enterprise. Begum (1993) reported about inadequate government efforts and incentives that appeared to have retarded the process of SME growth in the nation. Lack of infrastructure facilities in Bangladesh is another hindering factor for the growth of SMEs in Bangladesh (McDowell, 1997).

ADB (2009) has highlighted the following constraints such as limited access to finance, scarce , scarce medium and long-term credit, limited connectivity to markets, inadequate physical infrastructure, disadvantaged women entrepreneurs, absence of credit rating information system for SME borrowers. Deficiencies in the internal market environment are the major cause of SME failures, and revolve around management skills, financial knowledge, lack of expertise in functional areas such as marketing and human resource management (Leigthelm and Cant:2002). Needless to mention that marketing factors such as poor location, inability to conduct marketing research, poor products or services, misreading customer trends and needs also impact the success of SMEs..

Based on the foregoing discussion the constraints to SME growth and development from Bangladesh context may be classified as governmental policy, access to finance, market, technology; entrepreneurial capabilities and physical infrastructure. Recognition of these constraints to the growth of SMEs has led to the adoption of Pro-SME polices by developing and developed nations all over the world. Pro-SME policies mean that the government will directly support the development and growth of this sector by providing all means of incentives and assistance, any approach to solve development problems in Bangladesh must include the government support factors in the creation and development of SE sector (North 1990; Binks & Coyne 1983).

Theoretical Model and Hypotheses:

Based on above literature we have presented a tentative model for the growth of SME in Bangladesh, as depicted below. The essential thing in this frame of model is to formulate a decision model. Prior experience reveals that the development of small industry is a function of multiple issues of the socio-economic and political in nature So, our model consists of capabilities of entrepreneurs (CE), financial support (F), government support (G), appropriate technology (T), market relation/demand for the products (M), adequate infrastructure (I) and f is the format of the model, D is the objective or development of the sector. Therefore the model is:

$$D = f (CE, F, G, T, M, I).$$

The model is based on the assumption that development of SMEs depends on addressing these issues depicted in our model one by one keeping the whole situation in mind. The foregoing literature review supports all the issues in our model. Therefore, our model is in line with the literature review and following our model we can derive the following hypotheses:

H1: SME growth is significantly related to capabilities of SME entrepreneurs
H2: SME growth is significantly related to governmental support.
H3: SME growth is significantly related to availability of finance
H4: SME growth is significantly related to technological availability
H5: SME growth is significantly related to connectivity to markets
H6: SME growth is significantly related to sound physical infrastructure.

MATERIALS AND METHODS

The model indicates the relationship between SME growth factors and assumes that there are positive relationships between six growth factors depicted in the model and the growth and development of SMEs in Bangladesh. These constraints in growth and development of SMEs viz., lack of access to finance, lack of entrepreneurial capabilities, lack of governmental support, lack of proper technology , lack of connectivity to markets and sound physical infrastructure are the main constructs as is evidenced from several studies (e.g., ADB, 2009; Beck *et al*, 2006; Chowdhury and Amin, 2011).

Survey Instrument:

The exposition of problems that may impact the growth of SME forms the conceptual basis for the design of the research instrument used for this study. Therefore, in order to capture the information relating to research objectives we developed a questionnaire. 15 well-trained interviewers from the survey area who know SMEs and their business nature pre-tested the questionnaire. In addition, the reliability of the study was ensured by using the Cronbach's alpha (see table 1). In distributing questionnaires "drop and collect" procedure was chosen. The questionnaires were collected after six weeks. A follow- up visit was conducted to increase the response rate. In the absence of a sample frame, a judgmental sample was conducted among small and medium sized business owners located in southern districts of Bangladesh. 140 questionnaires were distributed to the managers and owners of 70 SME firms. 120 questionnaires were received; only 100 questionnaires were valid with a response rate of 71%.

The variables in the survey instrument were derived from a review policy, exploratory research and the relevant theoretical and empirical literature. We have outlined below the 21 variables in six categories, which

we have included in our questioner survey. Each variable consisted of at least 3 items. The values of Cronbach's alpha are greater than 0.6 for each variable and hence considered acceptable (Nunally, 1978). We conclude that the research instrument used in the study is valid and reliable. The items of the construct are assessed with "1" being very low and "5" being very high. Cronbach's alpha for all constructs ranged from .68 to .81, as depicted in table 5.

Sample Population:

70 firms from two industries (restaurants and small dairy processes) with 140 subjects (2 from each company) were sampled to ascertain what they viewed as major obstacles to their investments and growth. The subjects were the managers and owners. We achieved responses from 100 subjects from 50 companies. Almost 70 percent of the respondents were managers or had owned their businesses for more than 2 years, indicating relatively young firms. One in every four had Master Degree in business field, 40% had Bachelor Degrees in various branches of knowledge, and the rest had high school education. 80% of the businesses were sole proprietorship, 15% were partnership, and only5 % was private limited companies. The average employment of respondent business firms was 5 full time employees in 2011.

RESULTS AND DISCUSSION

Factor analysis is a data reduction technique used to reduce a large number of variables to a smaller set of underlying factors that summarize the essential information contained in the variables. To facilitate an easier interpretation of principal components, factor rotation methods were developed. This research study uses varimax orthogonal rotation method developed by Kaiser (1958). Principal components with Eigen values greater than one are usually retained.

Table 1: Mean ranking or perceived obstacles to the growth of SMEs.

Perceived obstacles	Mean	Std. Deviation
A: Entrepreneurial capabilities:		
Education	3.4364	1.54164
Experience	4.4059	.72358
Management Skills	3.8119	1.20593
B:Finance:		
High interest on bank loan	4.4158	.99265
Lengthy procedure in getting loan	3.5248	1.59119
Unavailability of long and medium term credit	4.0297	1.37445
Collateral requirements	4.0396	1.11284
C: Technology:		
Lack of access to IT	4.6238	.89277
Lack of computer knowledge	3.5545	1.49315
Lack of internet facilities	4.6832	.83583
Absence of websites	4.5842	2.86100
D: Market:		
Lack of knowledge of the formal market	4.2376	1.20124
Unavailability of raw materials	3.7723	1.56129
Limited connectivity to markets	4.0594	1.22329
Lack of information exchange	4.6337	.71726
E:Government Support:		
Bureaucratic administration of taxes	3.8614	1.00030
Corruption	3.9109	1.19247
Political influence	4.4356	5.14668
F: Infrastructure		
Lack of power supply	4.5743	.95233
Lack of good and proper transport facilities	4.7228	.72276
Costly and inefficient telecommunication	4.8119	.75780
Valid N (listwise)	101	

Source: Data analysis for this study

The results in table 1 depict that variables related to finance, infrastructure, market, technology experience and political influence are highly perceived as growth inhibitors. As a matter of fact, a careful examination of the factors listed in table reveal that all factors are perceived as important factors inhibiting growth and development of SMEs in Bangladesh.

Sampling Adequacy:

To judge the sampling adequacy and the factorability of the matrix as a whole we used Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO). If Bartlett's test of sphericity is large and significant and if the

KMO is greater than 0.6 then factorability is assumed. High values Kaiser-Meyer-Olkin (KMO) between 0.5 and 1.0 indicate factor analysis is appropriate (Leech *et al*., 2005).

Table 2: KMO and Bartlett's Test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.825
Bartlett's Test of Sphericity	Approx. Chi-Square	2105.238
	Df	210
	Sig.	.000

Source: Data analysis for this study

In table 2 a KMO value close to 1 indicates that patterns of correlations are relatively compact and therefore, factor analysis yield distinct and reliable factors. Kaiser (1960) recommends accepting values greater than 0.5 as acceptable values and values between .8 and .9 are great (see Hutcheson and Sofroniou (1999). Bartlett's test is highly significant (P<0.001), and therefore, factor analysis is appropriate.

Table 3: Total Variance Explained.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.020	42.951	42.951	9.020	42.951	42.951	5.306	25.265	25.265
2	3.322	15.818	58.769	3.322	15.818	58.769	4.409	20.996	46.261
3	1.516	7.218	65.987	1.516	7.218	65.987	3.954	18.829	65.089
4	1.383	6.586	72.573	1.383	6.586	72.573	1.420	6.761	71.850
5	1.083	5.159	77.732	1.083	5.159	77.732	1.235	5.881	77.732
		0							
Extraction Method: Principal Component Analysis.(source: data analysis for this study)									

Table 3 demonstrates that five components with Eigen values greater than one account for 77.73% of the total variance. According to the rules of principal component analysis only factors having Eigen values greater than one should be retained.

The first component (as per table 4) has an Eigen value of 9.02 with 7 items having 42.95%. The item in this component with the highest factor loading is entrepreneurial education (.869) followed by entrepreneurial experience (.853). The other items are high bank interest on loan (.607), lengthy procedure in getting bank loan (.784), unavailability of medium and long-term credit (.729), collateral requirements (.750), and management skills (.701). Component one is labeled human and financial, largely internal to firms.

Table 4: Rotated Component Matrix.

	Component				
	1	2	3	4	5
CE1	.869				
CE3	.853				
F2	.784				
F4	.750				
CE2	.701				
F1	.607				
F3	.729				
I2		.926			
I3		.915			
I1		.679			
M1			.764		
M2			.723		
M3			.664		
M4			.651		
G1				.649	
G2				.513	
G3				.628	
T1					.683
T2					.775
T4					.921
T3					.514
Cronbach's alpha	.68	.77	.73	.81	.79
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					

The second component relates to infrastructure consisting of three items. The items are lack of power supply (.679), lack of good and proper transport facilities (.915) and costly & inefficient telecommunication system (.926), which is the highest loading factor of all components. This component is external and highly impacts the growth of SMEs in Bangladesh. Other three components are market, technology and government and significantly impact the growth of SMEs (see table 4). In technology cluster the highest factor loading is

lack of internet facilities (.921). All these three components are external factors inhibiting the growth of SMEs. All hypotheses proposed in the study are, therefore, supported.

Conclusions and Implications:

The study reveals that SMEs in Bangladesh face numerous obstacles that affect their development and growth. These obstacles make it increasingly difficult for local businesses to flourish. What do make SME growth and development especially difficult, however, are corruption, political interference and lack of access to credit. If these can be improved, SMEs could provide local economies with substantial opportunities for growth. Setting up of new business must be free from red tape and lengthy procedures in obtaining new registration. Crime and corruption must be dealt with decisively in both private and public sectors of the business community. Improvement in the existing infrastructure of transportation facilities as well as reliable power must be provided to rural and urban areas. Above all technology in school curricula as well as adult education programs must be included to make sure that the wider population must be familiar with technology.

Limitations and Future Research Direction:

Though the study is a field study, it, however, was limited to two industries (restaurants and small dairy processes) and did not take into account in-depth interview based case studies to investigate into the constraints for the growth and development of SMEs in Bangladesh. However, considering the present study as bedrock, future research can be undertaken with more samples from different areas and clusters by using in-depth interview based case study method for a broader understanding of the constraints in the development and growth of SME sector of Bangladesh.

REFERENCES

Asian Development Bank, 2004. 'ADB to help foster development of SME sector in Bangladesh' Available at ADB.Org.

Asian Development Bank, 2009. 'Enterprise in Asia: Fostering dynamism in SMEs' Available at ADB.org.

Bannock, G., G. Matthew, J.A. Mariell, 2002. 'Indigenous Private Sector Development and Regulation in Africa and Central Europe: A 10 Country Study', London: Bannock Consulting, accessed from *ttp://www.dai.com/pdf/IndigenousPrivateSectorDevelopment.pdf* (on 9 December 2011).

Batra, G. and Hong, Tan, 2003. 'SME Technical Efficiency and Its Correlates: Cross-National Evidence and Policy Implications' World Bank Institute Working Paper, Retrieved fromhttp*://info.worldbank.org/etools/docs/library/86489/ses3.1_smetechefficiency.pdf* (on 9 October 2007).

Beck, T., D. Asli, L. Luc and M. Vojislav, 2006. 'The Determinants of Financing Obstacles' J. Int. Money Financ., 25(1): 932-952.

Begum, R., 1993. 'Entrepreneurship in small industries: a case study of engineering units' Dhaka University Journal of Business Studies, 14(1): 159-168.

Binks, M. and J. Coyne, 1983. 'The birth of enterprise, Hobart paper 98, IEA' London.

Camp and Anderson, 2000. 'Telecommunication Regulation in Bangladesh: A Broad Band future Through Development Initiative' Electronic proceedings of ISOC. www. ISOC. ORG/ INET.

Chowdhury, M., 2007. 'Overcoming entrepreneurship development constraints: the case of Bangladesh' Journal of Enterprising Communities, 1(3): 240-251, Emerald.

Chowdhury, M., 2011. 'Emerging women entrepreneurs in Bangladesh' The daily Starr, April.

Chowdhury, M. and M. Amin, 2011. 'The effects of human, social and financial capital on woman entrepreneurship venturing in Bangladesh' International Journal of Business and Economics Perspectives, 6(1): 138-149.

Elaian, K., 1996. 'Employment Implications of Small Scale Industries in Developing Countries: Evidence from Jordan' Science, Technology & Development, 14(1).

Gnyawali, D. and D. Fogel, 1994. 'Environments for Entrepreneurship Development: Key Dimensions and Research Implications' Entrepreneurship Theory and Practice, 18(4).

Hewitt, T. and D. Wield, 1992. 'Technology and Industrialization', in T. Hewitt, H. Johnson and D. Wield, (eds.), Industrialization and Development, Oxford University Press.

Hudson, M.A., A. Smart and M. Bourne, 2001. 'Theory and practice in SME performance measurement systems' Int. J. Oper. Prod. Manage., 21(8): 1096-1115.

Hutcheson, G.D. and N. Sofroniou, 1999. 'The Multivariate Social Scientist: an introduction to generalized linear models' Sage Publications.

Kaiser, H.F., 1958. 'The Varimax criterion for analytic rotation in factor analysis' *Psychometrika*, 23: 187-200.

Kaiser, H.F., 1960. 'The application of electronic computers to factor analysis' *Educational and Psychological Measurement*, 20: 141-151.

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.

Lee, J., 2001. 'Education for technology readiness: Prospects for developing countries' J. Hum. Dev., 2(1): 115-151.

Leech, N.L., K.C. Barrett and G.A. Morgan, 2005. 'SPSS for Intermediate Statistics, Use and Interpretation' 2nd Edition, Lawrence Erlbaum Associates Inc. New Jersey.

Ligthelm, A.A., M.C. Cant, 2002. 'Business success factor of SMEs in Gauteng: A proactive Entrepreneurial Approach' Bureau of market research.

Marsden, K., 1992. 'African Entrepreneurs-Pioneers of Development' Small Enterprise Development, 3(2): 15-25.

McDowell, S.D., 1997. 'Globalization, Liberalization and Policy Change: A Political Economy of India's Communication Sector' New York: St. Martin Press.

Minton, A.A., 2006. 'SMEs in Bangladesh' CACCI J., 1(1): 12-19.

North, D.C., 1990. 'Institutions, Institutional Change and Economic Performance' Cambridge: Cambridge University Press.

Nunnaly, J., 1978. 'Psychometric theory' New York: McGraw-Hill.

Qian, G. and L. Li, 2003. 'Profitability of small- and medium-sized enterprises high-tech industries: The case of the biotechnology industry' Strat. Manage. J., 24: 881-887.

Quddus, M. and S. Rashid, 2000. 'Entrepreneurship and Economic Development: The Remarkable Story of Garment Exports from Bangladesh' The University Press Limited, Dhaka.

Shapero, A. and L. Sokol, 1982. 'The Social Dimensions of Entrepreneurship', in C. Kent, D.

Steel, W.F., 1994. 'Changing the Institutional and Policy Environment for Small Enterprise Development in Africa' *Small Enterprise Development, 5*(2): 4-9.

Yusuf, S., 2003. 'Innovative East Asia: The Future of Growth' Washington, D. C.: The World Bank, A Co-publication of the World Bank and Oxford University Press.