Development of SMEs in Bangladesh

Lessons From The German Experience

FRIEDRICH EBERT STIFTUNG

SME FOUNDATION

Development of SMEs in Bangladesh:
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Researchers:
M. A. Baqui Khalily
Mohammed Jamal Uddin
Muhammad Shariat Ullah
Mohammad Tareq

Review Team:
Professor Dr. Momtaz Uddin Ahmed
Professor Dr. Mahmood Osman Imam
Professor Shibli Rubayat Ul Islam
Professor Dr. Mohammad Mahboob Rahman

Copyeditor:
Shuprova Tasneem

Dhaka, August 2020

Foreword

I am pleased to welcome that the report of the study *'Development of SMEs in Bangladesh: Lessons From German Experience'* is going to be published. The study was conducted under the joint collaboration of the Friedrich-Ebert-Stiftung (FES), Bangladesh and Small and Medium Enterprise Foundation (SMEF), Bangladesh. This study report provides an excellent summary on drawing lessons from the German experience for the development of SMEs in Bangladesh.

The objective of the study is to draw lessons from the German experience since Germany is considered as one of the successful countries in SME development in the world. In recent decades, success of German SMEs has drawn attention to the policymakers and professionals for its innovation and efficiency.

I like to extend heartfelt thanks and express deep appreciations to all the contributors & reviewers participated to finalize the study. In addition, we are grateful to Ms. Tina Blohm, Resident Representative of FES Bangladesh and her colleagues for their cordial supports.

The publication will be useful to the policymakers, practitioners, academician, researchers, development partners to Bangladesh and relevant stakeholders for reviewing the existing constraints and policies for the SME development in Bangladesh in light with the state of SME development in Germany and its drivers of development.

Md. Safiqul Islam
Managing Director
SME Foundation

Foreword

This journey started with the signing of an MoU between the Ministry of Foreign Affairs (MoFA), Government of Bangladesh and FES in 2016. The MoU focused on strengthening bilateral relations and both institution's mutual interest in the context of SDGs. Under the broader framework of the partnership, MoFA identified SMEs, skills, technologies and remanufacturing as key areas of co-operation with FES Bangladesh. On the other hand, FES's key themes circle around the futures of work by focusing on workers' rights, employment, equity, male-female participation in business and social justice. Thus, the objectives of the two organizations match closely. Following the signing of the MoU, MoFA defined the SME Foundation as a key organization to initiate long term work with FES on the issues of SMEs and to learn lessons from the global leaders on policies pertinent to SMEs.

The SMEs of Bangladesh form a large sector in terms of employment, diversification and coverage. However, their contribution to the overall growth of the economy has thus far not excelled to the degree envisioned. Yet, they do hold a huge unexplored potential to create more employment for youths, to open more space for creative people at the local level, to expand technical and vocational education and training (TVET) for an inclusive participation, and to expand industrial sectors in general. Realizing the benefits and impact of the SME sector, FES Bangladesh eagerly supported the SME Foundation through creating research-based data, as well as campaigning the growth potential of the sector.

As a first step, the SME Foundation in joint collaboration with FES Bangladesh and MoFA conducted a study titled "The Role of Small and Medium-sized Enterprises in Development: What Can be Learned from the German Experience?" in 2017. In the light of the study, they carried out this study centering the SMEs in Bangladesh.

An expert group was formed to design the ToR, to select the researchers through a competitive process, to guide the researchers as well as to review the reports before its finalization. The members

of the group are: Professor Dr Momtaz Uddin Ahmed (Chair of the group), Professor Dr Mahmood Osman Imam, Professor Shibli Rubayat Ul Islam and Professor Dr. Mohammad Mahboob Rahman. A series of meetings of the experts were held. Besides, a data validation workshop was organized to get feedback from Bangladeshi economists, policy makers, development experts, researchers, entrepreneurs, and their associations, as well as the media. The research team led by Professor M. A. Baqui Khalily followed the ToR, and received the feedback of the experts' group, the participants of the data validation workshop as well as the SME Foundation and FES Bangladesh to finalize the report. Though the study took nearly two years to complete, but there was always a good effort of the research team to listen to others for improving the quality of data.

It is a true honor to have a state minister and other relevant key stakeholders engage throughout the process of researching and reporting. Their appreciation for the work has encouraged us, as well as enhanced the expectation to do more for the well-being of the SME sector.

This study takes up possible lessons from the German experience of SMEs and analyses the key elements that can support the growth of Bangladeshi SMEs. The comparison with Germany is hence not done to paste and copy models, but to be inspired by overarching principles as to how SMEs can flourish within a sustainable economy.

The study examines the current state of SME development, investigates the financial and non-financial constraints to SME development in Bangladesh; and critically evaluates the German SME development model and the process. The key focuses of the study are on the definition of SMEs, approaches and legal framework, constraints of entrepreneurship development, support services, and problems of women in doing business, and so on.

The study report finds out the reasons behind the German successes in SMEs. The German dual vocational education and training system, employer-support towards the capacity building of employees, pro-industry banking facilities, and activism of trade unions are key to the economic growth of Germany. In addition, start-up SMEs, skilled manpower and networking

of SMEs are contributing a lot to grow. Their critical goal is to develop innovative, efficient, dynamic and sustainable SMEs so that they can compete with other global competitors.

Consequently, Bangladesh's SMEs are facing challenges of lack of clarity of its definition, which lead to policy implications to get attention of the concerned policy makers. SME Foundation has identified 177 clusters scattered throughout Bangladesh, but still all-out efforts to implement the Cluster Development Approach is not ensured. Besides, there are more constraints, such as limited access to finance, inadequate access to modern technology, limited effectiveness of testing services and fiscal disincentive for individual owned enterprise, high interest rate, lack of information and lack of co-ordination.

The SME sector includes innumerable women entrepreneurs all over the country. Especially in the micro and small enterprises, women are quite engaged. But they are only a few who reach to the management and policy levels of the SMEs. Even, during the conduction of the study, quite a few female experts were found and engaged. Therefore, the growth of SMEs will not only have direct impact on the Bangladesh's development, but also will directly help to uplift women in their economic and social pursuits and to reach gender equality. Thus, women entrepreneurship development is a key priority area of the government and other stakeholders, including financial institutions.

The world is changing very quickly in the age of fourth industrial revolution, and at the same time, the SME sector has been reshaped on the newly invented-elements of digitalization and technology. But the Bangladeshi SMEs are predominantly traditional and manpower-centric. Therefore, Bangladesh has to adopt new strategies and technologies to cope with the changing nature of SME demand to flourish.

In summary, we sincerely hope that this study on SMEs will create debates on the development of SMEs in Bangladesh and support the equitable growth of society.

Tina Blohm, Resident Representative, FES Bangladesh
Shadhan Kumar Das, Programme Coordinator, FES Bangladesh
Dhaka, 9 August 2020

Acknowledgement

The study was conducted under an agreement with Friedrich-Ebert-Stiftung (FES), Bangladesh in collaboration with SME Foundation, Bangladesh. The financial support of the FES Bangladesh, is highly appreciated.

In conducting the study, active role of the SME Foundation was essential. The authors would like to acknowledge with thanks the support and inputs that were received from the management of the Foundation. We are highly appreciative of the role that Mr. Md. Safiqul Islam, Managing Director and Mr. SM Shaheen Anwar, Deputy Managing Director, SME Foundation, played in taking the study forward. We deeply appreciate the support and coordinating services that we received from Md. Mamunur Rahman, DGM, Abu Monjoor Sayeef, AGM, Akhil Ranjan Tarfder, Manager, and Abu Syed, Deputy Manager of SME Foundation. They were very effective during our field visits with their organizational and program knowledge. They were instrumental in ensuring required logistic supports during the field visits.

We deeply appreciate the comments and guidance that we received from the members of the Review Team – Professor Dr. Momtaz Uddin Ahmed (Department of Economics, University of Dhaka), Professor Dr. Mahmood Osman Imam (Department of Finance, University of Dhaka), Professor Shibli Rubayat Ul Islam (Dean, Faculty of Business Studies, University of Dhaka), and Professor Dr. Mohammad Mahboob Rahman (Dean, School of Business, BRAC University). With their continuous inputs and guidance, they contributed significantly to the shaping of the report.

Field visits were instrumental in understanding the constraints of SMEs in Bangladesh. We were immensely benefitted from the interactions with the micro and small entrepreneurs in Bhairab and Chittagong. Thanks to them for their time and insights.

We would like to acknowledge with thanks the comments and guidance that we received from Ms. Tina Blohm, Resident Representative, and Mr. Shadhan Kumar Das, Programme Coordinator of FES Bangladesh for their insightful comments.

We deeply acknowledge with thanks the erudite comments of Professor Dr. H. Herr of the Berlin School of Economics and Law. The comments and insights were useful in revising the draft report.

M. A. Baqui Khalily
Mohammed Jamal Uddin
Muhammad Shariat Ullah
Mohammad Tareq

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List of Abbreviations

BB	Bangladesh Bank (Central Bank)
BITAC	Bangladesh Industrial Technical Assistance Centre
BSCIC	Bangladesh Small and Cottage Industries Corporation
BSTI	Bangladesh Standards and Testing Institutions
DPDT	Department of Patents Designs and Trademarks
GoB	Government of Bangladesh
IoT	Internet of Things
KfW	Kreditanstalt Für Wiederaufbau (Credit Institution for Reconstruction) German state-owned development bank
MLEs	Medium and Large Enterprises
MSEs	Micro and Small Enterprises
MSMEs	Micro, Small and Medium Enterprises
NBFIs	Non-Bank Financial Institutions
NPO	National Productivity Organisation
OECD	The Organisation for Economic Cooperation and Development
R&D	Research and Development
RJSC&F	Registrar of Joint Stock Companies 7 Firms
SMEs	Small and Medium Enterprises
Tk. (BDT)	Bangladesh Taka (currency)
UNICEF	UN Economic and Social Commission for Asia
UNIDO	UN Industrial Development organisation
VAT	Value Added Tax

Executive Summary

Development of SMEs in Bangladesh: Lessons From The German Experience

Small and medium enterprises (SMEs) have long been globally recognized as engines of growth. In recent time, the growing emphasis on inclusive development has drawn further impetus to SME development since growth of SMEs contributes to GDP growth, employment creation, poverty alleviation, and vertical and horizontal expansion of firms. These enterprises are also very dynamic, and can adjust better with the changes. In developed countries in Europe and North America, SMEs constitute almost 95% of the enterprises. In the OECD area, SMEs are the predominant form of enterprises, accounting for approximately 99% of all firms. They provide the main source of employment, accounting for about 70% of all employment, and are major contributors (50-60 percent) to value addition. In Germany, 99.4 percent of the enterprises are micro, small and medium enterprises. It accounts for 63 percent of all employment and contributes to over 54 percent to value addition. In emerging economies, SMEs contribute up to 45% of total employment and 33% of GDP.

Over 98 percent of the enterprises are SMEs in Bangladesh. More than 84 percent of rural non-farm employment was generated through cottage (over 80 percent) and micro enterprises (around 4 percent) in 2013.The contribution of various categories of SMEs together is between 80 and 85 percent of industrial employment and around 25 percent of total civilian employment. The contribution of manufacturing SMEs in Bangladesh to GDP has remained more or less around 17 percent during the period 2004-17. However, with the presence of the enterprises in other sectors and sub-sectors, contribution of business enterprises has increased to around 32 percent in 2017. Although no separate estimate is available for the contribution of SMEs, it is reported that it varies between 25 and 27 percent. In Bangladesh, small enterprises contribute only a little over 3% and SMEs together around 22% to GDP. How can SMEs in Bangladesh be developed within a broad framework?

One of the ways is to learn from the experiences of other countries. This study was conducted with the objective of drawing lessons from the German experiences since Germany is considered as the leader in SME development globally. In recent decade, success of the German SMEs has drawn attention of the policymakers and professionals because of its innovation and efficiency. Considering the prime objective, the scope of the study focuses on the review of the constraints to, and the policies for SME development in Bangladesh; and the review of the state of SME development in Germany and its drivers of development. Also, the scope requires identification of the German policies that will have implications for the development of SMEs in Bangladesh.

Methodology, the study was conducted based on survey of literature including literature on the German experiences, discussion with the stakeholders, dialogue with the technical, vocational and training institutions and dialogue with the support institutions, and visit to two clusters of micro and small enterprises, outside Dhaka. Visits to the micro and small industrial clusters have been very useful in developing better understanding of the policies, constraints and prospects of developing MSMEs in Bangladesh.

The most challenging task in conducting the study was to define SMEs as different countries use different yardstick. Based on the literature survey, we found that three common indicators: employment, turnover and fixed assets. Number of employment appears to be the most common indicator and popularly used in defining SMEs. Given the inverse relationship between employment size and, technology and turnover, there is a rationale argument for using turnover and fixed assets as indicators for defining SMEs. The European Union and the OECD have rightly argued that data availability makes it easy to use number of employment to define SMEs and compare among the countries both at a given point in time and over time. As such, we have considered 'number of employees' as an indicator of defining SMEs in this paper.

Although SMEs stand for Small and Medium Enterprises, the term tends to include micro enterprises as well. As such, in

some cases, we find the use of the term 'MSMEs' that stands for Micro, Small and Medium Enterprises. In classifying the SMEs, different countries have used different employment size[1]. The European Union classifies manufacturing enterprises into MSMEs, where micro manufacturing enterprises include enterprises with employees of less than 10; enterprises with number of employees between 10 and 50 are identified as small enterprises; and enterprises with employees between 50 and 249 are recognized as medium enterprises, and the enterprises with employees of at least 250 are identified as large enterprises. In Germany and the USA, enterprises with up to 500 employees are defined as SMEs. The German statistics provide disaggregated data to enable European Union and the OECD to present consistent estimates of SMEs. In Bangladesh, different measures are used. The 2016 national industrial policy suggests that enterprises with employees of up to 300 employees are identified as SMEs. The policy defines micro enterprises with employees of up to 25 employees; it is between 10 and 25 for manufacturing micro enterprises. The measures are not consistent with international practices. The standardized classification of SMEs should follow the classification of EU: Micro enterprises (up to 9 employees), small enterprises (10-49 employees) and medium enterprises (50-249 employees). Furthermore, from the policy perspective, this study suggests to re-group enterprises into two: (i) micro and small enterprises (MSEs) and (ii) medium and large enterprises (MLEs). This is not only true for Bangladesh; it is equally true for other developing countries and even developed countries. In developed countries, around 90 percent of the enterprises are micro and small.

The Government of Bangladesh (GoB) has adopted several approaches to developing SMEs in Bangladesh that extend from targeted programs to sectorial development approach to market-based approach. Market forces along with the ability of the entrepreneurs to compete in the market determine successes of micro, small and medium enterprises in private sector. The GoB

[1] In Bangladesh, manufacturing enterprises with employees between 16 and 30 are termed as micro. Enterprises with employees between 31 and 120 are classified as small enterprises. Finally, medium enterprises constitute employees between 121 and 300 under the new National Industrial Policy 2016.

recognizes the role of SMEs in economic growth, redistribution of income and employment following approaches like the area development approach, cluster development approach, and women entrepreneurship development program.

Considering importance of SMEs in the Bangladesh economy, the GoB has established new or directed established institutions for providing different support services to the SMEs. It established SME Cell (a permanent unit) under Ministry of Industries in 2003 and constituted a national SME taskforce (temporary body comprising experts and professionals assigned with specific objectives) in the same year. The GoB also formulated SME Policy Strategies in 2005, implemented Small and Medium Enterprise Development Program (SMEDP) in 2006 and then finally established SME Foundation, as an apex organization for promoting SMEs, in 2007. The support services may be classified into: (i) Financial support through banks, MFIs and SME Foundation; (ii) Technical assistance support; (iii) Governance and regulatory support; and (iv) Fiscal policy support. Bangladesh Bank (Central Bank) formulates SME Financing Policy with special focus on cluster based regional SME development and women enterprises. The policy measures do recognize the role of subcontracting and value chain in SME development without much specification for its development.

Despite the policy changes, development and growth of SMEs in Bangladesh is subject to some serious constraints. The key common constraints as identified by the enterprises are as follows:

- Limited access to bank finance for SMEs;
- High interest rate and collateral requirements restrict access to bank finance;
- Limited availability of skilled and semi-skilled workers;
- Firms do not use apprentices as they do not reap benefits because of their high mobility;
- No institutional linkage with technical education. On the other hand, firms rarely use apprentices in their production processes;
- There is no effective role of concerned business network;
- Lack of information restricts efficiency in production and marketing;

- Lack of coordination among different agencies of the government;
- Firms in clusters have space constraint. They mostly operate in residential areas; and
- Negligible presence of sub-contracting for backward and forward linkages.

Limited or inadequate access to finance is still the number one constraint. It is largely due to terms and conditions of loan contract. It is followed by the second most important problem of dearth of skilled workers. Apprenticeship is not largely practiced because of the perceived cost associated with high mobility of these skilled workers. The other important problems of asymmetric information of markets and products for lack of effective social networking. These problems are not new. They exist for decades. The constraints as identified above from the literature survey were also corroborated through the clusters' visits. The critical question is, why do all these problems exist? How can these problems be solved? As per the objective, we have addressed the questions with lessons from the German experiences.

Development of SMEs in Germany is globally ranked second in terms of contribution to employment and value addition. Most of the enterprises in Germany are SMEs. It is driven more by micro enterprises that contribute to around 82 percent of all employees, and around 17 percent to value addition. Micro and small enterprises together contribute to 96.5 percent of all enterprise employees, and around 35 percent in value addition. Why have micro and small enterprises succeeded? The development of SMEs in Germany has been guided by a set of principles. The principles are as follows:

- Think small first;
- Entrepreneurship as an attractive career choice;
- Second chance for honest and bankrupt enterprises;
- Responsive administration to quickly respond to the needs of SMEs;
- Access to finance with different venture capital funds for young technical firms, young innovative enterprises, and growth firms;
- Skills development, efficiency and innovation.

The German experiences are diverse. It is quite focused and targeted with disaggregated policies for different types of SMEs. The critical policies are (i) supportive banking system for start-up firms with innovation and market niche, (ii) more self-financing (less dependency on bank credit) through reinvestment, (iii) high investment in research and development for being more innovative, (iv) social upgrading for economic upgrading, (v) strong apprentice programs complimented by vocational education, (vi) investment in high technology, (vii) social capital for inter-firm collaboration and global or local level value chain integration, (viii) backward and forward linkages for coordinated development of SMEs through cluster development.; (viii) networking of SMEs that has implications for dissemination of information and learning from each other; (ix) close relationship with government support agencies. The most striking element behind the success of innovative and efficient SMEs is the critical role of government with appropriate policy support, responsive administration and targeted action plan. All these interventions are primarily oriented towards increasing competitiveness and increasing share of SMEs in global market. The global leaders are the family owned *Mittelstand* firms which derive lessons from their experiences in local market for developing competitiveness and increasing share in global market. One of the important elements in their success is the role of trade unions in economic and social upgrading through improving efficiency and commitment to higher productivity, given the uniform wage structure agreed through discussion with stakeholders across the sector.

What lessons can Bangladesh derive from the German experiences for SME development? The lessons are certainly diverse with action from both demand and supply side. The major lessons are as follows:

- Micro and SME sector needs to be nourished through different policy supports and action plan. SMEs should not be left alone in market competitiveness without being properly developed.
- SMEs should be classified not only by employment size but also by growth potentials with different technology;
- Different policy set for the development of different types of SMEs. Different venture capital fund for young firms like high tech firms, innovative firms, and growth firms;

- Supportive financial institutions for financing different types of SMEs;
- Investment in research and development for technological development, innovation and efficiency;
- Strong technical education and apprenticeship system;
- Role of social upgrading (e.g., uniform salary structure) in economic upgrading of the enterprises;
- More focus on micro and small enterprise development;
- Cluster-based industrial development with backward and forward linkages;
- SMEs are tied to global competitiveness;
- Strong social networking and access to information for market and product development, and increasing market competitiveness;
- Value chain integration through subcontracting practices.

The Government of Bangladesh needs to address the issues of what ought to be developed and how. Based on our cluster visits and lessons from the German experiences, the Bangladesh Industrial Policy should focus on small and medium enterprise development with targeted action plan. Such development strategy should focus clearly on cluster-based development and niche market. It is appropriate to note here that Germany follows social-market' economy with complementary role of economic upgrading and social upgrading. Productivity and efficiency is at the heart of German SME development strategy. Through social upgrading, Bangladesh can strongly encourage development of SMEs through higher productivity and efficiency.

In a final note, this study emphasizes on the need for review and effectiveness of policies and institutions for SME development in Bangladesh. Without such review, lessons derived from the German experiences may appear to be a piecemeal exercise that will have little implications. Lessons for Bangladesh, based on the German experiences, can be better perceived and better drawn if there is a complete stock and analyses of policies and institutions that operate in Bangladesh for SME development.

1. INTRODUCTION AND OBJECTIVES

This report is being prepared as per the Terms of References for conducting the above titled study and the agreement signed with the FES, Dhaka office, Bangladesh. The study primarily focuses on drawing lessons from the German experiences of development of small and medium enterprises (SMEs) in Bangladesh.

Although development of SMEs for the purpose of growth was on the agenda of international agencies and different countries for the last three decades, developing SMEs emerged as a prominent international issue following the global financial crisis in 2007 (OECD). Small and medium enterprises are globally recognized as engines of growth, and agents of dynamism, innovations and flexibility (e.g., Porter 1990; Ali et al. 2014; OECD 2015). The outcomes are higher GDP, economic stability, employment creation, horizontal and vertical expansion, and poverty alleviation. One can easily perceive that horizontal development of a large number of micro and small enterprises across a country will lead to equitable distribution of growth, employment opportunities, and higher pace of poverty alleviation (e.g., Helmsing 2003; OECD 2000; Reeg 2013). However, horizontal expansion of enterprises will require vertical development of value chain or supply chain systems. With such development, there will be further backward-and-forward linkages. Shinozaki (2012) argues that developing and prioritizing SMEs is crucial for promoting inclusive economic growth.

Small and medium enterprises appear to include micro enterprises. It is popularly known as MSME. In most developing countries, micro and small enterprises (MSMEs) constitute almost 95 percent of total enterprises. Recent data shows that, globally MSMEs constitute over 90 percent of all firms and business enterprises; and make up for more than 60 percent of total employment (World Bank, 2010). Among the Asian countries, SMEs contributed about 60 percent to GDP in Indonesia; over 35 percent in Malaysia and over 50 percent in South Korea during the period of 2007-2012 (Yoshino and Taghizadeh-Hesary 2015). The contribution of MSMEs to GDP is lower in developing countries than that in developed countries. It is not only the economic role of MSMEs that draw the attention of policymakers and professionals,

but also its role in attaining the sustainable development goal of innovation and decent life, as well as in providing opportunities for vulnerable households**.**

MSMEs also include informal and unregistered micro firms. Globally, around three-fourth of all MSMEs are informal, and around fourth-fifth of the MSMEs in developing countries are informal and unregistered (Kushnir et. al. 2010). However, micro enterprises have limited capacity to graduate to small and medium enterprises, *ceteris paribus*. With appropriate interventions, a significant proportion of these enterprises can graduate to the next level of enterprise development. Small manufacturing enterprises are considered to be an important segment of SME sector development for flexibility and comparative advantages in management and resource mobilization (e.g., Sharma, et. al., 2005; Verhees and Meulenberg 2004; Timmons 1998). In the European Union, small enterprises are dominating; more than 90 percent of the enterprises are small in size.

Read and Staines (2004) have rightly argued that a small economy with a large number of small firms would be dynamic and reward entrepreneurship. Entrepreneurs try out innovative ideas through small firms. This innovation allows for the organic growth of enterprises from small to medium and possibly large enterprises. This is the role of innovation and entrepreneurs that Schumpeter (1934) argued for in his theory of 'Creative Destruction'[2]. He identified that entrepreneurs play a critical role in real economic growth through innovation, new products, new employment, new markets and new industrial organizations. When all these changes take place, Schumpeter's creative destruction takes place as well.

Small firms therefore encourage entrepreneurship, which in turn promotes economic growth in small economies. An industrial organizational system with a large number of micro and small enterprises can create sound economic growth in most developed

[2] However, some researchers hold the different view that in many countries, especially developing countries, there is a large proportion of "poverty enterprises". Such MSMEs are, as a rule, not innovative. They are no entrepreneurs; they simply reflect poverty. Herr, H., & Nettekoven, Z. M. (2017). *The Role of Small and Medium-sized Enterprises in* Development*: What Can be Learned from the German Experience?* Friedrich Easert Stiftung Study Report.

and developing countries. Small and medium enterprises can upscale, and can promote forward linkages for medium and large enterprises. But the question is, why should such SMEs be developed? The answer can be found in equitable regional growth, income redistribution, distributive employment creation, poverty alleviation and innovations, particularly in small enterprises (e.g., Helmsing 2003; OECD 2000; Calvino et al. 2016; Reeg 2013). As such, there will be efficient use of resources—shifting resources from unproductive traditional sectors that are low wage and require low skill inputs, to more productive and modern sectors (Acs and Audretsch 1990; Read and Staines 2004). It, therefore, enhances productivity growth and leads to the expansion of national and international trade (Cook and Nixon 2000; Sharafat et al. 2014; OECD 2015; Khan 2014).

In Bangladesh, the SME sector has been given special emphasis in the five-year plans (more in Seventh Five-Year plan document), the industrial policy 2016 and the SME financing credit policy of Bangladesh Bank. The sector includes cottage, micro, small and medium enterprises (GoB 2018). The plan document and the industrial policy recognize SME development as a vehicle for employment creation, equitable distribution and poverty alleviation, in addition to economic growth. The data suggests that the contribution of SMEs to GDP has increased but it has increased at a slow pace. Although SMEs include cottage and micro enterprises, institutional support for cottage and micro enterprises has been relatively limited. Even between small and medium enterprises, support for medium enterprises has dominated. This will be more evident from the flow of credit to medium and small enterprises. The Bangladesh Bank statistics show that around 40 percent of enterprise loans are for small enterprises, and a very small percentage for micro enterprises. Over the past decades, the rate has been more or less similar.

In Bangladesh, small enterprises contribute a little over three percent and SMEs around 22 percent to GDP (in the case of manufacturing SMEs, the rate is around 17 percent), whereas micro and small enterprises constitute almost 99 percent of all

enterprises[3]. The rate has remained more or less constant over the past decades. However, major contributions are more evident in the employment statistics. In European countries, micro and small enterprises constitute almost 95 percent of enterprises, and their contribution is higher in terms of employment than those of medium and large enterprises. In the USA, the proportion is also around 95 percent. The definition and parameters of identifying enterprises may have led to the higher contribution of SMEs; but contributions of small enterprises remain undisputedly high.

During the past forty years, we have only moved a little towards the development of small enterprises; while other countries have progressed enormously.

The question is, why are we struggling with developing SMEs in Bangladesh when SMEs in other countries have been very successful? There must be some market and policy failures, which are evident from the survey of literature on SMEs in Bangladesh (e.g., Ahmed 2017; Ahmed 1998b; Rahman et al. 1979; Khalily et al. 1994). What ought to be done? While we try to understand the constraints to SME development, policymakers will be best served if they draw lessons from the successes of other countries. Although there is no consistency in the definition of SMEs, the definition used by European Union countries, including Germany, seem to be closer to the definition of SMEs in Bangladesh, in terms of number of employees.

Germany is considered as the second most successful countries in SME development and their contributions to GDP. The policies are diverse and institutions are well developed. Bangladesh may take lessons from the experiences of Germany in SME development. The basic objective of this study is to draw lessons from the experiences of Germany to address the constraints and/or policy or institutional failures for SMEs in Bangladesh.

[3] Bangladesh Industrial Policy of 2010 outlines that enterprises with employees of less than 10 have been defined as cottage enterprises. Micro enterprises are the enterprises with number of employees between 10 and 25, while small enterprises constitute enterprises with employees between 25 and 99. Enterprises with employees between 100 and 250 are termed as medium enterprises.

As reflected in the ToR, the objectives of the study are specified as follows:

- To understand the current state of SME development in Bangladesh, including contribution of SMEs to Bangladesh's economic development and constraints to development;
- To examine the financial and non-financial constraints to SME development, with particular focus on access to finance and subsidized credit;
- To critically understand the German SME development model and examine

German experiences with particular focus on subcontracting, backward/forward linkage, socially rewarding scenario of SMEs and global value chain integration, linkage between vocational education and small and medium enterprises, and the role of innovation and technological development in SME development, particularly in the context of the upcoming global challenges of the new industrial revolution.

In view of the objectives, the scope of the study focuses on a review of the constraints to and policies for SME development in Bangladesh; and a review of the state of SME development in Germany and its drivers of development. Finally, the scope requires identification of the German policies that will have implications for the development of SMEs in Bangladesh.

The subsequent portion of the report is structured into several sections. Section Two presents approaches to the study. Section Three presents a review of the concept and definition of MSMEs. The state of micro, small and medium enterprises in Bangladesh is reviewed and presented in Section Four. The German experiences are evaluated in Section Five. Lessons drawn are presented in Section Five. Finally, conclusion and recommendations are presented in Section Six.

2. APPROACHES TO THE STUDY

The critical issue is growth and development of SMEs in Bangladesh. This is more particularly for non-farm enterprises. SMEs are heterogeneous in nature. The growth and development of SMEs, particularly non-farm SMEs, will be critical to dynamic

economic growth. What policies should be taken to ensure the growth of SMEs in Bangladesh? Answers to this question can be derived from our observations and earlier findings on the state of SMEs in Bangladesh. However, it can also be derived from the theories of SME growth and experiences of other countries, particularly Germany.

Three core elements are required for the successful and comparative advantages of SMEs. These elements are resources, capabilities and core competencies (Rindova and Fombrun, 1999). As may be derived from the resource-based theory, four types of tangible (financial, organizational, physical and technological) and three types of intangible resources (human, innovation and reputational) will be crucial for overcoming the constraints to development and growth of SMEs (Grant, 1991; Harvie, 2002). These resources are present in the German system of SME development. But the question is, how can we develop these enterprise level resources?

The Clustering Approach: The SME Foundation has identified177clusters in the SME sector. The clusters have developed in different regions of Bangladesh through a natural process based on convenience and scale advantages.

The Networking Approach: Networking among enterprises is an intangible resource that can help an enterprise to link with other firms, particularly in the area of value chain (Ritter, Wilkinson and Johnston 2003). The networking will be more useful for the enterprises with asymmetric information.

Institutional Approach: The constraints to SME development in Bangladesh cannot be overcome only through cluster development. Whether it is cluster-based development or not, institutional support is required for both tangible and intangible resources to develop micro and SMEs. These institutions may be in areas like finance, electricity, regulation, training, and physical infrastructure, among others.

Therefore, we can approach our study from the resource perspective. As such, we adopted the following approach: (a) *Survey of Literature; (b) Discussion with Stakeholders*[4]*;*(c)

[4] List of persons interviewed is presented in Appendix-A.

Effectiveness of Networking as Social Capital; (d) *Dialogue With Technical, Vocational and Training Institutions;* (e) *Dialogue With Support Institutions;* and (f) *Review of literature on German experiences.*

3. CONCEPT AND DEFINITION OF SMEs

There is no consistent definition of small and medium enterprises. Although the role of SMEs and the informal sector is globally acknowledged, a challenge that remains is actually defining SMEs (Mahember 2011; Storey 1994). The critical question is, what constitutes SMEs, and why is such separation of SMEs from large enterprises required? As noted earlier, some countries use the term 'SMEs' to also include both cottage and micro enterprises; and in other countries, the term 'MSMEs' includes micro enterprises, small and medium enterprises. Bangladesh Bank, for example, uses different terms. On the one hand, the SME credit policy reflected in the Industrial Policy 2010 considers SMEs to include micro enterprises also; and on the other hand, Bangladesh Bank uses the term CMSMEs (cottage, micro, small and medium enterprises) in its SME credit statistics.

The term SME is broadly used to include micro enterprises in the USA and the European countries. The OECD also uses the term SME to encompass micro, small and medium enterprises. If this is a matter of what ought to be developed besides large enterprises, then the connotation says it all. From another perspective, the classification does not make sense when only 2-3 percent of the enterprises are large and around 98 percent are SMEs. Moreover, medium and large enterprises will not even exceed five percent of enterprises.

But then why do policymakers focus on SME development and why do they differentiate them from large enterprises when large enterprises make up such a small proportion, and even when medium and large enterprises together do not constitute more than five percent in developing countries and not more than 15 percent in developed countries? The answer is obvious: more targeted, diversified and inclusive industrial development policy, more equitable distribution of wealth and greater employment opportunities.

Given the level of development of SMEs in different countries, past discussions have focused on certain indicators in identifying types of enterprises – number of employees, turnover, sales, fixed assets and net worth (for example, OECD 2004). The only indicator out of these that can be easily measured is number of employees because of data availability. If it did not get in the way of using uniform and meaningful indicators for comparison of SME development in different countries, SMEs could probably be viewed differently in different countries based on the level of economic growth and technological development. However, the issue should be viewed from the policy and development perspective.

In defining and measuring the progress of micro and SME development, several factors need to be considered: (i) convenience in measurement; (ii) policy focus; and (iii) state of economic growth and technological advancement. In view of factor one, as argued in the literature, number of employees is easily definable and it is easy to get relevant information on employment. The second factor focuses on what enterprises ought to be developed. For example, the Bangladesh Industrial Policy 2016 recognizes SMEs as a thrust sector. This is also reflected in the SME credit policy. The third factor is relevant from the perspective of comparability, since the level of technological advancement may have an influence upon the state of enterprise development.

We need to regroup enterprises for policy formulation, targeting financing and promotional interventions for employment and growth, and measuring impacts (UNIDO, 1999). Based on these rationales, enterprises should be regrouped and reclassified. Policy will be more effective when enterprises are more homogenous in size, and have the potential of moving into the next level of enterprise development. The Bangladesh experience may be cited to clarify this perspective. The Bangladesh Bank formulates targeted credit policy for SME development; but more than sixty percent of both term and working capital loans go to medium enterprises, as defined in the industrial policy (Khalily 2006). Small enterprises find it difficult to get their desired loans from banks because of lack of or limited collateral (e.g., Ahmed

2017; Rahman et. al. 1978; Khalily 2006). In such cases, the SME credit policy has little bearing upon small enterprise development. Therefore, from the policy focus perspective, micro, small, medium and large enterprises need to be regrouped and redefined.

We argue that, depending on the state of development, there should be two broad groups of enterprises in developing countries: micro and small enterprises (MSEs); and (ii) medium and large enterprises (MLEs). From the convenience and simplicity perspective, the number of employees can be considered as a measure of enterprise size, although there is debate over using it as an indicator, as the number of employees is inversely correlated with technology. Therefore, using turnover as a measure is viewed as more appropriate, which will be independent of fixed assets and number of employees. But non-availability of data makes this difficult to measure. The OECD uses the number of employees for statistical purposes. Although there may be debate over which indicator should be used to measure micro, small and medium enterprises; there is no debate over characterization of the enterprises. The characteristics based differentiation between SMEs and large enterprises may be termed as 'qualitative indicators' (Berisha and Pula 2015).

Based on evidence (e.g., Adelman and Robinson 1988; Leidholm and Mead 1987; Reeg 2013; UNIDO 1999), the following characteristics can be identified within small enterprises: (i) heterogeneity of firms; (ii) more labor intensive and use of a more unskilled labor force; (iii) small investment; (iv) small size of enterprise in terms of number of employed; (v) limited innovation and upgrades; (vi) mostly located in rural areas; and (vi) generally individual ownership.

However, Reeg (2013) has broadly categorized small enterprises into two: 'Necessity Enterprises' and 'Opportunity Enterprises'. Her characterization of necessity and opportunity enterprises is recorded in Table-1. We term the enterprises for survival and consumption smoothening as 'Necessity Enterprises'. These enterprises are mostly rural based, and require small capital. On the other hand, the 'Opportunity Enterprises' are termed as 'Micro Enterprises', as they are somewhat more specialized and operate with regular employees. Reeg (2013) argues that these

enterprises have a higher potential to graduate to the next phase of enterprise development.

Table -1: Typology of necessity and opportunity enterprises

Necessity enterprises (Livelihood Approach)	Opportunity enterprises (Micro Enterprises)
Street-business types belonging to a community of the poor	Small-scale enterprises that could be located in the intermediate sector
Ease of entry, low capital requirements, low skills and technology	Barriers to entry in terms of capital, skills and technological requirement
Involuntary entrepreneurs	Entrepreneurs by choice, often with backgrounds in regular employment
Proprietors are mostly female	Proprietors are mostly male
Entrepreneurial objective is to maximize security and smooth consumption	Entrepreneurial objective is to maximize profits and accumulate wealth by taking risks
Part of diversification strategy, often run by idle labor, with interruptions and/or part-time	With some degree of specialization, consistent production
Embeddedness in social relations, obligation to share	Disembeddedness in social relations

Source: Adopted From Reeg, Carolina (2013)

It is quite evident from Table-1 that there are two complimentary ways to develop SMEs. One is the graduation from 'Necessity' enterprises to micro enterprises. Another is the lateral entry into small and medium enterprises with entrepreneurial ability and the ability to remove barriers to entry. Development of micro, small and medium enterprises should take both the complimentary ways.

While Reeg (2013) has attempted to differentiate livelihood enterprises from micro enterprises, Herr and Nettekoven have classified SMEs broadly into three, essentially based on the ability

to innovate and adapt to challenges: (a) Schumpeterian SMEs; (b) Normal SMEs, and (c) Poverty-driven SMEs. Schumpeterian SMEs are innovative and efficient, with roles in both EU and non-EU markets. Normal SMEs are business-oriented enterprises that react to challenges but do not change or innovate. Finally, poverty-driven enterprises are oriented towards sustainable livelihood and poverty alleviation. Poverty-driven SMEs are often known in Bangladesh as income generating activities for survival. Reeg referred to this group of SMEs as 'necessity' enterprises. These classifications of SMEs do not differentiate from large enterprises. UNIDO (1999) has identified the characteristics that can differentiate SMEs from large enterprises, as reported in Table-2. Although this has been identified in 1999, its relevance is equally applicable in today's context.

Table-2: Differences between SMEs and Large Enterprises

Characteristics	SMEs	Large Enterprises
Management	• Proprietor entrepreneurship • Functions-linked personality	• Manager-entrepreneurship • Division of labor by subject matters
Personnel	• Lack of university graduates • All-round knowledge	• Dominance of university graduates • Specialization
Organisation Sales Buyer's relationships Production Research development	• Highly personalized contacts • Competitive position that is not defined and is uncertain • Unstable • Labor intensive • Following the market, intuitive approach	• Highly formalized communication • Strong competitive position • Based on long--term contracts • Capital intensive, economies of scale • Institutionalized
Finance	• Role of family funds, self-financing	• Diversified ownership structure, access to capital market

Source: UNIDO 1999

There are others who have characterized enterprises in terms of probability of graduation from small to medium enterprises. As would be evident from different statistics, by number, the majority of SMEs are subsistence firms and small firms. Very few of those small firms can reach the medium size, and many of the medium enterprises may have the potential to further develop into large firms, depending upon the entrepreneurs of those firms (Nichterand Goldmark 2009). One of the main differences between SMEs and large organizations is the dominance of the entrepreneurs or owners.

Measurement of Micro Enterprises and SMEs

There are no consistent indicators to measure micro enterprises and SMEs. Different countries use different indicators, that may be a single indicator or multiple ones. The most frequently used is the number of employees in certain Asian countries like Japan, Malaysia and Taiwan (Yoshino 2011; Yoshino, N. and F. Taghizadeh-Hesary 2018; Yoshino and F. Taghizadeh-Hesary 2015). In Japan, together with capitalization, number of employees is used as indicators. In Australia, manufacturing enterprises with fewer than 20 employees are identified as small enterprises. Enterprises with employees between 20 and 100 are known as medium enterprises. In China, manufacturing enterprises with less than 200 employees are classified as SMEs. In Japan, both fixed assets and number of employees are used - enterprises with employment of 20 or fewer are known as small enterprises; and enterprises with employees between 20 and 300 are identified as medium enterprises. In the USA, manufacturing enterprises with 500 or fewer employees are classified as SMEs.

In the European Union, enterprises are classified into (i) micro enterprises; (ii) small enterprises; (iii) medium enterprises, and (iv) large enterprises. Micro manufacturing enterprises include enterprises with employees of less than 10, and enterprises with number of employees between 10 and 50 are identified as small enterprises. Similarly, enterprises with employees between 50 and 249 are recognized as medium enterprises, and the enterprises with employees of at least 250 are identified as large enterprises. More than 95 percent of EU enterprises are SMEs, making up for more than 60 percent of employment.

The UNIDO approach uses different indicators: micro enterprises are the enterprises with employees of up to 5; and small enterprises have between 5 and 9 employees (Abor and Quartey 2010).

In Bangladesh, different measures are used, and they have changed over time. However, the changes are not consistent with international practices. Bangladesh Bureau of Statistics (2013) has classified enterprises into micro enterprises with employees of maximum 9; small enterprises with employees between 10 and 49; and medium enterprises with employees between 50 and 99. However, the Bangladesh Industrial Policy of 2010 suggests different measures for manufacturing enterprises. In the case of manufacturing enterprises, cottage enterprises have been differentiated from micro enterprises. Enterprises with employees of less than 10 have been defined as cottage enterprises in the Industrial Policy. Micro enterprises are the enterprises with number of employees between 10 and 25, while small enterprises constitute enterprises with employees between 25 and 99. Enterprises with employees between 100 and 250 are termed as medium enterprises. These measures are different for trade and service sectors. This has been incorporated in the SME Financing Policy 2011-2016. The National Industrial Policy 2016 (draft, yet to be approved) redefined micro, small and medium manufacturing enterprises, making it more restrictive. According to this policy, manufacturing enterprises with employees between 16 and 30 are termed as micro, and enterprises with employees between 31 and 120 are classified as small enterprises. Finally, medium enterprises are constituted by employees between 121 and 300. Apart from the employee size indicator, the policy also defines different enterprises based on fixed assets (excluding cost of land and machineries)[5].

In the case of organized enterprises, it is expected that fixed assets-based criteria will be fully reliable and easy to collect.

[5] Fixed assets (excluding land and building) of large industries should exceed Tk.300 million. It is between Tk.100 million and Tk.300 million for medium enterprises, and between Tk.5 million and Tk.100 million for small enterprises, and it is between Tk.0.5 million and Tk.5 million for micro enterprises. Assets of cottage enterprises should be less than Tk.0.5 million. It should be noted here that the two criteria are not mutually exclusive.

Unfortunately, there is a lack of data. Nevertheless, in the general context, these numbers for defining SMEs are too high and the intervals are too wide to identify the types of enterprises (Ahmed 2013). Berisha and Pula (2015) did an excellent critical review of the definitions of SMEs. They argue, based on reviews of different definitions, that most countries use number of employees as an indicator for convenience, but the indicator has some serious limitations. The number of employees is not correlated positively with fixed assets or investment, as it varies by sector and level of technological development. Nevertheless, they argue, as do the OECD, that this indicator will be convenient for examining progress within a country, but not for global comparisons. They rightly argued that a consistent definition of SMEs should be policy-driven and can be better applied when it is backed by regular data from the enterprises. Divergence in definitions and the need for regular datasets are equally noted in Bruhn (2016).

Based on the discussion on the definition of micro, small and medium enterprises, we find that: (i) diversified and less uniform definitions exist; (ii) there is lack of regular data of MSMEs; (iii) definitions have changed over time with the scale of economic and technological developments in a country; (iv) number of employees, although there are limitations, is a simple indicator of measurement, and can be used for looking at trends in progress; (v) multiple indicators are used to define MSMEs; (vi) most countries include number of employees (1-250) as the definition for SMEs that include micro enterprises; (vi) consistently, micro enterprises in all developed countries have been defined as enterprises with employees between 1 and 10; and (vii) small enterprises have been consistently defined as the enterprises with employees between 11 and 50.

Based on these findings, definition of micro and SMEs, as well as large enterprises, should be redefined. We suggest the following for developing countries like Bangladesh:

- Cottage enterprises are also micro enterprises, as cottage is more of a locational factor. As micro, small and medium are size or ranking variables, inclusion of locational variables like cottage into the definition of CSMEs can be considered as a

misnomer. Therefore, cottage enterprises should be treated as micro enterprises.

- Micro enterprises should be defined as the enterprises with employees of up to 10. It will be a consistent indicator globally.
- Small enterprises should be defined as the enterprises with employees between 11 and 50.
- Medium enterprises should be defined as the enterprises with employees between 51 and 250.
- Large enterprises should be defined as the enterprises with employees of more than 250.

Employees should be defined in terms of full-time employment. Regular nature of part-time employment can be translated into equivalent full-time employment if data is available.

While we suggest redefining micro, small, medium and large enterprises, we seriously question the validation of the terminology of SME or MSMEs, as argued before, as around 99 percent of the enterprises are MSMEs in developing countries like Bangladesh. When almost all the enterprises belong to MSMEs, then use of such terminology is not meaningful; it is too broad for any policy targeting.

In Bangladesh, medium and large enterprises constitute around two percent of total enterprises. On the other hand, micro and small enterprises constitute 98 percent of enterprises. As such, as argued before, it is more rationale to re-classify and re-group to make policies more focused and targeted. We suggest to re-group enterprises into two: (i) micro and small enterprises (MSEs) and (ii) medium and large enterprises (MLEs). This is not only true for Bangladesh; it is equally true for other developing countries and even developed countries. In developed countries, around 90 percent of the enterprises are micro and small.

4. SMEs IN BANGLADESH: WHAT DO WE KNOW?

4.1 Role of SMEs in Bangladesh

Small and Medium Enterprises (SMEs) refer to the non-farm enterprises in Bangladesh. As noted earlier, it is defined in terms of number of employees and size of fixed assets (excluding land and buildings). These enterprises include manufacturing, trade

and services. The Bangladesh Bureau of Statistics (BBS) provides information on numbers of economic enterprises through censuses of economic enterprises and surveys of manufacturing enterprises. The former one is more comprehensive. The latest available statistics suggest that there are some 7.82 million economic enterprises in Bangladesh (Table-3). Of these enterprises, cottage and micro enterprises constitute 88.8 percent[6], with 87.52 percent as cottage and 1.33 percent as micro enterprises. The 2013 Economic Census also shows that the number increased from a total of 3.71 million in 2001-03. The majority (71.5 percent) of these units are located in the rural areas.

Table 3: Size distribution of economic enterprises in Bangladesh

Category	Number (million)	percent of total
Cottage	6.843	87.52
Micro	0.104	1.33
Small	0.859	10.99
Medium	0.007	0.09
Large	0.005	0.07
All	7.818	100

Source: BBS, Economic Enterprise Census 2013

Among different economic activities, the service sector is dominant, with wholesale and retail trade and repair of motor vehicles and motorcycles accounting for nearly 46 percent of all establishments. This is followed by transportation and storage (16.7 percent) and other service activities (13.2 percent), while manufacturing has a share of 11.1 percent. The majority (more

[6] The measures of cottage and micro enterprises, as defined in the Industrial Policy of 2010 and later in another policy of Bangladesh Bank, are perhaps not appropriate, as one will note that micro enterprises constitute only 1.33 percent of total economic enterprises and cottage enterprises constitute 87.5 percent of the total. It seems to suggest that there are only a small percentage of micro enterprises. If the existing definition is followed, one will perhaps conclude that there will be very limited scope for developing medium enterprises through graduation from micro enterprises in Bangladesh. Therefore, some rationalization will be necessary for systematic development of medium enterprises.

than 51 percent) of the establishments operate businesses without any registration (Bakth and Basher 2015).

A comparative analysis of the statistics covering the period 1986-2013 provides several interesting findings (Bakth and Basher 2015):

- From 1986, the total number of economic enterprises increased by almost four times by the end of 2013, with an annual compounded growth rate of 3.4 percent between 1986 and 2003 and 7.2 percent between 2003 and 2013. This growth rate was much higher than the population growth rate of Bangladesh.
- Number of manufacturing enterprises has increased by 1.70 times since 1986, with a declining share in the total – reducing from 24.5 percent to 10.9 percent in 2013.
- A huge number of enterprises (almost 90 percent) are engaged in trade and service sectors;
- An increasing trend in the location of enterprises in rural areas suggests dynamic behavior of the rural economy.

An area of concern is the declining share of manufacturing enterprises, as there will be little backward and forward linkages. However, increasing shares of cottage and micro enterprises and rural enterprises perhaps suggests that the SMEs in Bangladesh are more geared towards livelihoods, employment creation and poverty alleviation.

The BBS Economic Census 2013 reveals that, out of the total employment of 24.5 million, medium and large enterprises together have a share of only 17 percent. Cottage and micro enterprises together have a share of 56 percent of total employment. With the inclusion of small enterprises, the share is around 87 percent.

Similarly, manufacturing SMEs have contributed to GDP with a total share of 18 percent in recent years. By definition, the contribution of large and medium enterprises in total employment will be relatively high, since they have a greater number of employees. Bakth and Basher (2015) showed that since 1986, the share of cottage enterprises in total employment has decreased from 73.8 percent in 1986 to 53 percent in 2013. They further showed that more than 84 percent of rural non-farm employment was generated through cottage (over 80 percent) and micro

enterprises (around 4 percent) in 2013. The contribution of various categories of SMEs together is between 80 and 85 percent of industrial employment and around 25 percent of total civilian employment. This leads to another area of concern - that SMEs (small and medium enterprises), excluding micro and cottage enterprises, are more urban focused. Therefore, it contributes to inequitable regional and income distribution against rural areas.

The contribution of manufacturing industrial enterprises to GDP has remained more or less around 17 percent during the period 2004-17. What has changed is the contribution of different sizes of enterprises to GDP. While contribution of small enterprises to GDP has declined from 4.78 percent in 2004 to 3.2 percent in 2017, the contribution of medium and large manufacturing enterprises has increased marginally from 11.5 percent in 2004 to 14.1 percent in 2017 (Table-4). No calculation has been made for micro enterprises and/or cottage enterprises. However, with the presence of the enterprises in other sectors and sub-sectors, the contribution of business enterprises has increased to around 32 percent in 2017. Although no separate estimate has been made for the contribution of SMEs, it is considered to vary between 25 and 27 percent.

The analysis of the development of SMEs provides some crucial findings for future strategic lessons:

- Around 83 percent of the economic enterprises are cottage and micro in nature. Most of these enterprises are located in rural areas. This suggests that enterprises are mostly not the Schumpterian enterprises where innovations and technology will lead to backward and forward linkages.
- Over the past two decades, the number of business enterprises has increased but most of the non-farm enterprises are in trade and services. The number of manufacturing enterprises has been increasing at a decreasing rate, although the working population in the country has been increasing.
- Aggregate contribution of the manufacturing industrial sector to GDP has remained more or less constant during the past 12 years, but the contribution of small enterprises has declined. Relatively more expansion has taken place at the medium and large enterprise level, although its contribution to GDP is small.

Table 4: Contribution of Manufacturing Enterprises to GDP at Current Price

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Large and medium	11.5	12.2	12.1	12.5	12.6	12.7	12.7	13.2	13.8	13.2	13.4	13.6	13.9	14.1
Small	4.78	4.94	4.9	5.1	5.1	5.2	5.3	5.2	5.3	3.2	3.2	3.2	3.2	3.2
Total	16.3	17.1	17.0	17.6	17.7	17.9	18.0	18.4	19.1	16.4	16.6	16.8	17.1	17.3

Source: Bangladesh Economic Review, various years, Ministry of Finance

An important positive change that has taken place in small and medium enterprises is the diversified sub-sectors within the SME sector. It can be evident from the information derived from different sources (e.g., Ahmed, 2001; Board of Investment; Mintoo 2004) that along with traditional sub-sectors, the non-traditional SMEs that have flourished include shipbuilding, IT, apparels, pharmaceuticals, and light engineering. Such changes are noted in small enterprises. Due to dearth of information, we have so far not been able to fully understand the types or sub-sectors of SMEs that have been operating in the different regions of Bangladesh. However, the SME Foundation identified some 177 SME clusters in 51 districts (SMEF 2013). These clusters are in different areas, such as a shoe cluster in Bhairab and Madarbari; handloom carpet in Rangpur; cricket bat in Baldia; *atar (*perfume) in Sujanagar; coconut coir in Bagerhat; textile goods in Kumarkhali; and bakeries and confectionaries in Khulna.

The question is, why can't SMEs develop further, particularly manufacturing enterprises? What institutions are in place to support SMEs in Bangladesh? What are the policies driving the development of SMEs?

5. APPROACHES TO SME DEVELOPMENT IN BANGLADESH

The Government of Bangladesh has adopted several approaches to developing SMEs in Bangladesh that extend from targeted programs to a sectorial development approach to a market based approach.

Like in any other country, the private sector has been playing a critical role in SME and large enterprise development in Bangladesh. In such cases, market forces, along with the ability of the entrepreneurs to compete in the market, determine the successes of micro, small and medium enterprises. The role of government is currently focused on creating and enabling the economic and business environment, and facilitating them through appropriate policy support and infrastructure development. Policy support extends from credit facilities to non-financial interventions like the development of training facilities and physical infrastructure, including market centers, roads and electricity. Within a neo-

classical framework, the development of micro, small and medium enterprises will depend on the ability of the entrepreneurs to operate through market mechanisms and in a competitive market. But not all the micro enterprises and SMEs can operate efficiently in the competitive market. The promotion and development of MSMEs require targeted financial and non-financial supports.

The Government of Bangladesh recognizes the role of SMEs in economic growth, redistribution of income and employment. Detailed approaches to SME development have been outlined both in the Sixth (2011-2015) and Seventh (2016-2020) Five Year plans. The approaches are:

Area Development Approach: The area development approach to SME development involves identification of potential SMEs and also the principle of 'one district one product'[7] as noted in the Industrial Policy. The SME credit policy of the Bangladesh Bank (Central Bank) extends support to potential SMEs, and supports promotion and development of each district-based product through all branches of commercial banks. This approach is essentially directed towards promoting SMEs in all regions of the country.

Cluster Development Approach: Clustering is a critical concern for rapid industrialization in general and for the development of SMEs in particular. Growth of SMEs also depends on successful integration, both vertical and horizontal. SMEs alone cannot move further ahead without mutual support from other SMEs or large-scale enterprises. SMEs in Bangladesh in particular, face formidable challenges in expanding their capacities. An efficient strategy for capacity expansion of SMEs is through the agglomeration of co-located industries in order to take advantage of internal scale economies in logistics and infrastructure and a host other ancillary facilities. With this approach in mind, the SME Foundation has identified 177 SME clusters scattered throughout Bangladesh, and is now formulating a National SME Cluster development action plan for improving the competitiveness of the SME Clusters. Under the program, baseline databases of SMEs in each cluster will be created through a study by the SME

[7] The 'one district one product' policy refers to development of one cluster-based product or a product with competitive advantages in one district (second-tier in government administrative hierarchy). In Bangladesh, there are 64 districts.

Foundation to assess credit and other requirements. Both financial and logistics support from government and donor agencies will be required to implement the program.

Women Entrepreneurship Development Program: Female labor force participation (36 percent in 2010) has remained much lower than male participation (82 percent). The Government of Bangladesh (GoB) recognizes the role of women in economic activities. Because of the role of Micro Finance Institutions (MFI), women have been participating in economic activities and borrowing from MFIs. Different studies have shown positive impacts of micro finance on women empowerment (e.g., Khandker et al., 2013; Nahid, 2015). In the urban areas, because of their higher education, women are gradually coming forward in business. Bangladesh Bank in its SME Credit Policy of 2010 requires commercial banks to lend to women entrepreneurs, and it has introduced a targeted women's credit policy. The SME Foundation has been working to bring women entrepreneurs into the mainstream development process. Facilitating them for women empowerment is one of the prioritized activities of the SME Foundation. Other activities include institutional capacity building of women chambers and trade bodies, formulating gender action plans, encouraging bankers to finance women entrepreneurs, conducting studies and surveys on women entrepreneurs, organizing women entrepreneur conferences and skill development programs, hosting the national SME women entrepreneurship awards, organising the SME product fair for women entrepreneurs, etc. Women entrepreneurship development programs of the SME Foundation will be prioritized and strengthened under the 7th Five Year Plan (2016-2020).

6. SUPPORT SERVICES FOR SME DEVELOPMENT IN BANGLADESH

Considering the importance of SMEs in the Bangladesh economy, the Government of Bangladesh has established new institutions or directed established institutions to provide different support services to small and medium enterprises. Extending different services through different institutions is an outcome of a series of initiatives taken by the GoB for SME development. It established

the SME Cell (a permanent unit) under the Ministry of Industries in 2003 and constituted a national SME taskforce (temporary body comprising experts and professionals assigned with specific objectives) in the same year. The GoB also formulated SME Policy Strategies in 2005, implemented the Small and Medium Enterprise Development Program (SMEDP) in 2006, and then finally established SME Foundation, an apex organization for promoting SMEs, in 2007. The support services may be classified into: (i) Financial support through banks, MFIs and the SME Foundation; (ii) Technical assistance support; (iii) Governance and regulatory support; and (iv) Fiscal policy support.

6.1 Financial Support

Bangladesh Bank, for the first time in 2010, formulated the SME targeted credit policy to promote and develop SMEs consistent with the SME development policy of the government. In addition to setting targeted loan disbursement amount for SMEs, the policy recognizes the development of SMEs through area-based and cluster-based approaches to SME development. The area-based development approach requires that SME credit should be disbursed through all bank branches[8] to finance all types of SMEs. The cluster development approach requires financial institutions to finance cluster-based SMEs so that multiplier effects are large.

The other salient features of the policy are: (a) priority lending to women entrepreneurs with provision for collateral free credit facilities up to Tk. 2.5 million against personal guarantee; (b) preference for small enterprises with at least 40 percent of disbursement of SME credit; (c) full refinancing of manufacturing and service SMEs at bank rates. Apart from regular financing by banks and non-bank financial institutions (NBFI), the Central Bank has refinance schemes for medium to long-term finances to SMEs through banks and NBFIs against their disbursed SME credit. Presently, Bangladesh Bank, with the help of the government and different development partners, is operating five refinance schemes in the SME sectors – Agro Product-Processing Industries in Rural Areas, Bangladesh Bank Fund, Bangladesh Bank Women

[8] Banks include public sector commercial and development banks as well as private banks.

Entrepreneurs Fund, New Entrepreneurs Fund and Islamic Shariah Based Fund (Bangladesh Economic Review, 2018).

The policy continues with an increase in the amount of targeted SME credit. The SME credit disbursement target has been revised to 20 percent of annual total loan disbursement in 2017, which will be increased to 25 percent by 2021, with a minimum one percent increase in each year. Furthermore, the Central Bank has instructed banks and NBFIs to disburse at least 40 percent of their total SME loan disbursement for manufacturing, 25 percent for service and a maximum of 35 percent to the service sector by 2021. The targets are set by the Central Bank to ensure that SMEs are financed, as opposed to the preference of banks to finance working capital and term loans for large enterprises. Such targets are set for diversifying enterprise development and creating employment opportunities across regions.

Table-5: SME Financing by Banks and NBFIs
(Taka in Billion)

Year (Dec End)	Trad-ing	Manufac-turing	Services	Total SME credit	Women Enter-prise
2010	350.41	151.48	33.55	535.44	18.05
2011	343.83	158.06	35.10	537.19	20.48
2012	442.25	218.97	36.31	697.53	22.44
2013	567.04	240.16	46.03	853.23	33.56
2014	627.67	302.46	78.97	1009.10	39.39
2015	735.52	304.62	118.57	1158.71	42.27
2016	905.47	351.69	162.19	1419.35	53.46
2017	969.45	423.14	225.10	1617.68	47.73

Source: Bangladesh Economic Review 2018.

The total amount of SME loans disbursed has increased by almost two and a half times over the period 2010-2017 (Table-5). However, more than 50 percent of the total SME credit disbursed was for trading, and around 25 percent was for manufacturing enterprises. Women enterprise loans have steadily increased.

In addition to banks and non-bank financial institutions, SME Foundation has been offering limited financial support to selected numbers of micro and small enterprises, within the limited financial

capabilities of the Foundation. In addition, it links some enterprises to different banks for financial support. The SME Foundation, established in 2007, has also been providing technical assistance. Technical assistance services include providing training to the entrepreneurs, linkage with the market, and providing financial services in a limited way but mostly linking the SMEs with banks. Although the name of the institutions is SME Foundation, it is more focused on the cluster development of micro and small enterprises. Cluster development has become popular because of the important role that the Foundation has been playing.

Micro Finance Institutions have also been providing loans to poor and non-poor members. In recent years, they have been providing micro enterprise loans to traders mostly. In 2016-17, these MFIs provided over Tk. 300 billion to micro enterprises. They seem to be more effective in rural areas, where the density of MFI-branches is almost three times more than those of banks.

6.2 Technical Support

Although not adequate, different institutions provide technical support to SMEs, along with large organizations in Bangladesh. The National Productivity Organization (NPO) is a national level specialized organization under the Ministry of Industries, which aims to promote productivity of all organizations, including SMEs, in Bangladesh. The Bangladesh Institute of Management (BIM) is engaged in developing managers and managerial capacity building through training and research for all sorts of organizations, including SMEs.

The Bangladesh Industrial Technical Assistance Centre (BITAC) was established to create skilled manpower through technical training, acquiring and disseminating modern industrial technologies, and designing manufacturing and repairing import substitute machinery and machinery parts used in all local industries, including SMEs.

The Bangladesh Accreditation Board (BAB) was founded to make provisions for giving accreditation certificates to different laboratories, certification bodies, inspection bodies, and training institutions or persons. BAB provides accreditation services in line with international and national standards to different enterprises

including SMEs, such as ISO/IEC 17025 to testing and calibration laboratories, ISO 15189 to medical laboratories, ISO/IEC 17021, ISO/IEC 17065 and ISO/IEC 17024 to certification bodies, ISO/IEC 17020 to inspection bodies and so on.

There are also skill development training institutes. Jointly with South Korea and with Germany, Bangladesh has established two technical education institutes that are expected to provide short- and medium-term training. These institutions do not have a direct role in SME development but facilitate it through producing quality skilled personnel for industries, although this is more for small and medium manufacturing enterprises than for micro enterprises.

6.3 Governance and Regulatory Support

The ranking of Bangladesh in the *Ease of Doing Business Index* of the World Bank is not very satisfactory, although a silver lining is that the ranking is improving slowly. Bangladesh ranked 176 globally in 2018, one place up from 2017 (World Bank, 2018). This is due to poor regulatory and governance support from respective institutions. One of the major problems in this case is hassle and lengthy bureaucratic processes due to red tapism and corruption in getting licenses for starting a business. Difficulties in licensing arise for many reasons, including the involvement of multiple institutions/agencies, lack of knowledge on the part of the entrepreneur, and noncooperation of regulatory bodies in some cases. SME entrepreneurs claim that they face more bureaucratic and regulatory hurdles than large enterprises.

The following institutions are related to governance and regulatory support to SMEs in Bangladesh:

- The Bangladesh Standards and Testing Institution (BSTI) is the national standards body of the country. BSTI's main responsibility is certification for the quality of products as per the national standards.
- The Department of Patents Designs and Trademarks (DPDT) grants patents for innovations in the country.
- The Register of Joint Stock Companies and Firms (RJSC&F) is responsible for the registration process of private and

public companies in the country. It also deals with voluntary registration of partnership firms.

- Different city corporations and local government bodies issue trade licenses for doing business in their jurisdictions.
- Different ministries issue different licenses and certificates. For example, the Ministry of Commerce issues export and import certificates, and the Ministry of Environment issues environment related certificate.

The impacts of these institutions on SME development are not known; they will probably have limited impacts because of limited activities.

6.4 Fiscal Policy Support

The National Board of Revenue (NBR) is a key player in extending fiscal policy support to the SMEs in Bangladesh. Although there may be questions regarding its effectiveness in terms of scale and scope, fiscal policy support provides an indication of the government's good intentions to facilitate and support the development of SMEs. The major fiscal support for SMEs that currently exist are:

Turnover tax: All enterprises having an annual turnover of eight million Taka or less do not need to pay Value Added Tax (VAT); these enterprises will pay 3 percent turnover tax. However, there is no input-tax credit facility if turnover tax is paid. The VAT rate for other larger organizations currently range from 4 percent to 15 percent.

Tax exemption for cottage industries: Cottage industries (which may be termed as micro enterprises following globally acceptable definitions in terms of number of employees) that are not joint stock companies are waived from paying VAT if their annual production does not exceed six million Taka per year, and investment in plant, machinery and equipment does not exceed four million Taka at any time in a year. This facility is enjoyed for all products except a list of products mentioned in a Statutory Regulatory Order (SRO) issued by the National Board of Revenue.

Exemption from VAT registration: Cottage industries are exempted from VAT registration according to an SRO by the National Board of Revenue (NBR) in 2012.

Package VAT system: Traders located in the Dhaka and Chattogram city corporations having an annual value-addition of up to Tk. 1,86,667 or annual turnover of up to Tk. 700,000 pay a fixed amount of VAT of Tk. 28,000 per year. The rates are a bit lower in other areas: Tk. 20,000, Tk. 14,000 and Tk. 7,000 for businesses based on their locations in other city corporations, districts and other areas. Traders having an annual turnover of up to seven million Taka pay VAT at the rate of 4 per cent of total turnover.

Some of the micro and small enterprises with turnover of less than Tk.1.5 million have to pay turnover tax of 2.5 percent in place of VAT. This is expected to affect the growth of these enterprises. However, some of the priority sectors enjoy tax holidays.

Although there are some incentives for micro and small industries in the tax code of Bangladesh, many past studies (e.g. Bakth and Bashar, 2015) show that these are not particularly tailored to provide support to SMEs, and in many cases, discriminate against them. However, there is no study on the effectiveness of fiscal support on SME development.

Despite the proactive SME financing policy of the Bangladesh Bank and fiscal incentives, there have not been any substantial gains in SME development. As shown earlier, the contribution of the manufacturing industrial sector to GDP has remained more or less around 18 percent. However, contribution of medium and large enterprises has increased marginally. The critical issue is, why has there not been major breakthroughs in SME development? What has happened to cluster development? What are the constraints?

7. SUBCONTRACTING AND VALUE CHAIN INTEGRATION IN SME DEVELOPMENT IN BANGLADESH

We have highlighted the support services that are in place in Bangladesh for the development of SMEs. The policies recognize the role of subcontracting and value chain in SME development, but without many specifications on its development. In this section, we delve into the issues of subcontracting and value chain in the context of SME development in Bangladesh.

A sound, equitable and sustainable SME development strategy will require two critical elements: (i) inter-linked micro, small and medium enterprise development with provisions for subcontracting and value-chain integration; and (ii) higher competitiveness in the national and international markets through higher levels of efficiency. These can be achieved through value-chain integration and subcontracting (SECAP, 2011; OECD, 2005). In Bangladesh, these need to be developed: subcontracting between small and medium enterprises in the case of the manufacturing sector, and value chain integration in each sub-sector for improvements in efficiency. This will be particularly true for medium enterprises.

7.1 Subcontracting and SMEs in Bangladesh

Subcontracting is a growing phenomenon in organizing the production process. Firms all around the globe have increasingly been focusing more and more on subcontracting to minimize costs, harness quality and ultimately, to stay competitive. It is more common in the production processes that are involved in multi-stages activities, from processing to the end of production and marketing. Therefore, subcontracting has increasingly been referred to as a competitive strategy to organize production in vertically disintegrated supply chains (Holl, 2008; Webster et al., 1997). The contracts reflect the principal-agent relationship. Under the subcontracting arrangement, the principal firm gets services or products from the agent firms that act on behalf of the principal firm. It is generally applicable in industrial manufacturing and service sectors. Therefore, subcontracting may be industrial subcontracting or commercial subcontracting. In the case of industrial subcontracting, subcontractors feed intermediate products into the parent firm's highly complex manufacturing process, whereas in commercial subcontracting, trading companies hire enterprises to produce entire products and market them on their own (Webster et al. 1997). The lower the complexity of the product and labor costs, the greater the incidence of multi-tiered subcontracting (Sahu 2010). The most common subcontracting arrangements are found in readymade garments, textiles and light engineering sub-sectors in countries in South Asia and South East Asia.

Although subcontracting as a policy has been recognized as a strategy for developing cottage and small-scale industries in the First Five Year Plan of Bangladesh, it has not been able to create major and visible impacts in SME development. The operational policy was only formulated in 1986, when the Bangladesh Small and Cottage Industries Corporation (BSCIC) launched a subcontracting scheme in Bangladesh, taking lessons from South Korea and Japan. No impact assessment has been conducted yet on the outcomes of the scheme. However, apart from the statistics as reported in the annual report of BSCIC, Kamal Uddin (2014) did a survey of the subcontracting firms in 2012 in Bangladesh. The multi-national subcontracting in the RMG sector was not considered in the study.

Kamal Uddin (2014) identified three sectors in which SMEs play active roles as subcontractors. They are (a) machinery and equipment, (b) chemicals, electrical and electronic products and transport equipment, and (c) textiles, furniture and food processing industries. From another perspective, he classified the subcontracting organizations into manufacturing industries, non-manufacturing industries and service industries. SMEs operate at the lower segment of the subcontracting activities, particularly in light engineering. The activities include (a) making spare parts; (b) executing components of production processes such as casting, machining, forging, electroplating, heat treatment, (c) making and installing capital machinery as a part of industrial units, and (d) providing services for segments in the manufacturing chain or services. However, he argued that long-term subcontracting arrangements are quite limited.

Subcontracting and Light Engineering: Subcontracting schemes emerged in practice with the initiative of the Bangladesh Small and Cottage Industries Corporation (BSCIC) in 1986. Under the scheme, BSCIC undertakes the following activities: (a) identify the small and cottage industries that are complementary to medium and large firms; (b) establish linkage between subcontracting firms and lead firms; (c) facilitate signing of memorandums of understanding between them; (d) provide promotional services to subcontracting firms, like technical assistance to participate in tenders for orders; and (e) assistance in marketing. In 1989, through the enactment

of an official gazette notification, subcontracting arrangements in light engineering industries, particularly among the public-sector enterprises, were formalized. The BSCIC follows the framework as set by the gazette. It has the advantages of establishing linkages between large enterprises and SMEs and/or between public and private sector enterprises, as its industrial estates constitute mostly private sector enterprises. Since the inception of subcontracting, BSCIC has brought 1206 small and cottage industries under the scheme, and the enterprises have to date produced and supplied import-substitute spares and equipment amounting to a total of Tk. 3 billion[9] to principal enterprises under 30 Memorandums of Understanding signed with principal or prime firms (Kamal Uddin 2014). No statistics on continuity of the scheme is available. However, Kamal Uddin (2014) argues that long term subcontracting is constrained by quality of products, competitive prices, access to finance, asymmetric information and lack of technological advancement among the SMEs in light engineering. Therefore, he argues that subcontracting schemes need to be dynamic with multi-dimensional interventions like greater access to information, innovation and efficiency, subcontracting monitoring cells, expanding the scope of the government gazette to include all types of SME products, fiscal incentives for prime or principal enterprises, and more dynamic approaches from the BSCIC. It may be reiterated that the BSCIC sponsored subcontracting addresses enterprises in local markets and aims to substitute imported spares and equipment.

The BSCIC initiatives for subcontracting are more present in BSCIC industrial estate enterprises and public sector enterprises. That means, in most cases, subcontracting in light engineering highlights strategic collaboration of private and public enterprises. But there are evidences of subcontracting between private enterprises. During our visit to light engineering SMEs in Chattogram, we found evidence of such private-private collaboration in making equipment for a shipbuilding firm. However, the subcontracted SME complained about the bidding process and the possible risk of not having a long-term relationship with the principal contractor.

[9] Equivalent to some USD 35 million.

Subcontracting and Readymade Garments: Subcontracting is more dominant in the Ready Made Garments (RMG) sector in Bangladesh. It exists in RMG products for both foreign and local markets. Apu (2013) prepared an excellent report on subcontracting in the textile and clothing sector in Bangladesh in Textile Today, where he documented both horizontal and vertical subcontracting. The horizontal subcontracting takes place when the principal firms have limited capacity in peak time. The segmented activities in clothing may also lead to horizontal subcontracting. On the other hand, in the case of vertical subcontracting, a common practice in Bangladesh, the principal firm contracts out some of its processes in the vertical chain to subcontractors. There can also be specialist subcontracting, component subcontracting and product subcontracting. In Bangladesh, all these types of subcontracting are present in the textile and clothing sector. In the case of export-oriented RMG production, product subcontracting is common. What has the RMG sector subcontracting contributed to Bangladesh? Following the Rana Plaza disaster, substantial changes have taken place. The important ones are compliance with international standards, improvements in factory security and decent work-environments in factories. More importantly, it brought the attention of international buyers and government policymakers to workers' rights and wages. The export-oriented RMG manufacturers in Bangladesh have accepted the rights of workers to organize themselves and negotiate a uniform wage structure. There are more than 350 RMG trade unions in addition to the Federation of Garment Workers Unions. In the past, tripartite negotiations have led to the re-fixing of wages. As such, there is little variation in wages across the sector. The tripartite negotiations have also led to a commitment of workers to increase productivity. As such, profit or surplus is generated more from product prices and higher labor productivity, given the wage structure.

Subcontracting and Leather & Footwear: Subcontracting is a dominant feature in the leather sector of Bangladesh, where micro and small firms act as subcontractors to larger and mature firms. In the leather industry, subcontracting occurs at different stages. Leather processors supply intermediate products to tanneries

that possess a higher competence level, whereas leather goods and footwear subcontractors transform leather and accessories to leather commodities that are branded and marketed by their lead firm. Each mode of subcontracting (parts assembly, full-package production, self-employment) provides opportunities and displays asymmetries in resources, knowledge and capabilities. In the leather goods and footwear manufacturing industries, scarce capacity in peak season and rising competition among micro and small enterprises are the driving forces for subcontracting of production activities. Product quality varies depending on the final customer and the complexity of the goods (Strasser, 2014).

During the field visit to shoe clusters in East Madarbari[10], Chattogram, and Bhairab[11] in Kishoreganj district, we found the presence of subcontracting between micro and small shoe producers to medium and large manufacturer-cum-exporter of shoes. The principal firm subcontracts specific shoe production with the micro and small shoe producers in Chattogram and Bhairab as per the specifications and standards. The principal firms ensure quality and grading of the shoes. The subcontracted firms produce shoes in the name of the principal firms. We have found that the leading firm in shoe production in Bangladesh subcontracts local small firms in Bhairab for local markets. In this case, the knowledge and skills of principal firms are transferred to the subcontracted firms. Similar types of contracts also exist between small firms. We found that a firm in East Madarbari produced finished shoes in the name of another company in Netrokona. In this case, there was no monitoring of the quality.

The brief description of the subcontracting arrangements in Bangladesh suggests that subcontracting is present in mostly leather and footwear, RMG and clothing, and light engineering. But its effects on innovation, skill development and efficiency are yet to be evaluated and examined. Nevertheless, given the advantages of subcontracting, it needs organized promotion and a centralized monitoring mechanism so that entrepreneurship development can take place with backward and forward linkages and horizontal and vertical integration.

[10] A note on the visit to light engineering and shoe clusters in Chittagong is presented in Appendix-B.

[11] A note on the visit to shoe clusters in Bhairab is presented in Appendix-C.

7.2 Value Chain and SMEs in Bangladesh

The success of an enterprise will largely depend on its efficiency and value to the clients (Sturgeon 2001). Value chain activities range from conception of a product idea to delivery of a product to final consumers. At the most basic level, value chain analysis systematically maps the actors participating in the production, distribution, marketing and sale of a particular product (ESCAP, 2011; Stonkute, E 2015; Otchere et. al. 2013). The primary activities of the value-chain include production, marketing, delivery and servicing of the product; while support activities are related to providing purchased inputs, technology, human resources and overall infrastructure functions like general management and finance. Since Porter's introduction of the concept of a value chain, its conceptual framework has broadened significantly.

Sturgeon (2001) introduced various nomenclatures of the value chain including alternative names, scale and value-chain actors[12]. The alternative names of the value chain include supply chain, commodity chain, production chain, activities chain or product pipeline. We use the terms 'value chain' and 'supply chain' interchangeably in this paper to refer to the same concept.

Stonkute (2015) did an excellent review of the literature on value chain or supply chain management and attempted to establish causality between supply chain integration and success factors of SMEs. He rightly argued that supply chain management requires integration of both the internal system within an enterprise and the external system involving operations of suppliers, customers and other members in the supply chain. Therefore, the supply chain management strategy of an enterprise should target operational efficiency and higher quality customer services through improving product quality and close relationship with customers (Morash 2001). Hence, supply chain activities, whether they flow downward or upward, should be integrated

[12] Sturgeon (2001) has identified five major value-chain actors: (1) integrated firm/modern corporation (a firm which engages in the entire range of value-chain activities); (2) retailer/ marketer (a firm that carries out sales and marketing activities); (3) lead firm (a firm that initiates the flow of new products through the value chain); (4) turn-key supplier/system supplier (a firm that supplies complex parts and services); and (5) component supplier/ subcontractor (a firm that supplies discrete component parts).

(Stonkute, E 2015). Such integration has positive impacts on business performance, information sharing, customer satisfaction, sustainable business relationships and cost efficiency; but this is realized only when parties in the chain cooperate for mutual benefits. However, overriding bargaining power of any member may create a state of disequilibrium in the chain. Therefore, the inhibiting factors in supply chain management are lack of unified information technology infrastructure, absence of skill and knowledge integration, perceived static knowledge, and lack of or limited cross-trained workforce (Giuliani, 2017; Kamal et. al. 2014; Lall, 1996; Navaretti and Venables, 2004).

7.2.1 Value Chain of Plastic Industry in Bangladesh

The plastic industry is one of the sub-sectors under the chemical industry in Bangladesh. This sector started its journey as a small backward linkage industry in the 1960s (Islam, 2014), and now constitutes a significant segment of the country's manufacturing industry (ESCAP, 2013). During the last two decades, it has emerged as a vibrant industrial sector of the country (Islam, 2014). The Bangladesh Plastic Goods Manufacturers and Exporters Association reports that the plastic industry has approximately 3,000 small, medium and large manufacturing units and it employs more than one million people. Around 98 percent of the plastic-manufacturing units are SMEs, with only a few being medium firms. There are contract manufacturers and a few brand manufacturers as well. Most of the industrial units are located in the capital city of the country. The domestic market size is Tk. 90,000 million and the export market size is about Tk. 27,000 million (which includes the export of plastic as accessories for readymade garments).

Although this industry primarily serves the domestic market, some plastic items are exported to other countries. In 2015-16, export of plastic goods amounted to some $167 million, an increase by almost 1.67 times since 2008-09 (Export Promotion Bureau). Despite remarkable progress over the years, it still lacks a well-designed value chain for sustainable growth. The backward linkage of the value chain is inadequate and underdeveloped. Major inputs that are used in the plastic industry are granules

and additives. Only recycled granules are available domestically and such recycled materials are mostly used by SMEs. Taking advantage of low labor costs, this sector extensively undertakes recycling of used plastics. SMEs use around 60 percent recycled materials. However, recycling of mixed plastics can be extended to a great extent by using model technology (Islam, 2014). In order to meet the demand for plastic raw materials and due to the shortage of domestic recycled materials, this industry requires the import of recycled materials and 100 percent virgin materials. Bangladesh imports more than 150,000 metric tons of plastic raw materials each year and it is continuously growing.

Large firms usually import moulds from China and Thailand while SMEs use local moulds that are of low quality. Non-availability of good quality moulds is a key constraint to the plastic sector development in Bangladesh (Islam, 2014). Due to the inadequacy of good quality mould making facilities in the country, capital constrained SMEs are forced to use low quality mould from local suppliers, and thus they end up with producing low quality plastic products with poor finishing that ultimately serve low-end market segments. Therefore, plastic goods produced in Bangladesh find it difficult to compete in the global market (ESCAP, 2013). Local production of a mould requires around seven days while the import needs more than two weeks.

Alongside the underdeveloped backward industries, SMEs in the plastic sector suffer from many other constraints relating to support industries including shortage of skilled manpower, insufficient laboratories for quality control, machine maintenance, and international certification (Islam, 2014). These constraints were also identified during our field visit to a few plastic firms in old Dhaka[13]. Most of the firms in old Dhaka are small in size; they operate with labor trained on the job. Because of the technicalities of the business, almost every entrepreneur has a history of having worked as an apprentice. Development of a plastic industrial park to relocate the small plastic factories of old Dhaka can contribute to the development of SME value chains in the plastic sector, but high costs of land may be a constraint. However, in

[13] A brief note on the visit to plastic factories and meetings with selected entrepreneurs is presented in Appendix-D.

this case, the experiences of the *Jamdani Palli*[14] in Rupganj may be useful, where the entrepreneurs are provided with land for a nominal price of Tk. 70,000, whereas the market price is around ten times more. The production of good quality plastic moulds can also be facilitated by proper integration between SMEs in plastic production and SMEs in the light engineering sector. In the current context, SMEs in neither of these sectors are capable, both financially and technically, of making any significant progress in this venture (ESCAP, 2011). Thus, development of a common cluster for upstream value chains and downstream value chains can pave the way for the future success of this industry.

7.2.2 Value Chain of Leather Goods and Footwear Industry

The second largest export-oriented industry in Bangladesh is the leather goods and footwear industry. Bangladesh is endowed with a natural advantage as well as acquired advantage in this industry, which includes an abundant supply of labor, raw materials and successful experience in RMG for the production of high-value leather goods and footwear (Hong 2018). Thus, this industry has considerable potential for development. Bangladesh has the potential to become an investment hub for the global leather industry value chain (Coonan 2013). Many global brands are already sourcing from Bangladesh since labor costs in China have been rising, pushing up the costs of production and eroding competitiveness. Furthermore, the domestic footwear market is rapidly expanding as the size of the middle class grows (Paul et al., 2013).

Bangladesh ranked 8th position in terms of footwear production in the world in 2016, with a production of 378 million pairs, which was equivalent to 1.6 percent of total global production, and domestic production was valued at Tk. 17 billion. Roughly 6 million pairs of leather footwear are sold in the domestic market, and the remaining output is exported.

This industry comprises of 220 tanneries, 2500 footwear firms and 90 large firms. About 76 percent of the tanneries in

[14] *Jamdani* is a traditional textile made by Bangladeshi weavers and is considered to be a UNESCO intangible cultural heritage. *Palli* means village, but here refers to the equivalent of an industrial park dedicated to weaving *Jamdani*

Bangladesh are export oriented. The export earnings of the leather industry were $1.234 billion in the fiscal year 2016-17. The overall contribution of the leather, leather footwear and leather products industry in total national export in 2016-17 was 3.54 percent, of which leather accounted for 0.67 percent, leather goods 1.33 percent and footwear 1.54 percent. In the year 2015, Bangladesh exported 44 types of leather products to 84 destinations. There remains ample scope to increase the share in the global market by widening export items and export destinations. In particular, SMEs in this industry need to the upgrade value chain in the high-value-adding stages, which in turn will raise export earnings up to $5 billion in the future. It may be noted that these firms are in the private sector with mostly family ownership. However, in the past, BATA Limited was engaged in local production of footwear, although it now basically imports footwear from different international brands for retail sales in Bangladesh.

SMEs in the leather industry have the potential to develop the entire supply chain—starting from raw leather to leather processing to production of footwear and leather products, domestically. There are possible strong backward linkages with mostly locally sourced raw materials—allowing high domestic value addition (over 80 percent), an abundant supply of low cost, trainable labor, and its advantageous location. Alongside the leather segment, the footwear and leather goods segments also hold considerable potential. There are already several modern footwear and leather-based products manufacturing units with world-class operations in Bangladesh. Foreign companies are also showing interest in operating footwear factories in the country. A growing number of large footwear manufacturers are engaged in exporting, with several of them producing high-quality leather footwear and leather-based products.

A large number of small producers of footwear for the domestic market are also operating in Bangladesh, mostly in two major clusters in Chattogram and Bhairab. On the one hand, the growing exporting firms do not have any linkage with these producers in these clusters, and on the other hand, the growth of footwear exports has not led to the growth of the small producers in the clusters. The producers of footwear for export use modern

technology, but most of the small producers do not use any technology. However, some of the hand-made producers that are graduating to medium enterprise have semi-mechanized units, as was evident during our visit to the Bhairab cluster[15].The leather and footwear industry has great potentials because of availability of raw hides and skins and cheap labor force. Bangladesh has an ample supply of livestock and it has been increasing gradually, creating a huge supply of raw hides and skins in the local market. However, a proper functioning raw hides and skins market that is determined by supply and demand is absent (Strasser, 2014). Problems also remain in the tannery units. SME tanneries face a number of major challenges like lack of access to finance, lack of skilled workforce and training facilities, lack of access to the latest technology, and dependence on expensive imported chemicals (ADB, 2017; Strasser, 2014).

The footwear exporting producers are not free of challenges either. In addition to the problem of access to finance, the major challenges for the firms include design capability, product innovation and response ability to competitors in international markets[16].

The small and medium-sized footwear enterprises suffer from multiple problems and challenges. Inadequate access to bank credit is a major barrier, as they need borrowed funds to invest in machinery and modern technology. Lack of adequate credit, expensive imported machinery, and a dearth of skilled workforce and managers are barriers to moving into higher value-added products. Moreover, training facilities are inadequate and need to be expanded. Design capability and product innovation of these firms are low, and quality control is ineffective. The linkages and coordination between the small and medium-sized firms and the lead firms for which they subcontract are often weak, and support services are insufficiently developed. Moreover, there are procedural constraints, such as high costs of getting the requisite permits and approvals for business. These permits include numerous procedures and formalities involving trading across

[15] Please read a note on the visit to Bhairab shoe cluster in Appendix-C.

[16] These issues were echoed by Mr. Syed Manzur Elahi, a leading businessman and pioneer of Apex Footwear, during our meeting with him.

borders, which continue to amplify the sector's weaknesses and hinder investments (ADB, 2017). These problems are common even in footwear clusters, as discussed above. Similar problems also prevail in footwear cluster in Agra, India[17].

7.2.3 Value Chain of Furniture Industry

Furniture manufacturing is one of the high-growth and high-potential sectors dominated by SMEs. Except for a noted few, furniture sector consists of medium, small and micro firms. In a focus group discussion held in the Faculty of Business, University of Dhaka on November 17, 2018, industry experts said that there are about one hundred thousand micro and small furniture manufacturers and about one hundred medium and large firms. Estimated annual turnover of this industry is about Tk. 105 billion, of which Tk. 65 billion is the share of micro and small firms and the remaining Tk. 40 billion is contributed by the medium and large firms. In the fiscal year 2016-17, export earnings from this sector were USD 63 million. SMEs in the furniture industry produce three types of furniture: plastic furniture, solid wood furniture and processed wood furniture. Furniture manufacturing is also interlinked with some other SMEs in the light engineering sector, steel and iron sector, leather and textiles.

SMEs in the furniture sector strongly depend on imported raw materials. Supply from backward industries like medium-density fiberboard (MDF), particleboard, melamine board, small tools and fittings, fabrics, leather, steel and metal are inadequate and in poor quality. Around 60 SMEs supply MDF boards, particleboards and melamine boards that cover about 25 percent of domestic demand. However, the quality of domestically available inputs do not usually adhere to international standards, which deter export-oriented furniture manufactures from sourcing those inputs from local suppliers. A few large firms, including Partex, Hatil and Akhtar Furnishers, produce their required backward materials but such firms don't supply those materials to other manufacturers of the finished product. Brand furniture producers also claim that the supply of tools from the light engineering sector and fabrics

[17] Interested readers may read our note on Agra Footwear Cluster in India presented in Appendix-F.

from the textile sector don't meet quality standards for exporting furniture to the international market.

There is scope here of further integration in the value chain, both in backward and forward stages. SMEs in the furniture sector can invest in the backward supply of raw materials for making processed wood furniture. Since China and Malaysia are moving to more capital intensive industries, Bangladesh has the opportunity to take over a greater share of the international furniture market. Thus, future demand of materials for making processed wood furniture is expected to rise. SMEs in this sector also need to develop strategic partnerships with the light engineering sector, plastic sector and textile sector to ensure the development of a quality supply of tools, steel, metal and plastic accessories and fabrics. Wood furniture manufacturers claim that they import light-engineering tools and accessories from China since domestic suppliers cannot deliver high quality and a wide range of tools. Similarly, plastic furniture manufacturers argue that they import virgin raw materials from China in the absence of quality supply of recycled raw materials in the local market. All types of chemicals are also imported. Because of high import dependency of required raw materials, plastic furniture production is costly in Bangladesh compared to other competing countries in Asia. The export of plastic furniture is also not competitive in the international market. Thus, SMEs in the plastic sector need to develop the capacity to produce quality recycled materials and also chemicals to feed the plastic furniture manufacturers. This will harness price competitiveness of plastic furniture in the international market. Another key problem that SMEs in the furniture industry face is the supply of technically sound workers, designers and machine operators. In the future, furniture production will shift to modular production, which will demand a high degree of automation and skilled labor force. Therefore, the development of technical and vocational institutes is essential to ensure growing demand of non-managerial employees with appropriate technological know-how.

7.3 Constraints to Developing Subcontracting and Value-Chain

Some of the major constraints to the development of subcontracting and the value chain in integration in SMEs are outlined below.

Preference for imports: Subcontracting develops in a culture where large industries want to integrate SMEs in the value chain process. In many cases, large industries develop strategic partnerships or strategic alliances with SMEs through subcontracting, which in turn improves the competitiveness of the lead industries; for example, the automobile industry and electronics industry in Japan operate in such a structure. Similarly, the development of SMEs in the general machinery industry in Taiwan was fostered by the presence and mandatory subcontracting requirements of the Singer machinery company, where the government allowed the entry of Singer into Taiwan on the condition of the development of a subcontracting network with local manufacturers. However, such a policy and mindset is absent in Bangladesh. Larger industrial units in Bangladesh mostly prefer import to subcontracting domestically. Large firms in the furniture and plastic industries hardly subcontract or develop strategic partnerships with SMEs in feeder industries, like the light engineering sector of the country. Kamal Uddin (2014) noted that the first choice of most large firms is to import and the second choice is to purchase from small-scale industry, and there are examples of products being imported even though capacity for their production already exists in small-scale industry.

Lack of investment and uncertainty of demand: Lack of investment or limited investment capacity, and uncertainty of purchases by consumers, give rise to deterrent circumstances in commercial production of products by SMEs.

Unqualified SMEs for subcontract of exportable goods: Large firms in the leather goods and footwear industry report that although multi-tier subcontracting prevails for serving the domestic market, SMEs do not qualify for producing export quality goods on sub-contracts. Large export-oriented firms opine that two barriers hinder inclusion of SMEs in the export market through subcontract: (i) inability of SMEs to fulfill requirements of foreign buyers and (ii) non-compliance with local laws and

regulations relating to taxes and license. Large buyers are exposed to public attention and thus cannot afford the risk of having non-compliant suppliers. Furthermore, the bonded warehouse system denies large export-oriented firms from letting subcontractors benefit from duty-free imported accessories (Strasser, 2014).

Access to finance: Access to institutional finance still appears a key stumbling block to the development of SMEs. In most cases, access to finance is highly conditional, and requires strong backing by collateral and high interest rates. Conditions to avail loans from governmental and private banks are often make such loans inaccessible for micro and small manufacturers. High interest rates act as a deterrent for many micro and small manufacturers in the leather industry that, moreover, are often unable to fulfill collateral requirements. The collateral-free sum is considered too low for substantial investments. Intermittent order inflow and low capacity utilization discourage micro and SMEs from servicing loans in the low season. A high level of bureaucracy and corruption, particularly in governmental banks, lead to huge transaction costs, which micro and small industries cannot afford (Strasser, 2014). Bankers claim that many SMEs cannot qualify for loans as the business entities hardly maintain documentation of their business transactions like sales invoice, payroll, cash flow statements etc.

In the absence of adequate access to finance, leather sector tanneries are unable to invest in upgrading technology and machinery, and developing skills for reducing cost and improving leather quality, and thus lose competitiveness. Similar to the SMEs in tanneries, leather and plastic goods manufacturing SMEs face a wide range of constraints in relation to their value chain. For small and medium-sized footwear enterprises, access to credit is a major barrier, as they need borrowed funds to invest in machinery and modern technology.

Shortage of skilled labor force: Although Bangladesh is a labor abundant country; inadequate supply of technically sound manpower is a common problem for SME development in Bangladesh. A dearth of skilled workforce and managers are barriers to moving into higher value-added products in the RMG industry, leather and footwear industry, furniture industry

and light engineering industry. Moreover, training facilities are inadequate and need to be expanded. The shortage in skilled manpower supply is closely connected to the country's education system, both formal and vocational. In this case, Bangladesh can take lessons from countries like Malaysia and Germany, which have successfully developed skilled manpower for SMEs.

8. CONSTRAINTS TO SME DEVELOPMENT IN BANGLADESH

Globally, micro and SMEs are subject to some constraints. The constraints are quite common, although their magnitude may be different. Several authors have addressed the constraints that SMEs are confronted with, which are challenges of different degree. The nature of the problems are different in different economies. In developed economies such as in the European countries, SMEs face the challenges of intense competition and technological change. In developing economies, most micro enterprises are not registered. They are constrained by lack of or limited information about market and technology, lack of finance, shortage of skilled manpower and weak industry associations.

Yoshino and Taghizadeh-Hesary (2016) argue that many SMEs are not able to utilize their capacity and cannot operate with efficiency due to:

- Lack of access to finance, skilled labor, market information and technology
- Lack of scale and scope advantages
- No effective networks for access to information, new knowledge about technology, and domestic and international markets
- Inability to compete with large firms because of the advantages in innovation and R&D expenditures in developed economies, in particular
- Lack of entrepreneurial zeal, capacity, and know-how

Many small enterprises and businesses operate for the local market. As a result, they often put themselves in competitive disadvantages (Harvie and Charoenrat; Yoshino and Taghizadeh-Hesary 2016).

Jafar (2004) argue that the development of micro and SMEs depends on the role of government. The role of government is important in (i) creating a conducive business environment (ii) providing capital or equity support (iii) protecting businesses through regulations (iv) forging partnership with the private sector (v) setting up training facilities (vi) creating different institutions and (vii) facilitating market development.

Similarly, Haeruman (2000) noted that the SMEs are subject to different challenges in (i) improving the quality of human resources (ii) competency and ability of the enterprises and entrepreneurs (iii) greater access to capital (iv) asymmetric information about market and competing products (v) other factors of production inputs and (vi) business climate that encourages innovation, entrepreneurship and business practices and fair competition.

SMEs commonly face constraints that include low productivity, less value-added products, small investments, limited market area, extremely limited business networks, lack of access to sources of capital and raw material, and unprofessional management (Koe, Wei-Loon, R. Omar, and J. Rizal Sa'ari 2014; Munizu, Sumardi and Armayah 2016).

We have identified the constraints to development of SMEs in Bangladesh primarily based on literature review. Quite a number of publications and research studies have been conducted since the 1970s in Bangladesh. Most of the publications[18] focused on constraints to and challenges for the development of SMEs in Bangladesh. We highlight the problems based on this literature.

Limited access to finance: Finance is a powerful intervention for economic growth, especially in a resource-constrained developing

[18] See Abedin (2016), Ahmed (1999; 2001; 2004; 2009; 2013; 2014; 2017), Ahmed et al. (2004), Ahmed, N. et al. (2011), Ahmed, S (2003), Ahmed, S (2012), Bakth and Ahmed (2010), Bakth and Basher (2015), Begum R (1993), Chowdhury, et al. (2013), Daniels (2003), GoB (2006), Hasan and Jamil (2014), Islam (2014), Islam et al. (2009), Kamal Uddin (2014), Khandker (2014), Khandker, et al. (2013), Khalily, et al. (1994), Khalily (2006), Khan, et al. (2002), Maleque (2012), Miah (2006) Mintoo (2004), Qamruzzaman (2015), Rabbani, et al. (2005), Rahman et. al. (1978), Rahman et. al. (2012), Razzaque (2003), Sarder (2000), SEDF (2006), Zaman and Islam (2011), , SME Foundation(2013), among others. A comprehensive list is provided in reference/bibliography.

country like Bangladesh. Access to finance, especially to the poor, is essential for promoting inclusive economic growth and eradicating poverty in the country. Recent studies have pointed to the importance of the rural non-farm sector (RNF) in developing economies.

Since the independence of Bangladesh, institutional structure and traditional collateral-based lending has changed significantly. Despite an increase in the number of banks and financial institutions, and targeted policies, SMEs still have the constraints of limited access to finance. This was also highlighted by enterprises in the cluster zones. Several factors contribute to limited access to finance, including lengthy and complex loan sanctioning procedures, requirement of too many documents, and collateral requirements. Interest rates were considered as high as well. Recent statistics show that although SMEs have access to long term loans for investment in fixed assets, most of them, particularly small enterprises, have little access to working capital loans. As these enterprises have little access to capital markets, SMEs (particularly small enterprises) are more dependent on bank financing for both term and working capital loans.

Inadequate access to modern technology: Needs assessments of the cluster-based enterprises clearly demonstrated that the enterprises developed based on the availability of raw materials. They mostly use traditional technology. Even many of the formal SMEs lack upgraded technology. Consequently, they lag behind in competition.

Limited access to information technology: SMEs are in general subject to competition, both locally and internationally. Many of the SME products are vulnerable to unknown competition. Enterprises can cope with competition with others, and expand markets and minimize risks, if the entrepreneurs have access to information technology, but most entrepreneurs have little access. Information is required to understand market conditions, input and output prices, new products and new taste of consumers.

Lack of skilled staff: Staff and workers are not fully skilled in SMEs. This is due to the reluctance of entrepreneurs to invest in human capital and also due to lack of information and insufficient

institutions. This is more of a problem for the SMEs that are located in rural areas.

Underdeveloped physical infrastructure: SMEs suffer from inadequate access to physical infrastructure like roads, ports, markets and transport. Transportation costs are reasonably high when SMEs are far from main markets.

Poor knowledge about marketing: Most SMEs that are located in rural areas and those that operate in cluster areas have limited understanding of the market. They basically operate in local markets, and marketing intermediaries have a dominant role. As such, the market price of finished goods is relatively low.

Limited understanding about internationalization of SME products: Most SME products can access international markets with quality products and linkages with international markets. Most entrepreneurs, for example in the case of products in cluster zones, lack knowledge about how to get their products to reach international markets.

Absence of testing services: In any business, success will depend on the quality of the products; quality needs to be ensured. Unfortunately, lack of testing facilities (e.g testing of products by BSTI or other acceptable bodies like BUET) in different regions of the country is a constraint. This constraint adversely affects both producers and consumers.

Disincentive in fiscal policy: Organized large and some medium enterprises registered as a separate entity can take advantage of lower tax rates due to the tax deduction of some expenses, such as salary of owners and tax holiday. Unfortunately, most small enterprises and some medium enterprises are individual entities that do not get deductions for the salary of owners. As a result, enterprise income and wealth are subject to higher taxes.

8.1 Constraints to SME Development: Evidences From Visits to Clusters

We visited different clusters, as noted earlier, and interacted with different associations to discuss the challenges and constraints to SME development in Bangladesh. The constraints, as identified from the literature review, were corroborated. They vary in

intensity by sector. Nevertheless, the key common constraints as identified by the enterprises are as follows:

- Limited access to bank finance for SMEs, but almost non-existent for micro leather footwear producers because of reluctance of the lenders;
- High interest rate and collateral requirements restrict access to bank finance;
- Limited availability of skilled and semi-skilled workers;
- Firms do not use apprentices on the ground since they do not reap benefits because of their high mobility;
- No institutional linkage with technical education. On the other hand, firms rarely use apprentices in their production processes;
- There is no effective role of concerned business networks;
- Lack of information restricts efficiency in production and marketing;
- Lack of coordination among different agencies of the government;
- Firms in clusters have space constraints. They mostly operate in residential areas (like the plastic cluster in old Dhaka city, and the leather footwear cluster in East Madarbari and Bhairab);
- Negligible presence of subcontracting for backward and forward linkages.

These problems are not new. They have existed for decades. Although we have summarized the constraints, the list would be longer if it was prepared according to sector and sub-sectors. The nature of the problems would also have been different in many cases. Nevertheless, we have highlighted these drawbacks in a generalized form, although the ones that we have highlighted may not be applicable to all types of SMEs. The critical question is, why do these problems exist? How can these problems be solved?

9. DEVELOPMENT OF SMEs IN GERMANY: EXPERIENCES

Herr and Nettekoven (2017) have done an excellent review of literature on the SMEs in Germany with the ultimate of objective

of drawing lessons for developing countries or less-developed countries. This section draws heavily from this paper and is complemented by other empirical evidence. Over the last few decades, substantial changes, both in the scale and scope of SMEs in Bangladesh, have been made to ensure access of SMEs to different institutions. Not all SMEs have access to all types of institutions but of course, it is plausible that not all existing institutions are equally effective, and there may be gaps in the institutional approach. In that case, what kind of changes will be required? It will depend on the objectives of SMEs in terms of the market. We assume that: (i) SMEs should be geographically distributed; (ii) more emphasis will be placed on quality products; (iii) SMEs should be developed in cluster areas because of scale and scope advantages, and spillover effects; (iv) regulatory and legal requirements should be conducive; (v) SMEs should access international markets; and (vi) SMEs should have access to all required institutions, including finance.

Based on these underlying assumptions, policy parameters can be suggested. Given the objective of the paper, we tend to draw lessons for policies and structural changes based on the German framework and practices.

Why the Germany Experience? The development of SMEs in Germany is globally ranked second. Most of the enterprises in Germany are SMEs, whose development is driven by different perspectives. Several interesting factors help developing SMEs in Germany. They are (i) startup SMEs are differentiated from mature SMEs; (ii) definitions and classifications of SMEs are focused and objective oriented, with micro enterprises defined as enterprises with employees of less than 10; (iii) skilled manpower, a critical element in the development of SMEs, is linked with high investment in human capital (vocational education and training); (iv) supportive banking system; (v) networking of SMEs that has implications for dissemination of information and learning from each other; and (vi) close relationships with government support agencies. The critical goal in Germany is to develop Schumpeterian type innovative, efficient, dynamic and sustainable SMEs.

The KfW (2017), a big, government-owned development bank in Germany, classifies startup enterprises into two:

opportunity startups (often termed as Schumpeterian enterprises) and necessity startups. As noted by Herr and Nettekoven, in 2016, the main motive of new startups was to realise an innovative, marketable business idea.

SMEs are of paramount importance to global development as an engine of growth. It is due to not only economic progress like employment creation, increased productivity, source of innovation, but also social progress like improvements in individual freedom and higher standards of living. Following the 2008 economic and financial crisis, the European economy considers the "SME engine" as a central driver of investment and innovation to achieve its potential for both developing and developed countries (Audretsch et. al. 2018; Abel-Koch et. al. 2015). In the European Union (EU), SMEs represent 99 percent of all businesses, employing 93 million people, accounting for 67 percent of total employment, and generating 57 percent value addition (European Commission 2017). Germany is perceived as a role model for SMEs (Herr & Nettekoven 2017).

9.1 Definition of SMEs and Their Categories

Due to the wide range of SMEs that exist, there is no clear or unified definition of SMEs. The European Commission consistently defines SMEs as firms that have less than 250 employees or that generate up to 50 million euro in annual turnover (European Commission 2018). Considering the European Commission's definition of SMEs, the German's definition is broader. The Federal Ministry for Economic Affairs and Energy of Germany defines SMEs as firms having less than 500 employees or generating up to 50 million euro in annual turnover (BMWI 2014). However, the KfW identifies SMEs in terms of turnover: SMEs are firms with up to 500 million euro in annual turnover (Schwartz 2017). SMEs have been defined by Audretch & lehmann (2016) according to the definition put forward by the EU in terms of turnover. Despite this divergence in definitions and disaggregated data, following the EU definition, the European Commission provides consistent information on SMEs in Germany. This means, while reporting to the European Commission, Germany provides disaggregated data on SMEs according to size: Micro (up to 9 employees), small

(10-49), medium (50-249), and large (250+ employees). The definitions used by EC and Germany are consistent when defined in terms of annual turnover — firms with annual turnover of Euro 50 million are considered to be SMEs.

9.2 The German SMEs and their Key Features

Germany is a role model for SMEs. The German SMEs are known as Mittelstandfirms or companies. Most of these companies are family-owned and based in small towns, yet they hold market shares of up to 90 percent in worldwide market niches. These SMEs have enhanced the prosperity of both rural regions and urban cities in Germany. Particularly, the medium sized companies, as winners of globalization, continue their long-term progress with family ownership combined with professional external management, strategies of market leadership in global niches and a persistent focus on operational effectiveness (Audretsch & Lehmann 2016; Pahnke and Welter 2019; Venohr & Meyer 2007). Hidden Champions[19] are a subgroup of such Mittelstand firms, and are world market leaders of niche products. High export shares are a key element of their strategy, fueling their strong and sustained performance. Pursuing a niche strategy for differentiated premium products— usually a knowledge intensive, technological product in manufacturing— these comparatively small but globally competitive firms lock in global customers with highly specific quasi-rents through fully owned subsidiaries, retaining control and residual property rights. Also, the champions deploy highly skilled manpower in their businesses (Audretsch et. al. 2018).

Audretsch and Lehmann (2016) mentioned seven secrets or features of the German economy in their book "The Seven Secrets of Germany: Economic Resilience in an Era of Global Turbulence". They argued that Germany's economy remained robust during global turbulence, not so much because of policy and strategy, but because of strategic investments and development

[19] Hidden Champions are enterprises that incorporate qualitative aspects and a higher revenue limit: First, they must occupy the number 1 or number 2 position in their world market, or the number 1 position in the European market. Second, they should not generate more than circa €800 million in sales. Third, a Hidden Champion has to have low public visibility. Only a small portion of the German Mittelstand firms consist of hidden champions.

of key institutions that promote innovation, entrepreneurship, and localized decision-making. They concluded that the supply side responses contributed to robust economic growth. Welter et al. (2016) identified some characteristics distinguishing a Mittelstand company, which range from small size to governance (family ownership), human resource relations, linkages to the local community, finance and long-term orientation, among other things. Firm size, i.e. being classified as an SME, is just one among multiple key salient characteristics. Venohr and Meyer (2007) mentioned 10 lessons from Simon's analysis of Hidden Champions in their works. De-Massiss et. al. (2019) in a recent paper also highlighted traits of the Mittelstand firms. These constitute the following features of SMEs as a whole in Germany:

Size of firms: Germany's commitment to its small-to-midsize companies, or Mittelstand, promotes localized economic development while enabling firms to excel internationally within well-defined niche markets. Germany's small[20] industrial companies are market leaders and continue to outgrow their competitors. Such companies have a highly defined focus on markets where they are leaders, and they often have a share of more than 50 percent in the market. They spend heavily on research and development and are also characterized by a strong international presence.

Ownership of the firms: Most of the Mittelstand companies are family-owned and prefer to rely on their own financial power, which brings with it a high degree of independence, autonomy, and security. Family-owned firms are hardly a novelty in leading developed countries. Still, Germany is different. Most of the oldest family firms in the world, with a long tradition spanning generations, are located in Germany.

Strategy of firms: Another key characteristic of the German Mittelstand is a strategy focusing on the quality, innovation, and technology of the product as sources of competitiveness, rather than relying mainly on price competition. The strategy based on quality and innovation is consistent with a society and economy that has traditionally operated with a high value of its currency,

[20] With annual revenues of less than €1 billion euro, these firms account for about 40 percent of all German manufactured goods exports.

rendering low-cost price competition relatively ineffective. What almost all Mittelstand firms have in common is their strategic focus on market niches and their flexibility in the production process, enabling a handful of them to achieve the status of hidden champion. This cornerstone strategy, combining tradition with innovation by family firms, contributes to the long run perception among consumers of the product's quality, which obviously cannot be easily imitated by competitors.

Human resources and pay equity: An important characteristic of the German Mittelstand is the nurturing and development of human resources. SMEs in Germany have highly skilled, motivated, committed and capable human resources who feel a sense of community at their company and also feel that the values of the company coincided with their own values. A key qualitative difference between the German Mittelstand and SMEs in other countries is the extensive boost in training, skills, human capital, and capabilities invested in young people through the German apprentice system. The apprentice system is part of the dual system of education in Germany. The dual system refers to the requirement that apprentices spend between one-half to just over two-thirds of their time at work in a company and the remainder of their time in formal education. Most of that formal education takes place at a vocational school. Mobility of skilled workers across the industry is relatively low because of the uniformity in wages and the right to form trade unions. Workers are usually paid well, and the salaries of skilled workers are not too different from that of academics. Wage structure is co-determined, with a big role being played by trade unions.

Structure of organization: The flat organizational structure of SMEs allows decentralization and independent decision making. In a family business, the owner is typically the executive and the manager. Combining these roles into one means that the business decisions involving risk, uncertainty and liability are made in the context of the close ties that the family has with the employees and the community. The work environment in the Mittelstand is typically anything but formal. Employees have direct access to management and are involved in decision-making. The decision-

making and governance structures of the Mittelstand are noticeably flat rather than hierarchical.[21]

Time horizon of business plan: The long time horizon used for planning and decision-making is another feature of German SMEs. Most SMEs are working to secure the company's long-term existence, and place great value on lasting relationships with customers, suppliers and other businesses.

Flexibility in cost structure: Flexibility is not just a core strategy for the company but grounded in its cost structure. Over the last several years, when demand for products was high, Mittelstand companies registered about 45,000 hours of overtime work. While this may cost more in the very short run, SMEs enjoy longer-run costs savings because they avoid having to lay off workers during periods of slack demand with the adjustment of overtime work. This buffer enables a firm to flexibly adjust the actual hours worked by its employees, sparing both the costs of firing employees in a cyclical downturn and the high costs of searching for and hiring qualified employees during the upswing.

Competitiveness in global markets: Generally, the Mittelstand firms follow conservative growth-paths due to their unwillingness to access external finance and bring their business strategies into the public eye. But at the same time, they are also not willing to restrict their operations to limited local markets. The desire to be competitive in global markets makes these firms more focused. They become more competitive as they draw lessons from local sources. This trait differentiates the German Mittelstand from its SME counterparts in other countries. The localized competitiveness of the Mittelstand draws on the strong and supportive involvement of the companies (including the owner-managers) in other firms and people, spanning the entire value chain of the company's main products. Typically, this involvement and interaction involves relationships within the same town, city, or region, leading to especially strong and deep relationships being forged and nurtured

[21] Workers in small companies in Germany are usually paid well. Payment of skilled workers is not much lower than the wage of academics. In enterprises in Germany with more than 9 employees, the employees can elect a workers' council. In the firms that are bigger but still SMEs, there is a differentiated co-determination model with a big role of trade unions. All this leads to high motivation of workers, and they don't usually change jobs very easily.

with key suppliers and clients, in many cases over generations. In particular, Mittelstand companies are involved in the process of product development with their key clients and suppliers and have invested in and fostered those relationships for decades all over the world.

External orientation: One of the key characteristics distinguishing the German Mittelstand from SMEs in other countries is their aggressive and successful orientation toward opportunities beyond national borders. One indicator reflecting this robust external orientation is the strikingly high participation in exports. The export rate of the German Mittelstand is about 20 percent of output.

9.3 SMEs Performance and Their Influence in the German Economy

Germany's economic growth can be attributed to the "Mittelstand" model combined with the core strategies of the "Hidden Champions" – manufacturing high quality premium products to dominate market niches, creating and sustaining a highly-skilled labor force and investing in science and technology to maintain a sustained competitive advantage (Glas and Eßig, 2018). Therefore, German SMEs are considered the backbone of the German economy and this sector is generally in top shape. There were around 3.71 million SMEs in Germany in the year 2016. In 2016, the sector accounted for 99.95 percent of all firms in Germany, 38.3 percent of all turnovers and 70.4 percent of all employees in employment; as well as 83.2 percent of apprentices, 15 percent of R&D investment and 61.5 percent of exports (Audretsch et al., 2018; Schwartz, 2017).

The large majority of SMEs in Germany are small. Among 3.71 million SMEs, 81 percent have fewer than five employees and 86 percent of firms generate annual sales turnover of less than 1 million euro. The share of SMEs with 50 and more employees is 1.9 percent and the share of firms with an annual sales turnover of more than 50 million euro is 0.3 percent. However, the hidden champions and the innovative core of this sector are usually the bigger SMEs.

The performance indicators of SMEs are measured as follows, under the framework of national assessment made by the KfW SME Panel 2017 (Schwartz, 2017).

Employment in SMEs on a record high

SMEs are at the heart of the employment boom of the past years in Germany. The high level of employment is also reflected in the number of full-time jobs. The development of full-time equivalent employees shows that momentum picked up in 2016 with an average growth rate of 2.7 percent in 2016, which was 0.4 percent higher than in the previous year of 2015.

Sectoral transformation is changing SMEs, with services driving the upswing

Sectoral structural transformation is also making a clear imprint on SMEs. Knowledge-intensive services achieved the highest employment growth of all sectors in 2016. There are many different causes for the shift towards services. First, businesses' outsourcing or contracting of previously internal services to third-party companies plays a role (e.g. IT maintenance, data storage, personnel recruitment, legal affairs and taxation). These decisions are based on considerations relating to costs, specialization and division of tasks. Second, structural developments have created an increased demand for services for some time now (driven by factors such as demographic change and the growing share of smaller households, for example).

This structural shift is not only reflected in employment but also clearly visible in the SME sector on a long-term basis. In 2005, there were some 1.1 million SMEs providing knowledge-intensive services (31 percent of all SMEs). It increased to 1.4 million in 2016 (38 percent of all SMEs). More than 2.8 million service providers are currently active in the SME sector in Germany (Schwartz, 2017).

Taken together, all businesses active in service industries currently employ 18.4 million workers excluding trade and almost 23 million workers including trade. At the turn of the millennium, it was 'only' 12.7 million. Thus, more than 59 percent of all jobs were in the SME service sector in 2016 (or 74 percent including trade) (Schwartz, 2017).

Table-6 provides basic statistics on the performances of German SMEs in 2017 by size. As noted earlier, around 84 percent of all enterprises in Germany were micro in size but accounted for a little over 20 percent of all employment. The SMEs together constitute 99.6 percent of all firms, accounting for 63.4 percent of all employment. On the other hand, only 0.4 percent of all firms in Germany were large, accounting for 36.6 percent of all employment. Other data shows that some 2.6 percent of the firms in Germany were medium and large enterprises, accounting for 57 percent of employment. It is evident that the most important feature of the German SMEs is the increasing role of micro and small enterprises. They account for 97 percent of the firms and account for 43 percent of total employment. However, value addition largely comes from medium and large enterprises. The SMEs together contributed 54 percent of total value addition in 2017.

Table-6: Basic Stats of German SME Performances, 2017

Class Size	Percent of Enterprises	Percent of Employment	Percent of Value Addition
Micro	83.7	20.2	16.3
Small	13.7	23.2	18.1
Medium	2.2	20.0	19.7
SMEs	99.6	63.4	54.1
Large	0.4	36.6	45.9
TOTAL	100 (2,551,890)	100 (28,363,644)	100 (1643.9 billion Euro)

Note: Agriculture and non-market sector like health and education not included.

Figures in the parentheses are the absolute numbers against which percentages were calculated.

Definitions of SMEs are based on only the employment as micro enterprises having less than 10 employees, small enterprises having 10 to 49, medium enterprises range from 50 to 249, and large enterprises with 250 and above employees ((2003/361/EC).

Source: European Commission (2017)

As a result of solid turnover and turnover growth, only a few enterprises suffered losses. A mere 10 percent of SMEs reported a negative equity ratio — the quotient of equity and the balance sheet total — in 2016. Although this signifies a mild two percent increase (it was 8 percent in 2015), it still remains at a good level.

9.4 How Do The SMEs Function?

SMEs in Germany tend to be enterprises that secure a high share of exports in global markets because of their product type and quality strategies. Hauni (cigarette machines), Webasto (sunroofs and auxiliary heating systems for cars), or Dorma (door control hardware and systems; moveable walls) may not be household names, but they are leading global competitors in their respective industries.

They are the Hidden Champions[22] among the SMEs in Germany, who exploit the opportunities of private ownership by creating organizational cultures and practices that are driven forward by owner-entrepreneurs, and by building on long-term relationships within the firm and with key external partners. Also, they concentrate their often-limited resources on niche market segments that they can dominate worldwide. Their competitive positions are grounded in technology-based product leadership and close customer relationships. In addition, they strive for operational effectiveness, continuously assimilating, attaining, and extending best practices. Moreover, these companies usually share positive attributes like a certain nimbleness, long-term thinking, and concern for the interests of multiple stakeholders, including employees, suppliers and the regional communities in which they are based.

Governance and management practices of SMEs

Most Hidden Champions are privately owned, which shapes their organizational culture and lays the basis for long-term development of business strategies. Potential advantages of

[22] Rammer and Spielkamp used the term 'Hidden Champions' for SMEs and mid-sized companies with technological and innovation leadership that operate in niche markets and mostly remain unknown to the public (Hidden), and the firms that are exceptionally successful (Champion) due to their global competitiveness and leadership.

family-controlled firms include continuity, embeddedness in local communities, long-term relationships and flexibility arising from central command (Venohr and Meyer, 2007).

Principal-agent problems do not arise if the majority of capital and the management are united either in one person or shared by family members. The organizational structure is typically based on flat hierarchies and informal channels of communication following the personal style of the owner. Management and employees cultivate a high degree of mutual trust and loyalty, leading to an implicit "life-long" contract. This is reinforced by embeddedness in local communities in which the firms are located. In consequence, the corporate culture tends to resemble an "extended family" with patriarchal features and strong internal cohesion. Germany has very good experiences with co-determination and union influence. It is argued that the "high-road" strategy and innovative power is also based on the good relationship between trade unions and management.

Plant-level works councils exist as required by German law, yet they focus on company-specific employee concerns. This is not the case in all firms. And even if a firm follows such a strategy, it cannot prevent the unions' influence if the employees are organized[23]. Owners are often emotionally attached to their firm, which is typically an integral part of their self-fulfillment and the family tradition, rather than 'just' a financial investment. Their devotion is thus not only to maximize profits but to secure the company's existence for the next generations.

The continuity of ownership and the absence of stock market driven short-term financial pressures create a supportive environment for continuity of strategy. It allows the development of unique skills and assets, and it establishes a clear identity with customers, distribution channels, and other outside entities, while strengthening the fit across the value chain.

Strategic Positioning

Hidden Champions typically use the advantages of patient investors to pursue niche strategies that combine product specialization with geographic diversification (De Massiss et.

[23] A note on the Works Council is presented in Appendix-G with the contribution of Professor Herr.

al. 2017; Pahnke and Welter 2019). Such a strategy can lead to a competitive advantage and above-average returns vis-à-vis broadly-based competitors if (a) the firm offers differentiated products and services, appealing to a particular segment of customers and (b) the value chain that best serves the target segment differs from that of other industry segments.

Most of the Hidden Champions have developed their specialization continuously, while some have restructured their portfolio to shift from domestic diversification to a global specialist strategy, a phenomenon known as 'global focusing'.

In their niche, they can isolate themselves from competition by serving the special needs of a very narrowly defined target segment. They may attain a temporary 'quasi-monopoly', though markets are typically 'contestable': substitute products are available, and new competitors can be expected to enter the niche if it becomes sufficiently profitable for them. In addition to continuously striving to improve their differentiated products and services, niche companies must therefore monitor their cost base to stay price competitive.

Globalization has enhanced their opportunities: the opening of markets has led to an increase in product variety, while the historical disadvantages in terms of economies of scale can be overcome through global leveraging of costs across geographic markets. Moreover, the technological changes that fostered globalization create new opportunities for niche players. New transportation technologies substantially lower the costs, and increase the speed and reliability of sea fright and air transport; thus, enhancing global product market access and creating new opportunities for outsourcing parts of the value chain. Innovations in telecommunication and information technology facilitate global transactions and communications by reducing telecommunications cost to virtually zero and increasing the ability to process the transmitted information. This enables even small firms to manage transnational production and sales networks. In addition, flexible manufacturing technologies and practices reduce minimum efficient scale requirements in many industries.

Hidden Champions are typically positioned as "value leaders", combining superior quality of products and services

with a careful attention to customer needs. Many businesses may subscribe to such a positioning, yet the Hidden Champions back this strategy up with major resource commitments in R&D, sales and distribution. Companies closely resembling the group of Hidden Champions were found to spend about 5 percent of revenues on R&D. This is a high percentage, compared to the R&D spending of the manufacturing companies among the 1000 largest R&D spenders worldwide ("Global Innovation 1000"). Large companies, active in traditional manufacturing industries similar to Hidden Champions, spend on average only 2.2 percent of sales on R&D, which varies from 1.1 percent for companies among the top 500 largest companies to 3.1 percent for the next 500 companies of the world.

Other indicators such as patent counts may underestimate this strength in technology because patents often do not cover innovations. The company believes that publishing patents would give competitors crucial insights.

Another pillar of the strategies of the Hidden Champions is their commitment to customer needs. They typically sell their products and provide customer service and training through wholly owned distribution channels. Rather than contracting out, Hidden Champions typically operate these networks themselves to ensure both quality of service and close customer contact. This control over the value chain allows feeding knowledge from and about consumers into the process of continuous innovation, supporting innovations that are incremental rather than disruptive. This innovation strategy requires deep knowledge of customers' needs, which is generated through direct customer contact.

Wholly owned sales and service subsidiaries are not only a vital source for innovations but also an essential element of a strong and reliable service network. As product complexity increases, customers require more support in operating and maintaining the products. For many of the Hidden Champions, personalized customer support services have become an important part of their value proposition. Recent estimates suggest that services like preventive maintenance and provision of spare parts account for 50 percent of revenues and more than 75 percent of profits in industries like machine equipment.

The competences supporting these niche strategies are often specific to an industry, but transferable worldwide. Business customers worldwide have similar needs, and similar technologies may help develop solutions for them. Knowledge of particular needs of a customer in one part of the world may help in developing solutions for another customer in the same industry in another part of the world. Such global knowledge transfer is especially relevant for business-to-business markets where customer needs are more similar across locations. Global niche market leadership based on technology-driven products, and global sales and service networks, is thus a common characteristic of Hidden Champions. They build on competences that are specific to an industry but transferable and competitive on a global stage. Their strategies are implemented through persistent focus on efficiency.

Operational effectiveness

Targeting a global niche is an ambitious strategy for comparatively small firms. They need the support of long-term investors and other stakeholders, and a persistent focus on enhancing operations. They thus emphasize continuous improvement of products and processes, in close interaction with R&D and customers. Hidden Champions typically succeed through persistent and coherent implementation of many small steps. Some operational effectiveness is due to international sales and distribution networks and aggressive cost management, including selective off-shoring. Thus, successful Hidden Champions are improving operational effectiveness by assimilating, attaining and extending best practices in key processes, while making best use of the opportunities of a global supply chain. This is also driven by same wages for workers across the industries. It not only reduces employee turnover but also motivates enterprises to be more innovative and reach greater operational efficiency through higher productivity.

Besides the prime factors mentioned above, there are several other important factors responsible for the success of German SMEs. They are: Germany's local banking system, which is not profit oriented (made up of Sparkassen, or savings banks); the dual vocational system, with its combination of practical and theoretical education; the high social capital of strong

employers' associations and trade unions; government support of SME clusters and a big, government-owned development bank, the KfW. Social upgrading that encompasses a relatively equal income distribution is also crucial for SMEs and their expansion (Herr 2019), and positive supply-side and demand-side effects stimulate SME development as well. SMEs need both — policies that improve their supply side conditions and policies that create sufficient demand for them.

9.5 The German Banking System

The German Financial System is historically known to be a bank-based system. There are three major types of banks: publicly-owned savings banks, cooperative banks and private banks. Both publicly-owned savings and cooperative banks are non-profit banks, whereas private banks operate for profit. In 2012, the market shares of publicly-owned savings banks, cooperative banks and private banks were 29.4 percent, 11.8 percent and 38 percent of banking assets respectively (Krahnen & Schmidt, 2005). The German banking system is a local economy-based system concentrating on regional development, and commercial and household issues.

The banking system has a mandate to serve the local economy, providing support and services to local firms and private households. Both public savings banks and cooperative banks are only allowed to extend credit in their region and they assume joint-liability and share losses with the firms. Also, the banks give long-term credit and reschedule credit in times of economic trouble. The banker takes the Schumpeterian role of an 'emphor' as Schumpeter calls it. They operate under their separate central institutions, which reallocate any surplus funds, and provide technical and overall support. They also participate in big public infrastructure projects. Private banks conventionally work as house banks to big industrial companies.

There is also a special government bank, the KfW — the third biggest German bank, which supports small and medium-size enterprises (SMEs). The bank provides short- and long-term credit using regional banks. In this case, regional banks play their role as mediators who use their local knowledge in financing

local firms. This practice helps the bank to select the right firms (overcome adverse selection) and to reduce credit risk (overcome asymmetrical problems). The bank also promotes green projects and projects with clean technologies.

The German banking system is based on a relationship lending approach. The financial institutions have close relations with the firms over a long period of time, and they participate in the decision-making process of local firms' management. Through this practice, banks work as the house banks of the firms. Besides financial affairs, there exists a good social relationship between the two groups of stakeholders. This relationship is highly valued as social capital, which can be leveraged in a financial environment. Social capital is built on trust, and this trust helps the local banking system to overcome asymmetric problems. This overall process facilitates the German banking system, allowing local firms easier and greater access to finance from banks with low interest rates. Therefore, almost all firms, including small firms and firms with R&D, can quite comfortably access short term and long term finance and even finance for temporary difficulties, from public banks (Spence et al., 2003).

The banking system in Germany has created a culture of good networks with all stakeholders based in the local economy. Heavy involvement of public banks in company decision-making helped to create such a network. Such participatory roles of banks in companies' management facilities allows them to extend their advisory role to guiding the firms in a planned direction, and also contributes to making the banks' performance satisfactory and even helped the banks be more resilient against the 2008/2009 financial crisis. This also has to do with the fact that local banks were not allowed to invest abroad or in complicated financial products (Krahnen et al., 2014). Some of the central institutions of the local banks speculated before 2008 internationally and realized large losses – as the private banks in Germany did (Detzer et al., 2017).

The regulatory regime in Germany, from the 1930s up to the 1990s, could be seen as a bank-based model where cross-holdings of shares under the house-bank system were common between big private banks and big industrial companies. From 1995, the

German financial system started moving towards a more Anglo-Saxon system, which helped in strengthening shareholders' power and weakening the banks' roles in big firms. The European Commission, as part of a neoliberal agenda, encouraged these regulatory changes. Under the regulatory regime, especially before 1995, regional concentration of banking was remarkably high, and savings banks and cooperative banks played a dominant role in retail markets. However, after 1995, some changes were visible in the financial market with the development of a bigger role for securities markets and non-bank financial institutions like insurance companies, investment funds etc. (Koetter et al, 2004).

Despite pressures for liberalization and privatization, especially due to the reunification of two Germanys and from the European Commission, the structure of the German banking system has not changed significantly - especially not for SMEs. The post-unification wave of privatization in East Germany was particularly important because it attempted to save as much of East German industry as possible, and it was also partly a response to European Commission directives. With such initiatives, some state monopolies, such as the postal, telecommunications and transport sectors, became to some extent competitive, although those sectors were not originally inefficient (Detzer et al., 2017).

9.6 The German Industrial Policy (including SME Policies)

The German industrial policy includes all-important sectors, such as manufacturing, agriculture and service sectors, similar to contemporary industrial policies in most advanced industrial nations. In designing this policy, Germany follows more of a bottom up approach than a top down enforcement strategy when compared to other developed nations. Under this approach, the industrial policy is not central to the overall economic policy design of the nation. Rather, this policy is a set of activities designed by a network of actors based on the particulars of individual issues from the local or regional economy. Such separate, localised policies do not merely adhere to a single national level policy; they are carefully aligned to deal with the particular problems that exist locally. The principles of German industrial policy are based on an inclusive bargaining process between the respective stakeholders at the national and European level.

When designing any policy, like those relating to manufacturing industries or technologies, there is a convergence of different levels of actors representing business communities, government bodies, trade unions, civil representatives and consumer societies, who come up with a consensus in a policy frame. There exists permanent dialogue and the lobbying of entrepreneurial associations to influence government policy regarding lending support, taxation, and direct and indirect subsidies. This forum only coordinates the process of dialogue and mutual agreements for a particular industrial issue, without any power to direct them towards a central government plan. If any strong disagreement arises on any issue, then unilateral action is taken by the federal government (Kassim & Menon, 2002).

Globally and regionally, German sovereignty in industrial policy can often be limited by international trade agreements, especially those of the WTO and the EU legal framework on competition policy. Regarding the context of the EU, all major trade boundaries are under the jurisdiction of the European Commission. This is a great challenge for Germany as a dominant economy where they have many national champions in different sectors, for which some policy issues like subsidies need to be set strategically. Inside the EU, it is more challenging for the German government to act unilaterally.

The newest vision of German industrial policy is Germany's High-Tech Strategy 2020, or Industry 4.0. This policy emphasises on automation in the production process with various solutions like smart factories, internet of things (IoT) etc. Such solutions will bring visible outcomes in digital manufacturing and the service sector, allowing machines to communicate with remote peers to coordinate a complex production setup; creating a situation where internet based industrial products can control living agents' behaviors, where self-driving trucks can transport goods and more. The government is coming up with large funding programs and collaborations between various stakeholders to support this policy. It also facilitates SMEs' adoption of high-tech applications by providing advice, training, and platforms for research centers (Heng, 2014).

The German government supports SMEs under the High-Tech Strategy through funding in different fields like energy, bioengineering, IoT and other priority areas mentioned above. Other support is also provided through collaborations with partners with the aim of promoting and boosting SME exports. The government bank, KfW, gives its full support to SMEs with low cost funding for both the short and long terms through local banks (Colla & Kuhn 2017). Moreover, the German government considers industrial clusters key to the country's innovation performance and global competitiveness. This cluster policy is not only about funding but also about guiding cluster management by providing consultations, training and networking opportunities. Also, there are various initiatives for SMEs, with research institutes who support them with innovative solutions. The Federal Ministry for Economic Affairs and Energy also supports SMEs' exports by helping them enter into or develop new foreign markets in fields such as energy or environmental technologies. The ministry provides guarantees, export credit subsidies and assists German companies in foreign market activities (Erber, 2016). Of key importance for German industrial policy are the Fraunhofer Institute and the Max-Planck-Society, both with over 20,000 persons employed. The Frauenhofer Institute organizes clusters by initiating joint research with SMEs and facilitating cooperation among SMEs. Its purpose is to transfer knowledge to firms, especially SMEs. In addition to that, the Max Planck-Society is responsible for more basic research (Herr and Nettekoven 2018). Alongside the Industrial Policy 2020, the Government of Germany on February 5, 2019, released the draft National Industrial Policy 2030[24], which aims to respond to changing globalization and innovation. The policy primarily targets boosting the competitiveness of the industrial sector. In order to achieve this target, the policy's central field of action is to strengthen key enabling technologies, such as digitization and artificial intelligence. The other fields of action include (i) strengthening SMEs; (ii) mobilizing venture capital; (iii) promoting and maintaining access to technologies; (iv) improving general policy

[24] An outline of the German National Industry Strategy 2030 is presented in Appendix-E.

environment; and (v) reviewing state aid and competition law to support the objectives of the 2030 policy. The vision of the 2030 policy is to ensure competitiveness and strengthen industrial SMEs.

10. LESSONS FROM THE GERMAN EXPERIENCE

Quite a number of lessons can be derived from the German experience. The most important lesson that one can derive is the fact that the micro and SME sector needs to be nourished through different policy support. They cannot be left alone to face market competitiveness without being properly developed. The specific lessons are as follows:

- *Classifications for SME Development*: SMEs should be classified for targeted development and policy interventions. In Germany, on the one hand, micro and SMEs are separately classified, and on the other hand, SMEs are classified into innovative SMEs, normal SMEs and necessity SMEs from the policy perspective. The policy perspective classification is needed for increasing efficiency, as well as global integration and linkages.
- *Long term SME Development Policy*: Long term policy with a vision for SME development needs to be formulated so that field level actions for the short-term, the medium-term and the long-term can be formulated.
- *Access to Finance*: The constraint of access to finance is globally true. Export oriented firms in Germany are given finance facilities- especially by the KfW. Government savings banks provide subsidized credit for SME development, and the KfW provides subsidized credit through regional institutions. Credit guarantee schemes are practiced to promote SMEs and minimize the risks to the lenders. In Bangladesh, this is now at the early stage of development, although third party guarantee is commonly practiced for providing small loans. Subsidized credit for SME development, export financing, introduction of credit guarantee schemes and institutional structuring are needed for greater access to finance.
- *Use of Technology and Innovation:* Germany's industrial policy places a strong emphasis on the use of technology.

Besides, Germany has also focused on developing enterprises with innovation and high levels of technology. In the 2030 vision policy, it has focused on artificial intelligence and digitization in industrial SMEs. In order to increase exports and improve efficiency, technology and innovation in industry SMEs need to be encouraged.

- *Technical Education and Apprenticeship System:* One of the strengths of the German SME development strategy is technical education and apprenticeship. Lack of skilled manpower and the high mobility of skilled manpower is a major constraint in Bangladesh. Although we have a substantial number of technical educational institutions in Bangladesh, they suffer from limited direct industrial linkages. In Germany, firms invest in apprentice workers, who work in specific industries where firms support the workers in pursuing formal technical education for the improvement and upgradation of their skills. They do so because firms are benefitted from such upgraded knowledge. It is important to mention here that in Germany, the curriculum for vocational schools are developed in cooperation with government and employers' organizations. Also of key importance is that workers with vocational education are paid good wages. Wage dispersion in Germany is much lower than in Bangladesh, where low wages in SMEs prevent young people from wanting to work in them. Therefore, industries in Bangladesh should develop a sound apprenticeship system and linkages to vocational and technical education to develop skilled manpower. In recent years, we found that different network associations have been establishing vocation institutions for training to meet the demands of the sector.
- *Emphasis on Small Enterprises:* Although the SME sector is targeted for growth, major emphasis is also given on small enterprise development specifically. These enterprises are usually family-owned and better managed, with a flat organizational structure that gives them the potential to grow with support from big enterprises. In Bangladesh, while micro enterprises are informal, similar collaboration of small industrial firms with bigger ones can provide opportunities

for both medium and large enterprises, and will contribute to industry efficiency.

- *Cluster-based Industrial Development:* A cluster is an agglomeration of inter-linked or related activities comprising industries, suppliers, critical supporting business services, requisite infrastructure and institutions (Ng and Thiruchelvam 2012). The cluster not only brings numerous producers under one umbrella but also brings firms that deliver related and supporting services for the healthy growth of the industry. In Germany, there are more than 120 industrial clusters in both the manufacturing and service sectors. The clusters provide opportunities for bringing together technology producers and users, and initiatives for innovations and industrial efficiency. In Bangladesh, there are some 177 clusters. Other than some initiatives for providing physical space in an estate, there is no significant movement for industrial development of the clusters. Strong lessons can be drawn from the German experience in this regard. The Government of Bangladesh needs to implement pragmatic solutions to bring changes in technology and innovation. This will not only lead to greater efficiency but will also create backward linkages for medium and large enterprises.
- *Ties with Global Competitiveness:* In Germany, one of the critical elements in SME development is to target increasing global competitiveness. This is ensured through export finance, technological innovation, cost minimization and subsidized finance. Bangladesh has to learn from the experiences of Germany and how they have been supporting the global competitiveness of industrial firms.
- *Social Capital of Networking and Access to Information*: Networking and access to information is critical to the advancement and development of SMEs. In this case, firm associations play a major role. One driving force for SME development is the supportive role of trade bodies that facilitate entrepreneurs in the early stages of development. They provide a network of related information and technical assistance, as well as support administrative issues for registration and licensing. In Germany, the Ministry of Economics

and Technology works closely with business chambers to facilitate enterprise development by providing information and improved financing opportunities for business start-ups. This information hub is created in every Federal State where potential start-ups can get in touch, and who are then referred to the appropriate body for support in the next stage. This central point of contact provides all advisory services for business opening and supports coordination of all other start-up activities. In Bangladesh, networking of industrial producers or SMEs by sector plays quite a limited role. We should be focusing on creating these sources of information and inter-firm collaboration within a sector, in addition to contributing to the skills of workers.

- *Social Upgrading:* Economic upgrading is linked with social upgrading in Germany, which follows a social-market economy model with limited wage differentials and the key role of trade unions in the codetermination of wages and productivity. The rights of the workers in voicing their concerns and codetermining productivity and wages essentially contributes to the economic upgrading of enterprises. As such, social upgrading and economic upgrading is complementary. In recent years, the presence of trade unions in the RMG sector in Bangladesh has also contributed to maintaining healthy and competitive environments within the sector.
- *Value Chain and SME Integration:* Enterprises in the value chain are connected through backward and forward linkages. Based on efficiency and scale and scope advantages, these firms split the production process of a complete product, where the lead firm supervises and monitors the integration of different sub-activities. Hidden Champions are key to value chain integration and development, and research and development also facilitates efficiency and development of the value chain system. In Bangladesh, although the value chain is much discussed, its impact is not as visible. Technological development and standardization are key to value chain integration.

11. CONCLUSION

SMEs are critical elements in the economic development and growth of a country. They are considered to be engines of growth in Bangladesh. Different policies are in place to support them, but the fact still remains, SMEs in Bangladesh are constrained by a lack of access to finance[25], lack of skilled manpower, limited integration of the production process, and limited inter-firm cooperation and collaboration in a cluster. Moreover, Bangladesh's industrial policy is not updated regularly with a vision. For example, the National SME Policy[26] was submitted in 2015 but was only approved by the cabinet in September 2019, after this report had been finalized.

German experiences, on the other hand, are diverse. The SMEs are quite focused and targeted with disaggregated policies for different types of SMEs. The critical policies are subsidized credit for startup firms with innovation and market niches, more self-financing (less dependency on bank credit) through reinvestment, high investment in research and development for being more innovative, social upgrading for economic upgrading, strong apprentice programs complimented by vocational education, high

[25] Despite the very large number of existing banks and financial institutions in Bangladesh, SMEs face many constraints and have limited access to finance. This was also highlighted by enterprises in the cluster zones we visited. Several factors contribute to limited access to finance: such as lengthy and complex loan sanctioning procedures, requirement of too many documents, and collateral requirements. The interest rate is also considered to be high. Recent statistics show that SMEs have access to term loans for up to 3 years (36 months) on an equal monthly installment (EMI) basis, but they, particularly small enterprises, have little access to working capital loans. Such EMI practice in SME loans shrinks the capacity of SMEs to ensure a smooth flow of funds in their business operations. As these enterprises have little access to the capital market, SMEs, particularly small enterprises, are more dependent on financing from bank and non-bank financial institutions for both long-term and short-term working capital loans.

[26] The cabinet of the government of Bangladesh, with the Prime Minister as the chair, approved the draft SME Policy 2019 on September 8, 2019. The policy will be effective from June 2024. The policy focuses on six issues: funds, technology and innovation, access to markets, education and training, trade support and access to information. The policy will be implemented through two committees of the Ministry of Industries, GoB. The critical issue of definition and measurement of CMSMEs from the perspective of international consistency remains unresolved, and target of development.

investment in technology, social capital for inter-firm collaboration and global or local level value chain integration, and backward and forward linkages for coordinated development of SMEs through cluster development. All these interventions are primarily oriented towards increasing competitiveness and increasing the shares of SMEs in the global market. The global leaders in this regard are the family owned Mittelstand firms. These firms derive lessons from their experiences in the local market for developing competitiveness and increasing their share in the global market. One of the important elements in their success is the role of trade unions in economic and social upgrading that leads to higher productivity through improving efficiency, given the uniform wage structure across the sector.

We have highlighted the lessons that Bangladesh can derive from German experiences. Given these lessons, what ought to be done and what should be reflected in Bangladesh's industrial policy? We bring forward some of the issues that we think should be reflected in the Industrial Policy of Bangladesh.

The Government of Bangladesh needs to address the issue of what ought to be developed and how. Based on our cluster visits and lessons from German experiences, we recommend that the Bangladesh Industrial Policy focus on small and medium enterprise development with targeted action plans. Such a development strategy should focus clearly on cluster-based development and niche markets. Leather and footwear, light engineering and textile and clothing sectors should be developed on a cluster basis with backward and forward linkages. with integrated action plans on access to finance, technology, market information, collaboration and strategic partnerships with large or prime enterprises, and targeted development of skilled workers. Similarly, light engineering clusters should be developed with subcontracting from large enterprises. The approach of BSCIC needs to be revisited and re-focused with action plans and effective coordination of all stakeholders involved in the process. Partnerships between large enterprises and SMEs should be a critical strategy for industrial development in Bangladesh.

Similar to Germany, innovation and efficiency should be the prime elements in industrial policy, with the identification

of accessible niche markets and global value chain integration. One of the key elements in the success of Germany in enterprise development is the commitment of entrepreneurs to access global markets. That means, the policy should target promotion and consolidation of such enterprises and products with all required support. In Bangladesh, such products can be leather and footwear, light engineering, and textile and clothing sectors. One of the necessary conditions will be investment in research and development for innovation, new product development and penetration in global markets. The supportive role of government bodies like the Bangladesh Council of Science and Industrial Research (commonly know as Science Laboratory) will be a critical factor.

It is generally perceived in Bangladesh that enterprises can maximize profit through saving on wage payments, among other factors. As such, social upgrading has remained a forgotten issue, in the private sector in particular. Until the Rana Plaza tragedy, it was definitely a forgotten issue in the RMG sector. With international collaboration and the key role of trade unions and factory owners, both wages and work environments have been improved, along with the commitment to increase productivity. Fair and uniform wages not only reduces the turnover of skilled workers, it also drives up efficiency and productivity. The Government of Bangladesh needs to address this issue with both policy directives and sound actions to ensure industrial development.

The dearth of skilled labor is a constraint in SME development. A strong apprentice system, similar to what is in place in Germany, has to be a critical element in Bangladesh's Industrial Policy. This has to be developed with the participation of government, technical and academic institutions, owners' associations and trade union bodies.

Finally, in conclusion, we must emphasize the need to review the effectiveness of policies and institutions for SME development in Bangladesh. We have drawn lessons from German experiences and suggested the critical elements that should be in the Bangladesh Industrial Policy. But how can these lessons be implemented? Are the existing institutions and policies appropriate for the implementation of these lessons?

How effective are these institutions and policies in promoting SMEs, through innovation, skill development, access to finance and markets, as well as vertical and horizontal integration of subcontracting and value chain development? Without proper analysis and understanding of the policies and institutions for SME development in Bangladesh, lessons derived from the German experiences may appear to be a piecemeal exercise that will have little implications. Lessons for Bangladesh, based on the German experiences, can be better perceived and better drawn if we take a complete stock of policies and institutions that operate in Bangladesh for SME development[27]. Literature on SME development in Bangladesh is more focused on constraints than on the effectiveness of institutions and policies. Reviews of the implications of existing policies are required, both at the macro and micro level. Industrial policy can then be reformulated based on the lessons from German experiences. Therefore, we suggest that a separate study should be conducted with the objectives of (i) review and analysis of implications of national industrial and SME policies with macro and micro approaches; (ii) evaluation of the role and effectiveness of different institutions (including SME Foundation) on micro, SME and large enterprises and identification of its limitations that restrict the effective role of these institutions; and (iv) recommendations of remedial policies and institutions in the context of the lessons learnt from the experiences of micro, small and medium enterprises, and development of inter-linkages to promote micro and SME development in Bangladesh.

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[27] This study could be complete and effective had it focused on the supply side issues of SME development in Bangladesh. We could then recommend specifically what reforms will be needed to implement derived lessons from the German experiences.

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APPENDIX-A

LIST OF PERSONS INTERVIEWED

1. Mr. Syed Manzur Elahi, Apex Footwear Ltd., Dhaka.
2. Mr. Jamal Uddin, proprietor of ZamZam Engineering Industries, Chittagong.
3. Hajee Md. Idris Hasan, Titas Molding and Engineering Works, Chittagong.
4. Hajee Md. Solaiman President, Eats MadarbariShoeFactory Owners' Association (EMSFOA), Chiittagong;
5. Mr. Md. Serajul Islam, VaiVai Molding, Chittagong.
6. Mr. Md. Monzur Khan, Secretary, EMSFOA
7. Mr. Kabir Ahmad, Convener, EMSFOA
8. Mr. Shahadat Hossen Kamal, Member, EMSFOA, and Proprietor, Comilla Mita Shoe Factory, Chittagong.
9. Mr. Bahadur Miah, Member, EMSFOA
10. Mr. Azahar, Member, EMSFOA
11. Mr. Konu Miah, Rivew Shoes and Member, EMSFOA.
12. Mr. Anwar Hossain, Proprietor, Star Brand, Chittagong.
13. Mr. Md. Azhar Uddin, Propritor, Dipali Shoes, Chittagong.
14. Mr. KhandakerARif Reza, Territory Manager, BRAC Bank, SME Banking Division, Chittagong.
15. Mr. Hamidul H. Chowdhury, Deputy General Manager, BSCIC, Chittagong.
16. Mr. Anwar Hossain, Joint Director, Bangladesh Bank, Chittagong.
17. Mr. Engr. Abdul Mubin, Executive Engineer, BITAC, Chittagong.
18. Mr. Md. Salim Uddin Sabuj, Deputy General Manager, Bangladesh Bank, Chittagong.
19. Dr. Tunazzina Sultana, Professor, Department of Marketing, University of Chittagong, Chittagong.
20. Mr. Md. Junaid Bin Bakhtiar, Unit Head, Eastern Bank, Business Assets, Chittagong.
21. Mr. Md. Al Amin Mia, President, Bhairab Shoe Factory Owners' Association (BSFOA), Bhairab.
22. Mr. Sher Md. Shohrab Ali, Vice President, BSFOA, Bhairab.

23. Mr. Md. Shobuj Mia, Secretary, BSFOA, Bharab.
24. Mr. Md. Ashraf, Treasyrer, BSFOA, Bhairab.
25. Mr. Md. Murshid, Joint Secretary, BSFOA, Bhairab.
26. Mr. Saju Mia, Social Welfare Secretary, BSFOA, Bhairab.
27. Mr. Palash, Proprietor, Orpita Shoes, Bhairab.
28. Mr. Forman Uddin, Proprietor, M/s Ruma Baby Sandle Factory, Bhairab.
29. Mr. Nasir Uddin, Managing Director, Best Footwear Industries Ltd., Bhairab.
30. Mr. Raihan Habib, Proprietor, M/s Meshkat Shoes, Bhairab.
31. Mr. Ishak Ahmed, Proprietor, M/a Sumana Traders
32. Mr. Md. Shah AlamBhuyia, Proprietor, M/s Mahal Shoes, Bhairab.
33. Mr. Aros Ali, Proprietor, Modern Footwear, Bhairab.
34. Mr. Shamim Ahmed, Ex-President, Bangladesh Plastic Goods Manufacturer and Exporter Association (BKGMEA), Dhaka.
35. Mr. K. M. Iqbal Hossain, Vice President, BKGMEA, Dhaka.
36. Md. Nure Alam, Assistant Office Secretary, BKGMEA, Lalbagh, Dhaka.
37. Ms. Ferdous Ara Begum, Chief Executive Officer, BUILD, DCCI.
38. Mr. Mohsin, Proprietor, Mohsin Plastic Products, Lalbagh, Dhaka.
39. Mr. M. Azizul Islam, Owner, AzizulZamdani, Narayanganj.
40. Mr. Md. Nobi Hossen, Proprietor, Alif Zamdani House, Narayanganj.
41. Mr. Md. Mobarak Hossain (Barek), Proprietor, Bangladesh Zamdani Industries, Narayanganj.

APPENDIX-B

VISIT TO CHATTOGRAM CLUSTERS
November 29-December 1, 2018

Dialogues in the Chattogram Division were mainly with the members of two clusters, namely light engineering (metal workshop and molding units) and leather (shoe manufacturers), during the 3-day visit from November 29 to December 1, 2018. A workshop was organized with the participation of stakeholders[28] at the BITAC premise on December 1.

Light Engineering Cluster

On November 29, we visited light engineering factories – ZamZam Engineering Industries and Titas Molding and Engineering Works – and held discussions with owners. Both the enterprises are small in size, based on both number of employees and fixed assets.

Sample 1: Zam Zam Engineering Industries

Mr. Jamal Uddin, proprietor of ZamZam Engineering Industries, started as an apprentice at Coats Bangladesh; he worked there for three years in different capacities and learned the trade quite well. During the past ten years, he has received a number of trainings from the Chittagong Polytechnic Institute and the Light Engineering Association. As an enterprising young man, Mr. Jamal Uddin established ZamZam Engineering Industries in 2002 at Saraipara, Pahartali, Chattogram, with an initial investment of Tk.1.5 million. Like any other light engineering firm, his one is order-driven and raw materials are sourced from ship-breaking zones. The enterprise started with 8 to 10 machines and 10 persons, including three permanent staff. At present, the total manpower is 135, including 35 permanent staff. The value

[28] Representatives from government technical training institute (BITAC), Bangladesh Small and Cottage Industries Corporation (BSCIC), banks (Sonali Bank Ltd., BRAC, Eastern Bank Ltd., BASIC), financial regulatory body (Bangladesh Bank) and SME facilitator (SME Foundation) were present, as well as academics from the marketing and finance disciplines.

of ZamZam Engineering Industries is approximately Tk.30 million. Mr. Jamal Uddin dreams of making it into the automated product-based industry. He took his first loan with collateral in 2007 to purchase land. He enjoys lines of credit amounting to Tk.5 million. Presently, he works with different large-scale enterprises, such as Coats Bangladesh Ltd., BSRM, S ALAM Group and Abul Khair Group.

In addition to intense competition, he identified the following major challenges:

- limited access to finance;
- lack of standard testing facilities;
- shortage of skilled technical manpower, and
- absence of technical support.

Mr. Jamal Uddin has a dream of becoming the creator of a group of companies. At present, he owns four businesses with proprietorship and partnership concerns: ZamZam Engineering Industries, ZamZam Iron Mart, Bangladesh HOIST Supplier and M/S Alif Engineering Workshop. His vision drives him but he considers access to finance at affordable interest rates a necessary condition for success.

Sample 2: Titas Molding and Engineering Works

Titas Molding and Engineering Works, one of the older light engineering firms in Chattogram, was established in 1982 by Hajee Md. Idris Hasan. He established a molding and light engineering factory in 1982 as a result of his prior experience from 1972 to 1981, both in the scrap supply business and molding business. He started Titas Molding and Engineering Works in a rented premise with capital of approximately Tk.0.1 million. At present, it employs 17 full time workers. His son, Mr. Iqbal, supervises the business with support from his father. Mr. Iqbal received general education in a local college, and has received numerous trainings from technical institutions. Unskilled workers are also trained at the factory; they initially join as apprentices and later with their new skills, they play crucial roles and create new opportunities for themselves. Titas Molding and Engineering Works has a good reputations as a molding business in the community. Titas has access to credit: they borrowed their first

Tk.0.6 million from BRAC bank in 2005, and their current loan amount stands at Tk.1.5 million, which is being used to expand the business. Collateral, short term and high interest rates are major constraints to accessing credit. The other challenges they mentioned were trade credit, cost of raw materials and shortage of skilled manpower. Mr. Iqbal is a dreamer; he dreams of expanding the business and relocating in an organized industrial estate. He considers renting factory premises to be a constraint. Access to credit is a necessary condition for expansion and the development of light engineering.

Constraints to Development of Light Engineering Cluster

Although order-based light engineering and molding engineering differ in character, the problems, as identified by the sample enterprises, are quite similar. The major constraints are:

- Limited access to finance due to lack of collateral, high interest rates and the short duration of loans;
- No standard testing facilities of their own. Although such testing can be outsourced to some institutions like BITAC, they are not cost effective;
- Less effective role of the Association in generating and disseminating information and policy-lobbying;
- Lack of adequate skilled technical manpower;
- No BSCIC estate for light engineering;
- Absence of technical support from medium and large firms and institutions.

Meeting with Stakeholders: In Search of Remedies

On December 1, we organized a workshop with the presence of stakeholders. The purpose was to address the constraints as identified by the enterprises. In view of the deliberations, the following remedies can be suggested:

- Bangladesh Bank needs to target credit policies for small enterprises;
- Bangladesh Bank can collaborate with MFIs to provide loans to small enterprises as banks are unable to offer loans without collateral;
- Information should be disseminated regarding training

programs offered by BITAC and other technical institutions, directly to the registered firms and through the Light Engineering Association networks of the members;

- Firms operating in light engineering can get technical support and quality control checks from organizations like BITAC;
- Although BSCIC does not have separate industrial estates for small enterprises, BSCIC can develop a separate estate for small firms engaged in light engineering for a more focused development.
- A system of apprenticeships needs to be developed under government policy and under the guidance of the Association network.

A NOTE ON THE VISIT TO LEATHER (SHOE MANUFACTURING) CLUSTER

East Madarbari, Chattogram
November 29, 2018

The visit to the shoe manufacturing cluster at East Madarbari started with meetings with members of the Chattogram Khudra Paduka Shilpa Malik Samity (Chattogram Small Shoe Industry Owners' Association) at East Madarbari in Chattogram, followed by a visit to two factories. The visit lasted for four hours.

Meeting With the Malik Samity (Owners' Association)

The meeting with the Executive Committee of the Malik Samity took place at their office. The members present included Hajee Md. Solaiman (President), Mr. Md. Monzur Khan (Secretary), Mr. Kabir Ahmad (Convener), Mr. Shahadat Hossen Kamal (Member), Mr. Bahadur Miah (Member) and Mr. Azahar (Member) and Mr. Konu Miah (Member).

The key issues discussed can be structured into: (i) history and development of the shoe cluster; (ii) factors in development; and (iii) challenges and constraints to shoe clusters in Chattogram.

The shoe business was started in the form of trading in 1973 in this cluster with 7/8 firms located in the Pathantuli area. During the crisis period of the 1974-75 famine, the shoe business went through a rough patch, but after that, 1974-79 and particularly the period of 1978-80 were the best times for shoe traders, when the business from non-Bengali (Bihari) traders started to be transferred to the Bangladeshi traders. Till 1983, the trading business was concentrated in Pathatuli and then in 1984, some 100-150 manufacturers relocated to the new location in East Madarbari where the present cluster exists. Shoe manufacturing was expanded to the Alkaron area as well. There were very few tanneries in Chattogram at that time. Besides the very limited leather supply, only imported foam, rubber and rexine were the prime raw materials for sandal and shoes. Only a limited volume of shoes was made from leather and the rest, such as sandals, and ladies and gents' shoes, were made from foam, rubber and rexine.

The increased demand, and the transformation of skilled workers with knowledge into entrepreneurs, contributed to the rise of the number of shoe factories in this location.

Most of the workers were from other districts, mainly Noakhali, Cu milla and Bhairab. Very few workers were from local Chattogram. The whole process of shoe manufacturing has four basic stages: making the upper side, making the sole, fitting, and finishing. Initially, this business was not very capital intensive, rather it was labor intensive but based on skilled labor, and daily turnover was sufficient to provide the required cash to manage the business in the absence of trade credit for long periods (it was only for a couple of days, say 1-2 days). For example, Mr. Kabir Ahmed started his 3-unit shoe manufacturing business in 1984 with only Tk[29] 2,300 as capital, along with his skill/ knowledge and 27-28 other skilled workers with him in this line of business. The factory premises were rented, and the workers were employed on an output basis, not on the basis of regular salaries. Only a few employees were on a monthly payroll. The required capital was supplied by the customers who booked the production in advance (forward purchase system).

After 1990, this business has become very competitive due to Chinese and other foreign products, as well as more locally produced footwear. Trade credit for retaining business has also increased significantly. Consequently, nowadays, this business requires capital of at least Tk 0.7 million, with average investment being Tk 2.5-3.0 million. Most of the manufacturers started their business with their own capital. But over time, some one-fifth of the factories have postponed/closed their production largely due to business failure—mainly the failure to compete with imported, low-priced footwear from India, China and Myanmar. Among the domestic factors that also contributed were failure to ensure quality products, and non-availability of skilled workers and quality raw materials.

Training facilities are not available either. Also, there is no linkage of supply chains to distribute the products. Most of them have no showroom in the market; rather they sell 60-70 percent of their products to wholesalers, and 30 percent to retailers. Most

[29] The exchange rate in 2019 was USD 1=Tk 85.

of the sales are on trade credit, depending on the relationship. Nevertheless, the previous trade credit is generally settled at the time of next transaction, but it continues throughout the year till Ramadan. Generally, the year-end (seasonal Ramadan) balance is settled with 5-7 percent trade discount, 70 percent in cash and the remaining amount in 2-3 cheques. The high average balance of Tk 7-8 million makes it too costly for the small producers of footwear in East Madarbari. On the one hand, they do not have control over the transactions with wholesalers and on the other hand, it creates a problem of scarcity of capital. They can't control the whole value or supply chain from production to showroom/distribution due to shortage of capital and management problems. At present, a shoe manufacturer will require at least Tk 5 million as capital. Technological advancement has progressed a lot in the process of shoe manufacturing. There are two technology-based production systems: one is the hand-made system which is small scale in size, and the other is the large scale technological setup. They need a timely loan at an affordable rate of interest, say 9 percent instead of 11 percent, and with longer tenure, say 48 months instead of 36 months. Also, they are not able to use the waste, which could be utilized for manufacturing by-products such as card holders, wallets etc.

Sample 1: Review Shoes

Hajee Konu Miah started his business in 1974-75 as an experienced entrepreneur, having 45 long years of experience in this line of business. He is the owner of the enterprise Review Shoes, which produces 30-40 designs every year. As a seasonal business, he produces only 7-8 designs in the peak season, especially during Ramadan. The enterprise has its own brand Review Shoes, along with the brands of wholesalers who have a contract production/manufacturing system. One such brand is AMEX from Mymensingh district and another is the brand INTER, who are wholesalers from the Nupur Market in Chattogram. The firm has 6-7 wholesale customers who have contract production/ manufacturing agreements with them. The factory usually produces and supplies to the customers with contract agreements when its products' demand is less than its production capacity.

Following this strategy, they balance the gap between the demand of its own products and its production capacity during the off-season. Also, they charge a higher price for brand products to contract customers. The annual capacity of this enterprise is 36,000 pairs, in which one-third is utilized for the contract system and the rest is used for its own brand products. The cost of raw materials and chemicals varies from 5 percent to 10 percent over the year. Accordingly, the price of the finished products is adjusted once a year with the wholesalers, retailers and contract customers. The competition among the manufacturers is not so much, since the products vary from one manufacturer to another due to design and the quality of the finishing.

Sample 2: Dipali Shoes

This factory produces shoes with imported high-quality Chinese materials. The brand of Dipali Shoes is substituting imported Chinese finished products. All other variables remain the same as the previous sample case 1 in this cluster.

The Association

The association was formed in 1992 with 60-70 members as "Chattagram Khudra Paduka Shilpa Malik Group" at East Madarbari in Chattogram. At present, the number of members of the Association is 500. Beside the members, there are 300-400 manufacturers who are not members of the Association. So altogether, the size of shoe manufacturers will be approximately 800, where 20 percent has closed down. The purpose of the Association was to solve the problems in the cluster mentioned above. However, the leaders of the Association have failed to settle the disputes/problems in the market. These problems are associated with receivable collection, police/Thana and local political harassment. There exists a leadership problem in the Association.

APPENDIX-C

VISIT TO BHAIRAB SHOE CLUSTER
December 13, 2018

The day-long trip started with a meeting with the Bhairab Shoe Owners' Association. The meeting with the President, Vice-President, Treasurer and three other members was very fruitful and effective. It lasted for almost three hours.

We structured our meeting into three segments. The first segment focused on the journey of each of the officials we interacted with. The second segment focused on the problems and challenges of the shoe cluster. The last segment was on the role of the Association.

The First Segment: Journey towards factory ownership

The people we spoke to own micro or small enterprises for hand-made shoe production. The individual stories that we heard have the same beginning. They went to Dhaka to work as apprentices. They struggled but learned the technical-know how. Then they worked as labor. With some experiences and some cash savings, they came back to Bhairab to start their own business – they have now become hand-made shoe manufacturers. But why did they go into this business? Traditional shoe businesses in the area and network relationships with peer groups motivated them to get into this business. Their beginning suggests that skills and a very good understanding of the shoe sector are prerequisites. Indeed, shoe production is a technical business. Therefore, the critical issue was prior training. Apprenticeship was the source of skill development from the start. The officials of the Association stated that the firms are open to apprentices. They stated that like them, apprenticeship has driven many of the trainees to become manufacturers.

The cluster has spillover effects on the economy. It has led to forward and backward linkages, like the growth of organized wholesale markets for both inputs and finished products; and the growth of retail shops, both in Bhairab and adjacent upazilas and districts. As was communicated, unemployment is not a big

problem in Bhairab district, and more than 300,000 individuals are engaged in the Bhairab shoe cluster production and with the marketing of inputs and finished shoes at the wholesale and retail level.

The Second Segment: Problems and Challenges

The problems as identified by the Association officials are quite common and well known. Based on their arguments and our understanding, we identified the major problems as follows:

- Inadequate or very limited access to bank credit or lack of collateral and/or disinterest of the bank officials on the grounds of high risk;
- Lack of technical know-how, as there is no formal training institutions in the area;
- No product diversification at the enterprise level;
- Potential competition from producers of machine-made shoe products. However, some of the officials have argued that products and market-focus are different for the machine-made products;
- Lack of information about markets and new products due to no formal communication process for acquiring information;
- Seasonality of the shoe business. Shoes are in high demand during the period of festivals and less in demand during the rainy season. As such, the officials argued that they needed to diversify their business in order to minimize risks;
- Trade credit is a common financial instrument in this business. The common contractual arrangement is 60 percent in cash and 40 percent in credit. Generally, the amount of trade credit is settled during Ramadan or within a few months of Ramadan. As such, capital remains a major constraint for expansion and up-gradation of the firm;
- Limited ability to create designer shoes due to lack of expert shoe designers in the area, although one of the officials at the meeting said that he has a specialized designer;
- Piece-meal based labor contracts lead to higher turnover of labor;
- Finally, access to cheaper shoes from India and China appear to threaten the competitiveness of the local producers in Bhairab.

In view of the problems identified and our observations, one may perhaps argue that long run expansion and the survival of hand-made shoe producers may face some challenges. They are as follows:

- Machine-made cheaper shoes;
- Imported machine-made cheaper shoes from countries like India and China;
- Change from piecemeal based contracts to alternate employment like monthly basis appointments may be a threat for many small hand-made shoe producers. This suggests that the right to organize trade unions may be a threat in the long run.
- Lack of diversification and inability to cope with the taste of consumers may affect long run demand of hand-made shoes.

The Third Segment: Role of Association

The Association of owners has existed for over 15 years. When it started, it had some 75 members. Today, this is a platform of some 800 hand-made shoe producers. They have not yet been able to attract all the producer-owners, who are estimated to be over 10,000. The life-time membership fee is only Tk.350. Even with such a low fee, the Association has not been able to bring all under its fold. What role is this Association playing?

The Association performs three core functions. They are as follows:

- Addressing professional problems of the members like harassment from the VAT agencies or law-enforcement agencies in connection with business;
- Lending accumulated membership fees to the entrepreneurs who are short of working capital;
- Increasing socialization among the members through annual programs;
- Nominating members to participate in different training programs organized by the SME Foundation and coordinate training programs offered by the SME Foundation.

Recommendations:

- Specialized targeted programs for micro and small business financing;
- Apprenticeships should be recognized as a strategy for developing the skills of the workers;
- The Association should be more effective in training, dissemination of information and bringing together all the producers under the network of the Association.

APPENDIX - D

Visit to Dhaka Plastic Cluster
January 10, 2019

The visit to the plastic cluster took place in two steps: first, we had a meeting with the National Plastic Producers and Exporters Association, and second, we visited a few factories in Lalbagh and held a meeting with owners, which took place on January 10, 2019, at 11:00 am. Mr. Iqbal Hossain and Mr. Shamim Ahmed attended on behalf of the National Association.

Meeting with Association:

The meeting started with a discussion on the importance and role of the National Association. The Association has 2200 members. Most of them are small producers of plastic goods. They generally produce for local markets, and some 20 producers directly export. However, around 300 are deemed to be exporters.

Being a national association, it was expected that the discussion would focus more on constraints. The following constraints were identified:

- High borrowing interest rate (difficulty in accessing credit was not mentioned). Inability to access credit is due to high interest rates (they mentioned that borrowing from international credit markets through local banks could be cheaper.)
- VAT is high. They argue that 15 percent VAT on output or sales is a constraint as it reduces the competitiveness of the local producers.
- Less availability of skilled manpower, leading to a high turnover of skilled employees, given the high demand.
- Lack of space act as constraints to the expansion and up-gradation of existing enterprises.

However, they argue that the present cash incentive of 10 percent given by the Government is a positive step towards the growth of this sector.

Field visit to Lalbagh:

We visited a few factories in the Lalbagh area of Dhaka where plastic producers/factories are located. At first, we introduced ourselves to the production process by visiting a few factories. We found that nowadays, starting a plastic factory will require a minimum fixed investment of about Tk. 2.5 million, and some 10-12 persons will be required. By any standard definition of enterprise, plastic enterprises are at least small enterprises. Most of the thousands of enterprises are small in size, and only a few like RFL and Bengal are medium in size. It may be noted here that most of the small plastic enterprises in Lalbagh are located in rented premises. Some 300-400 enterprises are located in the area.

We visited Mohsin Plastic factories and had a discussion with Mr. Mohsin. He started his career as an apprentice and a worker at a factory in 2001. After working for five years in different areas of production and procurement, he along with two partners, started a factory by contributing Tk 30,000 each. After few years, they split up and started their own businesses. He has excelled: he has two factories with some nine machines; he produces some 70/80 different products and employs some 25 workers.

Mr. Mohsin has identified the problems from the micro level as a producer. They are as follows:

- Frequent power failure
- Paucity of skilled manpower
- VAT rates are in some cases exorbitant
- Lack of information about rules, products and competition
- Competition with big-players in the industry (Mr. Mohsin avoids competition by not producing the same products or producing low-end cheaper products)
- Lack of space

Recommendations:

Based on our interactions, following recommendations can be made:

- Strengthen apprenticeship system;
- Expand the scale of operations of the Training Institute established by the National Association;
- Ensure continuous supply of electricity;

- VAT rates should be rationalized downwards so that it facilitates competing with imported products in retail markets;
- A separate estate for the plastic sub-sector (cost of land may be a constraint and it should be addressed through different approaches, like cooperatives or long-term credit support for the purchase of land);
- Knowledge about technological change and markets should be continuously given through participation in international exhibitions and the organizing of frequent national exhibitions;
- Large investments will be required to modernize and make it a sub-sector of technological sophistication.

APPENDIX - E

German National Industry Strategy 2030

Globalisation and innovations are taking place more quickly, and there is a clear trend towards state interventions and away from multilateral agreements. As a successful industrial economy, Germany needs to respond to these changes and proactively shape new developments.

Economic Affairs Minister Peter Altmaier therefore presented the draft of a National Industry Strategy 2030 on 5 February 2019. The draft develops the first coherent national and European industrial strategy.

Objective

The Strategy's core objective is to give a lasting boost to the competitiveness of the entire industrial sector in Germany and Europe and to consolidate and build on the technological lead enjoyed by Germany and the EU.

The Strategy is based on the tried and trusted principles of the Social Market Economy and defines the cases in which state intervention can exceptionally be justified, or even required, in order to avert serious disadvantages for the country's economy and the well-being of the nation. The National Industry Strategy 2030 thus makes a contribution towards shaping a social market economy, which has a viable future, where economic and social upgrading go hand-in-hand.

Fields of action

A central field of action of the National Industry Strategy 2030 is the strengthening of key enabling technologies such as digitization, artificial intelligence and battery cell manufacturing. Any company wishing to maintain its position in the face of competition will need to have mastery of and access to the new technologies.

The other main fields of action are:

- strengthening industrial SMEs

- mobilizing more venture capital for risky investments
- advocating open markets, more multilateralism (including a modernization of the WTO) and a level playing field
- promoting and maintaining access to and mastery of technologies
- improving the general policy environment (e.g. energy prices, taxes, welfare charges)
- revisiting state aid and competition laws in order to support and create big national champions, and prevent hostile takeovers and unwarranted FDIs.

European dimension of the National Industry Strategy 2030

The draft presented by Minister Altmaier envisages a strengthening of Europe's industrial competitiveness in general. Industry has brought growth, prosperity and progress to Europe. A competitive industry is a core element of European commerce and thus part of the way forward towards a shared identity of a flourishing, social, sustainable and modern Europe.

Germany therefore supports the development of a long-term European industry strategy comprising concrete measures to maintain and permanently boost the competitiveness of European industry. It needs to be rooted in the national industrial strategies of the leading industrial nations in the EU.

Dialogue process

The Strategy is currently a draft document. The intention is to engage in dialogue with industry, commerce, the trade unions, policymakers and the Länder (federal states), and discuss proposals to achieve a lasting strengthening of the competitiveness of the industrial sector.

APPENDIX – F

A NOTE ON
AGRA SHOE CLUSTER
Reference: Sing Anushruti (2019)

Agra is a medium-sized town in Northern India. This town is well-known as an industrial district and the leather industry is among the most traditional and original industries of Agra. It is the hub of footwear manufacture in India since the Mughal era. The most famous industrial cluster in Agra is the Agra Leather Footwear. This cluster has mostly flourished between the 1960s and 1980s. During that period, the Soviet Union was the sole export destination for footwear from Agra.

At present, this cluster hosts around 10,000 micro units; 150 small units, around 30 medium units and around 15 large-scale units. In the footwear segment, more than 0.2 million pairs are manufactured every day and there are over 0.35 million people employed. The footwear cluster in Agra accounts for 65 percent of all domestic consumption and 28 percent of export of footwear (Singh, 2019). The raw material is mainly imported from Kanpur, Kolkata, Chennai, Taiwan and China, among others. Major products of this cluster are shoes, synthetic upper materials, MCR sheets, PVC unit soles and infants' shoes.

Along with the hub of producers, this cluster is equipped with a number of related supporting institutions like R&D centers and testing labs, including the Central Leather Research Institute (CLRI), which is a constituent laboratory under the council of National Scientific and Industrial Research (CSIR) in New Delhi and is the world's largest R&D institute in the leather sector. There are a number of associations in the cluster, and the most prominent one is the Agra Footwear Exporters and Manufacturers Chamber that supports the footwear community to upgrade their operations according to local and international standards. The chamber makes notable contributions in the areas of environment awareness, adoption of new technology, information sharing, national and international fair support and support of new entrants. Thus, the Agra footwear cluster reflects a good fit with the cluster characteristics of Michael Porter (Porter, 1990 and 1998).

Industry environment that contributes to the growth of the Agra footwear cluster

- Supply of skilled workforce: the Central Footwear Training Institute at Agra plays a dominant role in supplying a skilled workforce. Besides, workers also learn through apprenticeships in mechanized factories. There are also some private training institutes.
- Availability of footwear designers and pattern cutters on demand that helps to minimize costs of production.
- Availability of footwear components.
- Availability of low cost tools and machinery.
- Availability of leather and synthetic materials in the open market. Besides, laces, adhesives etc. are also produced in Agra.
- There are also less tangible factors, such as the closeness of professional collaboration and the extent of trust build-up, which appear to be part and parcel of specific producer-trader relations in this cluster.

Government and intuitional support

The Indian Government supports this cluster in a number of ways, such as:

- Special subsidies under the Indian Footwear, Leather and Accessories Development Programme. In 2018, the government released Rs. 26,000 million for this cluster.
- Micro, small and medium enterprises (MSME) development institutes that impart business and technical knowledge to existing and new entrepreneurs. This institute helps the cluster to be innovative and technologically driven.
- Support services by Agra footwear association in sector modernization.
- Effective networking platform through annual meets at Agra promotes industry linkages.

Major Problems

- Decline in exports due to competitive prices from other countries like Bangladesh.
- A decline in 'ease of doing business'; as such, their rank has slipped to 14 in 2018, from 10 in 2015.
- Consumer trends shifting away from traditionally made shoes to global brands. Competition from e-commerce and global and national brands are resulting in this shift in consumer trends. Due to predatory pricing, low-tech knowledge and the lack of a digital presence, small businesses are lagging behind online marketplaces. Buyers are also gravitating towards online shopping because of the convenience and heavy discounts. It is argued that the footwear sector in Agra needs to establish an online presence in order to compete with e-commerce.
- Low wages of workers is also a notable problem in this cluster. It is reported that average daily earnings of a skilled footwear worker is substantially low compared to the earnings of even an unskilled daily worker in nearby New Delhi. A skilled worker said his daily earnings were in the range of Rs. 200–Rs.250, compared to the minimum wage of Rs. 485 of his New Delhi counterpart (Singh, 2019).
- Difficulty in procuring raw hides from nearby tanneries as the government has shut down many tanneries in the Taj Trapezium Zone (TTZ) in order to protect the World Heritage Sites from environmental pollution.
- High capital costs (9-14 percent) are also hindering the growth of small and micro firms since they cannot afford such high rates of interest amid global competition.
- Skilled workers are easily available but this work force is illiterate. Hence, they depend on traditional know how. Low levels of education and the inability to communicate in English has remained a major problem for entrepreneurs.

APPENDIX – G

A Note on Worker Participation in Germany
(Thanks to Professor Herr for this contribution)

Source: https://oshwiki.eu/wiki/Worker participation - Germany # Works_council

Works council

Regulatory framework and current data

In Germany, works councils are the only form of worker representation. Works councils in private companies are called Betriebsrat (abbr. BR). In the public sector, they are known as Personalrat (abbr. PR) and have their legal basis in different laws that adapt the regulations of the industrial constitution law almost entirely. In establishments that belong to the church, the councils are called Mitarbeitervertretung (abbr. MAV), which also have their own legal basis in the autonomous law of the churches. Members of the MAV have fewer rights than their colleagues in private and public establishments. However, this does not affect their rights and duties in OSH as far as they are granted by the act on occupational safety and health (ArbSchG).

The minimum staff number for setting up a council is five workers who enjoy passive electoral rights (§1 BetrVG). The works council must be set up by the workers themselves by forming an assembly Betriebsversammlung (§42 ff. BetrVG). The employer does not have the right to prevent the formation of a works council. However, employers have been known to actively impede the setting up of works assemblies, and, consequently, works councils.

Recent panel data shows that only between 38-45 percent of German employees (regional disparities) are represented by works councils. Survey data from Euro found shows that only about 25 percent of the German establishments with 10+ workers have a works council and that representation of workers in Germany is under the EU-27 average. Figures also vary with sectors and sizes of the establishments. Developments in the retail sector have been criticised, as has representation of workers in small enterprises.

Composition works councils are bodies consisting of worker representatives only. The representatives are elected by the workers for a four-year term. The candidates are often connected to trade unions who draw up lists of candidates. There are also, however, independent lists or even independent candidates. The size of the works council is legally defined in §9 BetrVG.

Table 1: Size of establishments and number of representatives in the works council

Size of establishment	Representatives in the works council
5 – 20 workers	1
21 – 50	3
51 – 100	5
101 – 200	7
201 – 400	9
401 – 700	11
701 – 1,000	13
1,001 – 1,500	15
1,501 – 2,000	17
2,001 – 2,500	19
...	...
4,501 – 5,000	29
5,001 – 6,000	31
6,001 – 7,000	33
7,001 – 9,000	35
9,001 – 11,000	37
...	...

Source: §9 BetrVG, compiled by the author

Where there are over 200 staff, a legally defined number of works council members are exempt from work (§38 BetrVG), as the following table shows:

Table 2: Size of establishments and number of works council members exempt from work

Size of establishment	Number of works council members exempt from work
5 - 199 workers	0
200 - 500	1
501 - 900	2
901 – 1,500	3
1,501 - 2,000	4
2,001 – 3,000	5
3,001 – 4,000	6
...	...
9,001 – 10,000	12
10,001 – 12,000	13
12,001 – 14,000	14
...	...

Source: §38 BetrVG, compiled by the author.

The works council is a collective organ, presided over by a chairperson (§26 BetrVG). It makes majority decisions (§33 BetrVG). In establishments with over 100 workers, the works council can form committees and delegate duties to these (§28 BetrVG).

Duties

The works council has of a number of rights concerning involvement in making decisions; from co-decision (Mitbestimmung) to co-operation (Mitwirkung), hearing (Anhörung), consultation (Beratung) and information. Co-decision is the strongest form, because it means that the works council can block management decisions where no agreement can be found. In such cases, an arbitration committee must be established. The works council can also take the initiative and make its own proposals. The works council can also send two members to the safety committee as worker representatives.

Co-decision rights in companies include such issues as working times, shift work, breaks, and OSH in general (§87 BetrVG). Binding agreements are often made between management and the works council on these issues. Further co-decision rights can be established by law and/or collective agreement, and can supplement the general rules contained in §87 BetrVG. Co-decision on OSH includes measures to prevent workplace accidents and occupational diseases, as well as health promotion (§81 Abs.1, Nr.7 BetrVG). Other areas for OSH co-decision are explicitly defined in legal provisions, e.g. for appointing occupational physicians and OSH experts (§9 section 3, 'GesetzüberBetriebsärzte, Sicherheitsingenieure und andereFachkräftefürArbeitssicherheit', ASiG).

The works council has the right to initiate further measures and set up binding agreements. This also applies to OSH, in accordance with §80 and §88 of the BetrVG, and to chemical safety, in accordance with §21 section 4 of the ordinance on dangerous substances (GefStoffV).

In addition, the works council has a so-called right to 'corrective co-decision'; when workplace standards fall below acceptable levels regarding the organisation of work or the working environment. The works council can then demand measures from the employer to ensure such standards are met, or to lower the strain on the worker (§91 BetrVG).

The works council must be kept informed about technical measures (e.g. machinery) and related documentation, including risk assessments. They are to be consulted about risk assessments, working condition checks and accident analyses (§89 BetrVG). Generally, the employer must inform the council regarding its rights and duties. Information has to be timely and comprehensive (§80, §90 BetrVG).

Other works council duties include actively promoting OSH and the implementation of prevention measures (§80, §89 BetrVG). This includes cooperation with the authorities: the works council has to support their work.

APPENDIX-H
Workers' Councils

Tabelle 7: Distribution of a works council by company size in 2017 (in per cent)
Basis: Only private firms with more than 5 employees without agriculture and non-profit organisations

	Size of firms, below number of employees are given						
	5 - 50 employees	51 - 100 employees	101 - 199 employees	200 - 500 employees	501 and more employees		*From 51 employees*
			Germany				
Firms with a workers' counsil, in percent	5	32	53	69	80		45
Employees working in firms with workers' council	9	33	55	70	86	39	52 63
			West Germany				
Firms with a workers' counsil, in percent	5	32	55	70	79	9	27 45
Employees working in firms with workers' council	9	33	57	71	85	40	53 64
			Former DDR				
Firms with a workers' counsil, in percent	6	32	44	64	92	9	27 41
Employees working in firms with workers' council	11	33	45	66	90	33	46 56

* excluding agriculture and non-profit organizations
Source: IAB Establishment Panel 2017