

The Role of Small and Medium Enterprises (SMEs) Loans on Employment Generation: Bangladesh Perspective^{*}

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Abstract

This study examines the contributions of bank loans to Small and Medium Scale Enterprises (SMEs) in employment generation in Bangladesh. This is because the sector serves as a catalyst for employment generation, poverty reduction and economic development as well. The aim of this study therefore; is to find out the relationship between employment and SME Financing. Using panel data analysis with a sample of 310 enterprises for the period 2009-2011, the paper shows that SME loans has a positive impact on employment generation.

Keywords : Small and Medium-Scale Enterprises (SMEs), Bank Loan, Employment, Panel data analysis, and Bangladesh.

JEL Classification: C23, E24, G21, L25, O53.

^{*} The views expressed in the paper are authors' own and do not necessarily reflect the institutional views.

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1. Introduction

SME sector has an importance of acting as a platform in the development drive of any economy especially in the areas of job creation, offering significant employment opportunities, empowering the poor and providing assets to enhance poverty reduction. The fight against unemployment or lack of employment opportunities has been one of the key challenges facing Bangladesh economy since independence. Greater part of the country's labor force is employed in agriculture finding no other alternatives in job market. Despite this high dependence on agriculture, other sectors have also been growing significantly in Bangladesh. Over the years, share of agriculture in GDP is declining while manufacturing and service sectors are the drivers of growth. Manufacturing sector in Bangladesh has been contributing at a consistent rate over the last decade to around 15 percent. SMEs in manufacturing and services combined have 19 percent share of GDP (Rabbani and Sulaiman, 2002). A nationwide survey claims that Micro, Small and Medium Enterprises (MSMEs) value addition accounts for 20 to 25 percent of Bangladesh's GDP. These enterprises are accommodating more than 30 million people aged 15 years and above (Daniel, 2003). So SMEs are playing significant contribution in the transition of agriculture-led economies to industrial ones furnishing plain opportunities for processing activities which can generate sustainable source of revenue and enhance the development process in Bangladesh. Nonetheless, the role of SME in employment generation and poverty reduction has been well recognized in the PRSP (GOB, 2002).

SME in Bangladesh is dominated by trading. But the greatest potential of employment creation is among the SMEs involved in manufacturing. The key reasons for SMEs not entering the manufacturing sector are financial constraints and dismal state of utilities (CPD, 2003). So, the role played by small and medium enterprises (SMEs) in employment generation and economic development is a key question for policy makers. Many empirical studies find that the share of SMEs in GDP is significantly higher in high income countries. A cross country study (Ayyagari et al, 2003) shows that SMEs account for over 51 percent of GDP and 57 percent of employment in high income countries while the corresponding figures for low income countries are 16 and 18 percent. This also reveals the importance of SME in growth and employment generation.

Small and Medium Enterprises (SMEs) have come to the limelight in the financial sector on account of their contribution in generating employment, reducing poverty and fostering economic growth and yet limited access to finance. Both Micro Finance Institutions (MFIs) and banks are beginning to realize the potential of this market and

designing new financial products for it. SMEs in Bangladesh mostly require financing for three purposes – for start-up capital, for working capital and for fixed capital. Unavailability of working capital from formal financial institutions is recognized as one of the major complaints of SMEs in Bangladesh (Meagher, 1998). Mostly they rely on personal savings or retained earnings in the case of those who are already in operations. To develop SMEs, Bangladesh Bank has introduced several schemes and programs to ensure institutional financial services for the SMEs. They include credit wholesaling by using the grants received from different development partners, opening of ‘Dedicated Desk’ and ‘SME Service Centre’ in the banks and special services for the women entrepreneurs.

This study tries to examine the contributions of formal SME financing i.e. bank loans towards employment generation in Bangladesh. In this regard, the main aim of this study is to find out the relationship between employment and SME loans and to provide some policy suggestions. The remainder of paper is structured as follows. After introduction the second section describes the literature review. The third section reviews a snapshot of SME sector of Bangladesh. The fourth section presents methodology. The fifth section shows empirical results of the study. The last section depicts conclusion.

2. Review of Literature

Due to the important role in GDP growth, new job creation and entrepreneurship development Small and Medium sized Enterprises (SMEs) are acknowledged worldwide as the drivers of socio-economic growth. A growing body of empirical literature supports the fact that SMEs are crucial contributors to total employment and job creation in developed and developing economies. There is a general agreement among scholars and policy makers that the key advantage of the sector is its employment potential at low capital cost. But challenge for SMSs are lack of start-up capital, high financing cost and banks' reluctance to provide loans for fixed and working capital.

Birch (1979) provided early evidence that supported the notion that SMEs are the primary engines of job growth. His findings showed that 81.5% of all net new jobs in the United States during 1969–1976 were created by firms with 100 or fewer employees.

Kirchhoff and Phillips (1988) examined the contribution of small and large firms to U.S. job growth and found that firms with fewer than 100 employees are the major sources of new job creation. In contrast, firms with more than 1,000 employees provided only 13 % of all new jobs despite having a 37% share of employment.

OECD (2004) estimated that SMEs account for 60 to 70% of jobs in most OECD countries, with a particularly large share in Italy and Japan and a relatively smaller share in the United States. Throughout, SMEs account for a disproportionately large share of new jobs, particularly in countries that have displayed a strong employment record.

According to Berrios and Markus (2013), small and medium-sized enterprises (five to 250 employees) generate a large share of jobs in industrialized countries. Moreover, these jobs are with existing companies and with newly created firms, particularly those that grow rapidly in the first years of operation.

A recent research by Ayyagari, Demircuc-Kunt, and Maksimovic (2011) investigates the contribution of small firms to employment, job creation, and growth in developing countries. They presented a unique cross-country database on the contribution of SMEs to total employment, job creation, and growth across 104 developing economies. They find that while small firms (<20 employees) have the smallest contribution to aggregate employment compared to medium (20-99 employees) and large firms (100+ employees), SMEs (<99 employees) are comparable to large firms in their contribution to aggregate employment. They also showed that SMEs are the largest contributors to total job creation across developing countries and have the largest share of employment, accounting for 71% of jobs in the region. SMEs not only do employ the largest number of people, they also generate most new jobs.

The International Labor Organization (ILO) and the German Agency for International Cooperation (GIZ) recently published a study titled 'Is Small Still Beautiful?' (2013). A literature review of recent empirical evidence on the contribution of SMEs to employment creation examined almost 50 studies. The review concluded that SMEs provide two-thirds of all formal jobs in developing countries in Africa, Asia, and Latin America, and 80% in low-income countries, primarily Sub-Saharan Africa. Similarly, more important than holding the majority of jobs in low-income and emerging economies, SMEs make a key contribution to net job creation, particularly smaller and young firms.

Das and Kalita (2009) worked on labor-intensive sectors to find out generation of employment in India. They attempted to address what constraints to decline the labor intensity in India. Using primary survey data from different manufacturing firms (apparel, leather, gems & jewelers, sports and bicycles) during 2005-2006, the study reveals that the constraint factors reduced the employment generation in labor intensive

firm. The study identified several problems i.e. lack of skilled workers, weak infrastructure, poor investment, rigid labor rules and regulations and imperfect export markets which decline the generation of employment of that firms. So, they suggested a set of policies to enhance the potential generation employment of those manufacturing sector.

Asma Benzazoua Bouazza (2015) examines the current developments of small and medium-size enterprises (SMEs) in Algeria and investigates the contribution of those enterprises to economic development and employment creation. The analysis shows that the Algerian SME sector contributes to 40% of the country's GDP and employs only 18.4% of the active population. However unemployment remains high, particularly among young Algerians.

Dr. Kadiri (2012) examines the Contributions of Small and Medium Scale Enterprises (SMEs) to employment generation in Nigeria. By using Binomial Logistic Regression the study observes that the sector was unable to achieve this goal due to its inability to obtain adequate business finance for the sector. It was observed that virtually all the SMEs that were sampled relied on the informal sources of finance to start their business. As a way out, the study suggests the need for the integration of the activities of the formal with that of the informal financial institutions.

Abdulsalam and Tukur (2014) investigate the effect of microfinance on growth of small enterprises in Sokoto State, Nigeria. A stratified sampling method is used to select the sample of 120 firms to elicit the information for the survey. By using linear regression, two hypotheses were tested in their study. One shows that, positive and significant relationship exists between access to microcredit and value of physical assets of the firms. Another also shows a positive statistical relationship between access to micro-credit and employment generation. The study concludes that, accessed micro-credit have grown in terms of both physical assets acquired and employment generated. It, therefore, recommends that microfinance banks should consider an upward review of the size of loan offered to small businesses to enable the enterprises have enough funds to finance their operations.

Alam and Ullah (2006) showed in their article that, Small and Medium Enterprises (SMEs) are accounting for 25 percent of GDP, 80 percent of industrial jobs, and 25 percent of the total labour force in Bangladesh even though the sector gets negligible facilitation from different support service providers. They identified various constraints that hinder the development of SMEs in Bangladesh, such as lack of medium to long-

term credit, limited access to market opportunities, technology, and expertise and business information. Lack of suitable incentives, inefficient and limited services from relevant government agencies as well as poor capacity of entrepreneurs are other reasons for the slow growth of SMEs. They suggested that the government has many things to do to flourish the SMEs because, if they flourish, SMEs will create new entrepreneurs, generate more jobs and contribute to a great extent to the national economy.

Rabbani and Sulaiman (2002) looked at the performance of small and medium enterprises that have received loans from Brac Bank Limited with a focus on employment generation. Their analysis reveals that employment generation is higher in enterprises with longer association with the Bank, enterprises in the manufacturing sectors and enterprises with a high initial labor force. Moreover, employment generated after repeat loans has a greater positive impact on the wage bill when compared to employment generated after first loans.

We conclude from the existing literature that SMEs are the key driver of economic growth and employment generation in both developed and developing economies. Moreover, SMEs make a significant contribution to exports earnings, technology assimilation, skills development, and innovation stimulation. Even such contributions vary among different countries and regions. A number of literatures in previous studies have identified factors affecting SMEs' growth and expansion such as competition, finance, technology etc. However the role of SMEs in generation of employment has in most cases been focused. SMEs face a lot of challenges specially lack of start-up capital that substantially hinder their progress, growth and subsequently their contribution to economic development. Financing SMEs as a core business is still relatively new for formal financial providers in Bangladesh. Therefore this study puts more importance to identify the contributions of bank loans to Small and Medium Scale Enterprises (SMEs) in employment generation in Bangladesh which makes it different from existing literature.

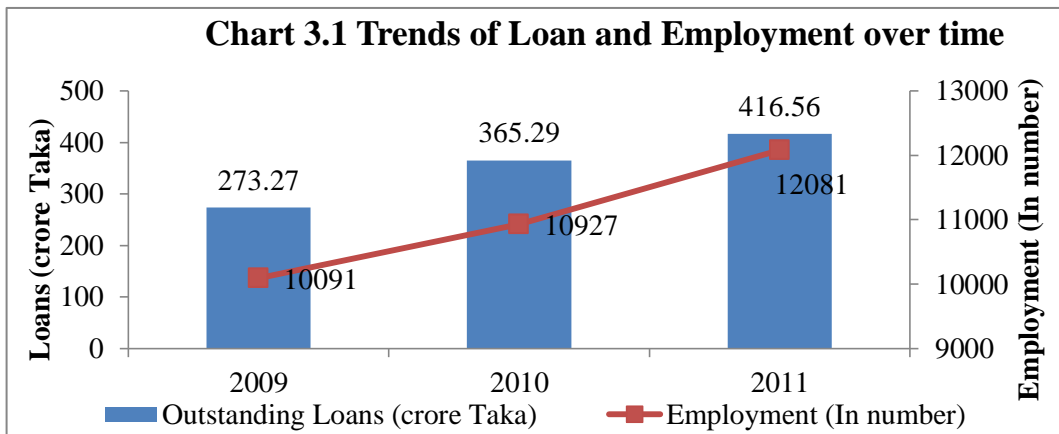
3. Snapshot of SME sector in Bangladesh

In recent years, the SME sector has consistently registered higher growth rate compared to the overall industrial sector globally. There is a general agreement among scholars and policy makers that the major advantage of the sector is its employment potential at low capital cost. A developing country like Bangladesh, the SMEs are considered as the engine of growth. The SME entrepreneurs in both the urban and rural areas of Bangladesh are now making a crucial progress in national development. In Bangladesh,

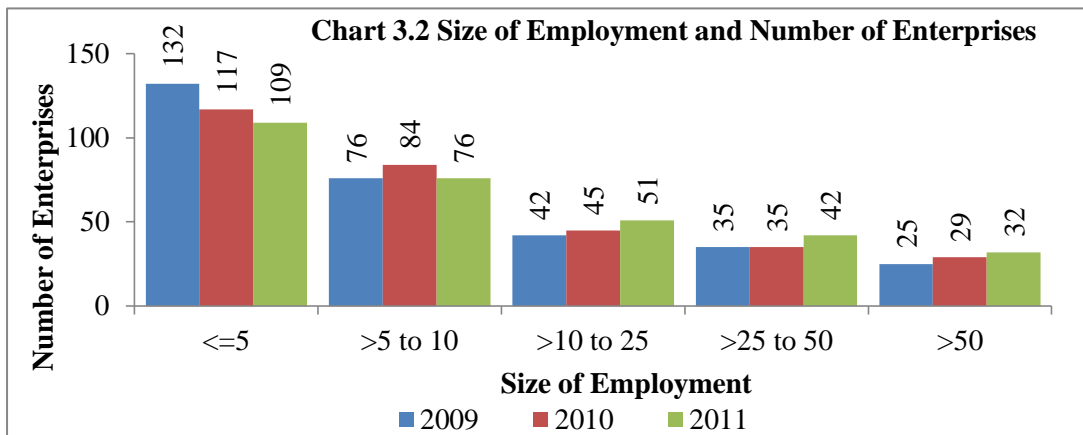
poverty alleviation through economic growth as well as employment generation on mass scale is heavily dependent on the development and expansion of SMEs.

Similarly, the loans for the SME sector has continuously recorded higher growth rate compared to the overall credit growth to industrial sector in recent years. Such high growth in SME loans in the recent past was one of the concerns in monitoring credit situation of Bangladesh. In addition, it was a widespread belief that SME loans disbursed to industries had been diverting to unproductive sectors as investment in stock market and housing sector, etc. On that background, Bangladesh Bank (2016) made an in-depth analysis to find causes of high growth of industrial loans and its economic impact through a field survey of 451 enterprises financed by banks and financial institutions in 2012. It found that changes both in manpower and capital of surveyed enterprises over the years indicating transformation of small to medium sized enterprises. Loans not only generate regular funding of existing borrowers but also create opportunities of being new entrepreneurs. In case of generation of employment, small sized and/or manufacturing enterprises contribute the most.

However, this study attempts to find the relationship between SME loans and employment in Bangladesh in the light of that survey data and uses a sub sample of 310 enterprises for the period 2009-2011 and applies panel data analysis. The trends of loans received and employment created by this sample enterprise are shown in Chart 3.1.

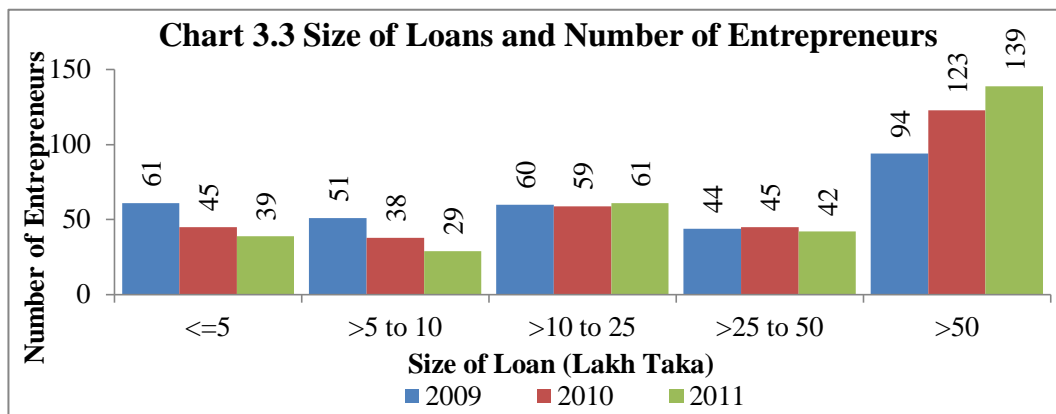


Analyzing the data of loan and employment for 310 SMEs in Bangladesh during 2009 to 2011, we have observed a positive relationship among the loan (outstanding) and employment where both the loan and employment have increased over the time. The amount of outstanding loan was increased by 33.67 percent to Taka 365.29 crore⁵ in 2010 and 14.04 percent to Taka 416.56 crore in 2011 as compared to the previous year (chart 3.1). Accordingly, the number of employment also increased by 8.28 percent and 10.56 percent in 2010 and 2011 respectively in comparison with the previous year.



Considering the size-wise loan and employment of 310 surveyed SMEs, it was observed that 42.58 percent of the total enterprises had employees up to 5 persons in 2009 (chart 3.2). But this number of enterprises had declined gradually and stood at 35.16 percent in 2011. On the other hand, 8.06 percent of the enterprises had employees for more than 50 persons in 2009. But this number of enterprises had increased gradually to 10.32 in 2011. Therefore, the study showed that enterprises were creating more employment opportunities over the time and there happened shifting of small to medium enterprises.

⁵ One crore = 10 million



Considering the size-wise loan of 310 surveyed SMEs, it was observed that 19.68 percent of the total entrepreneurs had outstanding loans worth of Taka 5 lakh⁶ or less (chart 3.2). But number of entrepreneurs in this loan category had declined gradually and stood at 12.58 percent in 2011. On the other hand, 30.32 percent of the total entrepreneurs had outstanding loan above Taka 50 lakh in 2009. But number of entrepreneurs in this loan category had increased gradually to 44.84 percent in 2011. Therefore, the study showed that the entrepreneurs had taken more loans over time and hiring more employees to expand their business activities and hence contributing to more employment with taking higher amount of loans over the time.

4. Research Methodology

The study is based on the data collected from field survey conducted by Bangladesh Bank to make an in-depth analysis for causes of high growth of industrial loans and its economic impact through a field survey of 451 enterprises which borrowed from banks and financial institutions in 2012. In this regard this report attempts to find the relationship between SME loans and employment in Bangladesh.

Test Hypothesis

For the objective of this study is tested through the null hypothesis which is stated that is no significant relationship between SME loans and employment in Bangladesh.

Method

We apply panel data regression to test null hypothesis and use a sub sample of 310 enterprises of that survey. The data are used for the period 2009-2011.

Fixed Effects

The fixed-effects (FE) model is used to find out the relationship between employment and loans variables within an enterprise over time. FE model is based on the assumption

⁶ One lakh = 0.10 million

that each enterprise is different. So an enterprise's error term and constant are not be correlated with the other one.

The equation for the fixed effects model becomes:

$$Y_{it} = \beta_1 X_{it} + \alpha_i + u_{it}$$

where

$\alpha_i (i=1 \dots n)$ is the unknown intercept for each enterprise (n th enterprise-specific intercepts).

Y_{it} is the employment of i th enterprise at time t ,

X_{it} represents loans of i th enterprise at time t ,

β_1 is the coefficient for loans,

u_{it} is the error term

The error term u_i is the cross section or individual specific error component

Random Effects

The rationale behind random effects (RE) model is that the variation across enterprises is assumed to be random and uncorrelated with loans included in the model. In RE consider those individual characteristics that may or may not influence employment. An advantage of RE is that time invariant variables are included and these variables are absorbed by the intercept in the fixed effects model.

The random effects model is :

$$Y_{it} = \beta X_{it} + \alpha + v_{it} + \varepsilon_{it}$$

$$= \beta X_{it} + \alpha + w_{it}$$

where

$\alpha_i (I=1 \dots n)$ is the unknown intercept for each enterprise (n th enterprise-specific intercepts).

Y_{it} is the employment of i th enterprise at time t ,

X_{it} represents loans of i th enterprise at time t ,

β_1 is the coefficient for loans,

w_{it} is the composite error

The composite error term (w_{it}) consists of two components— v_i , the cross section or individual specific error component and ε_i , the combined time and cross section error component.

Fixed or Random: Hausman test

To decide between fixed or random effects, a Hausman test is needed to run where the null hypothesis is that the preferred model is random effects versus the alternative the fixed effects (Green, 2008, chapter 9). It basically tests whether the unique errors (u_i) are correlated with the regressors, the null hypothesis is they are not.

5. Findings of the study

The results of the relationship between employment and SME loans based on both fixed effects (FE) and random effects (RE) methods are shown in table 5.1. Table 5.1 shows that both FE and RE methods establish relationship between loans received and employment generated by SMEs. In fixed effects results the coefficient of this linear relationship is positive and its value is 0.03 and standard error 0.0024. The p-value (0.000) indicates relationship between SME loans and employment of the enterprises is significant at 1% level. Therefore, a positive statistical relationship exists between SME loans and employment. However, the value of F Statistic is 24.79 which is statistically significant at 1% level and shows that the model is acceptable. The adj. R² is 88.8% which reveals that a statistically a good fit of the relationship.

Table 5.1 Regression results on Employment Generation with SME Loans

EMPLOYMENT	FE			RE		
	Coefficient	Std. Error	P-value	Coefficient	Std. Error	P-value
SME LOANS	0.027197*	0.002439	0.0000	0.029670*	0.002353	0.0000
C	32.50477	0.349914	0.0000	32.22421	2.508636	0.0000
Adj. R-sq.	0.888106			0.143570		
F-stat.	24.78560			156.7349		
P-value (F-stat.)	0.000000			0.000000		
Hausman (Chi-sq. Stat.)	8.565661*					

* Indicates significant at 1% level.

On the other hand, the random effects results show that the coefficient and standard error of the linear relationship is also the same as fixed effects results. The p-value (0.000) of the coefficient indicates relationship between SME loans and employment of the enterprises is significant at 1% level. Therefore, a positive statistical relationship exists between SME loans and employment. However, the value of F Statistic is 156.73 which is statistically significant at 1% level and shows that the model is acceptable. But the adj. R^2 is 14.35% which reveals that a statistically a poor fit of the relationship.

While choosing the preference between FE and RE results, we tested Hausman Test. We found that the value of chi-square is 38.56 which is significant at 1% level. This indicates that FE is appropriate.

6. Conclusion and Recommendations

The objective of the study was to find out the relationship between SME loans and employment generation. By applying a panel data analysis, we found that there is positive relationship between SME loans and employment. The findings of this research work will go a long way in the further development of the SME sector in Bangladesh, whereby barriers against access to finance will be eliminated and job creation will be enhanced. Banks and Non Bank Financial Institutions (NBFIs) may play greater role in search of potential SME entrepreneurs. Since trading sector needs more loans for purchasing goods for sale but employs few workers, banks and NBFIs can provide SME loans to the entrepreneurs of the industrial sector which can generate more employment. In case of disbursing loans, Banks and NBFIs can prioritize small sized enterprises because they have ample opportunities to expand their business activities through loans. Banks and NBFIs can also create new entrepreneurs through providing loans. In this regard, employment will be generated in self-employed process.

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