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MICRO, SMALL AND MEDIUM ENTERPRISES ACCESS TO FINANCE CONSTRAINTS IN ETHIOPIA: DEMAND SIDE ANALYSIS

Temesgen Woldamanuel Wajebo [(a)1]

[(a)] *PhD Candidate in Economics, Addis Ababa University, Addis Ababa, Ethiopia; E-mail: temashare@gmail.com*

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ABSTRACT

Despite the immense importance of micro, small and medium enterprises (MSMEs) to job creation and the alleviation of abject poverty, significant numbers of MSMEs cannot realize their full potential because of limited access to finance and other factors, mostly in developing countries. The study investigates micro, small and medium enterprises' access to finance constraints in Ethiopia from a demand-side perspective. This study employed a descriptive analysis using survey data collected from 814 randomly selected sample enterprises. The results show that about 76% of the MSMEs were established by initial capital majorly generated from their own savings, family or friends, Equub, and saving and credit cooperatives among others. The remaining 24% accessed their initial capital from formal financial institutions. From the total, 39.4% of MSMEs did not apply for loans due to high collateral requirements, complex application procedures, unfavorable interest rates, insufficient loan size, maturity, and grace period, and lack of transparency. The study results also reveal that 22%, 46%, and 32% of the MSMEs are partially credit constrained, fully credit constrained, and non-credit constrained, respectively. The difference between the average demand and the loan supplied is estimated to be 3241, 11444, and 30949 USD for each micro, small, and medium-sized enterprise, respectively. The total estimated finance gap for all MSMEs is 31.7 billion USD. The findings of this study suggest the establishment of public credit guarantee schemes, cash flow-based lending, and psychometric testing for credit scoring and automating the MFIs' services to improve MSMEs' access to finance.

INTRODUCTION

Despite the enormous importance of the MSME sector to job creation and the alleviation of abject poverty, many of the MSMEs are unable to realize their full potential due to the limited access to finance and other factors that inhibit their growth and performance, mostly in developing countries.

According to the International Finance Corporation (2017), MSMEs in countries in the high-income group have less constrained access to finance. These countries in the high-income group have the highest proportion of finance-unconstrained MSMEs, which is 81% of total MSMEs, and only 19% of constrained MSMEs. In contrast, countries in the low-income group have the largest proportion of fully or partially finance-constrained MSMEs; 67% (3 million MSMEs) of finance-constrained MSMEs found. In developing economies, including Sub-Saharan Africa, SMEs are typically more credit-constrained than large firms, severely affecting their potential to grow (Ayyagari et al., 2008; Beck et al., 2008; Ayyagari et al., 2012). According to Beck et al. (2008), small firms steadily report more financing constraints than medium- and large-sized firms. The probability that a small firm mentions access to finance as a primary constraint is 39%, compared to 36% for medium-sized firms and 32% for large firms.

Various studies have also pointed out that MSMEs in Ethiopia have very limited access to finance from formal financial institutions (Weltbank, 2015; Nega & Hussein, 2016). A study conducted by Weltbank (2015) on SME finance in Ethiopia revealed that only 3% of small enterprises and 23% of medium enterprises have a loan facility.

[1]*Corresponding author: ORCID ID: 0000-0003-4050-4097*

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To mitigate these problems, the Ethiopian government has been undertaking considerable policy reforms in the financial sector. As a result, currently, according to the report of the national bank by the end of 2019/20, the number of banks has reached 18 (16 private and 2 public). These banks have a total of 6,511 branches nationwide. Similarly, by the end of 2019/20, the number of microfinance institutions (MFIs) had reached 41. Their total capital and total assets reached Birr 19.4 billion and birr 92.2 billion, respectively. Apart from the above formal financial institutions, there are semi-formal institutions which are regulated by cooperative agencies such as saving and credit cooperatives (SACCO), rural/saving and credit cooperatives (Ru/SACCOs), and village saving and lending associations (VSLAs). There are also informal institutions that are totally unregulated financial sources, which include "Iqub" and "Idir".

Despite great efforts by the Ethiopian government to improve MSMEs' access to finance from formal financial institutions, the credit market is relatively underdeveloped in Ethiopia compared to other neighboring countries. So, MSMEs are suffering from limited access to finance, which is choking the sector's ability to contribute towards the country's economic development and employment. Hence, the author mainly attempted to assess micro, small and medium enterprises' access to finance constraints in Ethiopia from a demand-side perspective. Specifically, the study seeks to identify the key constraints to MSMEs' access to finance, estimate the MSMEs' finance gap and finance constrained MSMEs, and assess the potential demand and actual supply of finance to MSMEs from formal financial institutions. Finally, the findings of the study help to highlight the policies and intervention programs for improvements on both the demand and supply side.

LITERATURE REVIEW

Definitions and categorization of enterprises differ from country to country. Depending on contexts and development scenarios, countries choose one or more thresholds to define and categorize enterprises. Some of the factors used for defining and setting boundaries across enterprises include investment size, number of employees, annual sales turnover, net asset value, and legal status.

The global experience of categorizing enterprises also varies in general categorization and use of terminologies. Some countries and organizations generally use the category of Micro and Small Enterprises (MSE), while others use small and medium Enterprises (SMEs). There are international development organizations and experts who combine both MSEs and SMEs into one and create the term "Micro, Small and Medium Enterprises" (MSMEs). The term MSME covers a wide range of definitions across countries and multilateral organizations. However, due to its ease of collection, some of the most commonly used criteria are the number of employees, total assets, and total annual sales amount. Broadly, MSMEs are independent firms that employ less than a given number of employees. This number varies across countries. According to the OECD (2005), in developing countries, micro-enterprises have at most 10 or, in some cases, 5 workers; small enterprises are generally those with fewer than 50 employees; and the most frequent upper limit designated for medium enterprises is 250 employees.

The definition and terminology of SMEs and MSEs have evolved over time in Ethiopia as well. According to the Ethiopia Micro and Small Enterprises Development Strategy of 2011, the working definition of MSEs in Ethiopia is based on capital, number of employees, and type of services. Compared to the definition used by multilateral organizations, the Ethiopian definition does not consider annual sales or turnover. The definition used by Ethiopian federal institutions or concerned agencies is presented in Table 1 below.

Table 1. MSMEs Categorization in Ethiopia

Type of Enterprises	Sector	Man power	Size of capital (ETB)
Micro Enterprise	Industry	≤5	< 100,000
	Service	≤5	< 50,000
Small Enterprise	Industry	6 ≤30	100,001- 1.5 million
	Service	6 ≤30	50,001- 500,000
Medium Enterprise	Manufacturing Industry	31≤100	1.5 – 20 million

Operationalized Definition of Terminologies

The definitions for categories of credit constraints are customized from definitions used by the World Bank and International Financial Corporation. The customization categorized credit-constrained MSMEs into three categories. The first, fully credit-constrained (FCC) enterprises are defined as those that find it challenging to obtain credit. These are enterprises that have no source of external financing. They typically fall into two categories: those that applied for a loan and were rejected, and those that were discouraged from applying, either because of unfavorable terms and conditions, or because they did not think the application would be approved. The second, partially credit-constrained (PCC), MSMEs are defined as those that have been somewhat successful in obtaining external financing. PCC firms include those that have external financing but were discouraged from applying for a loan from a financial institution. They also include firms that have an external source of financing and firms that applied for a loan that was then partially approved or rejected. The third, non-credit constrained (NCC), enterprises are those that do not appear to have any difficulties accessing credit or do not need credit. Firms in this category encompass those that did not apply for a loan as they have sufficient capital either on their own or from other sources. It also includes firms that applied for loans that were approved in full.

MATERIALS AND METHODS

According to Mark et al. (2009), mixing qualitative and quantitative approaches gives the potential to cover each method's weaknesses with strengths from the other method. Thus, both qualitative and quantitative approaches to research have been

employed to undertake this study. The data was obtained from both primary and secondary sources. Primary data was collected from sampled MSMEs using structured questionnaires. On the other hand, secondary data was collected from the administrative publications, annual and inventory reports, previous studies, and other related literature. Since the research is going to approach the subject matter of the study from the demand side, all MSMES that were found in the country were considered as the population and the number of MSMEs that existed in Ethiopia was 2,291,913 as of February 2021, according to the database of the Ministry of Trade and Industry.

The probability sampling technique was used. Since stratified sampling is ideal for a study that has a population with heterogeneous characteristics, it was employed to select the representative MSMEs from 3 sectors and 6 regions, which were used as strata. This enabled the MSMEs from one sector and region within the categories not to be over sampled. The name list of MSMEs in each category has been used as a sample frame for the selection of samples. At the end, by using disproportionate stratified random sampling, the respondents were selected from each sub-sector.

The Yamane (1967) formula was applied to the Agriculture, Manufacturing, Construction, and Service sectors to determine the sample size from each sector using a 0.07 sampling error, and based on the formula; the final sample was determined to be 814. Disproportionate sampling was used because it is worthwhile, particularly when the sample frame or units contained in some strata get few sampling units and vice versa in other counter strata. Accordingly, a disproportionate sampling method was applied to control the overrepresentation of the MSMEs from the service sector due to the large population size and underrepresentation of the MSMEs from the agriculture and industry sectors due to the lower population as compared to the service sector. So, by using reasonable assumptions, 12% of sample enterprises from the agriculture sector, 36% from industry, and 52% from the service sector were selected using simple random sampling. A descriptive method and content analysis were also employed to analyze the qualitative data.

RESULTS AND DISCUSSION

Survey Response Rate

In a population survey of 814, 810 correctly filled questionnaires were returned, representing a response rate of 99.5 percent. According to Kothari (2004), a 50% response rate is adequate, 60% is good, and above 70% is rated very well. Therefore, this response rate can be categorized as very good.

Disaggregation by Size

As indicated below in Figure 1, 43.7% and 36.32% of firms included in the survey were micro-enterprises and small-enterprises, respectively. Likewise, the remaining 15.01% and 4.96 of the sample were selected from medium and large enterprises, respectively.

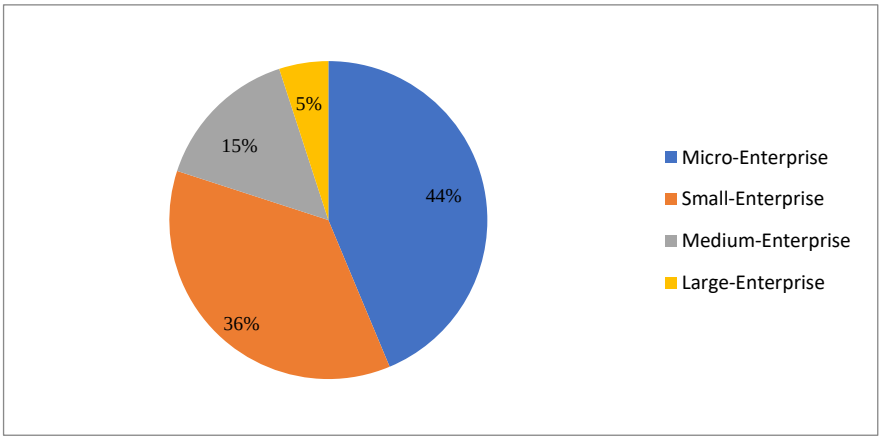

Figure 1.Characterization of the Surveyed Enterprises by Size

Sources of Initial Capital for MSMEs Establishment

As shown in table 7, 33.4 % and 21.8 % of the enterprises are established by the funds majorly generated from personal savings, and friends or families, respectively. The remaining 13.4%, 11.1%, 9%, and 6.7% of the enterprises have been established with the initial capital mainly stemming from MFI, banks, saving and credit institutions, and Equb, respectively.

Table 2. Major Sources of Initial Capital for MSMES Establishment

	N	Percent
Own saving	348	33.40%
Friends or Family	227	21.80%
Micro finance institutions	139	13.40%
Bank	116	11.10%
saving and credit cooperatives	94	9.00%
Equus	70	6.70%
Non-government organization fund	18	1.70%
Informal money lender	17	1.60%
Other	12	1.20%

Source: own computation from survey data

MSMEs Loan Application Status and Determining Factors

As portrayed in Table 3, 60.6% of surveyed enterprises applied to get loans from formal financial institutions in the last three years and 5 months. The remaining 39.4% of the respondents' enterprises didn't apply for loan in financial institution due to different reasons

Table 3. Loan Application Status of Surveyed MSMEs

Did you ever apply to take a loan from formal financial institutions in the last three year and 5 months?		
Valid	Yes	60.60%
	No	39.4

Source: own computation from survey data

Surveyed enterprises were asked the reason why they did not apply for a loan. The response of the respondent to the multiple response questions is summarized in Figure 2. From enterprises that did not apply for loan, 7% and 10.3 % of them are because they do not want a loan and because they did not repay their previous loan, respectively. However, 22.2% of the enterprises did not apply for a loan because of high collateral requirements, primarily and, secondly, due to the terms and conditions such as complex application procedures, unfavorable interest rates, insufficient loan size and maturity period, absence of grace period, lack of transparency, and fear of inability to repay. The finding has similarities with the finding of the study undertaken by Nega and Hussein (2016) on small and medium enterprise access to finance in Ethiopia (synthesis of demand and supply side). They found out that the primary reason for not applying for a loan is that of high collateral requirements.

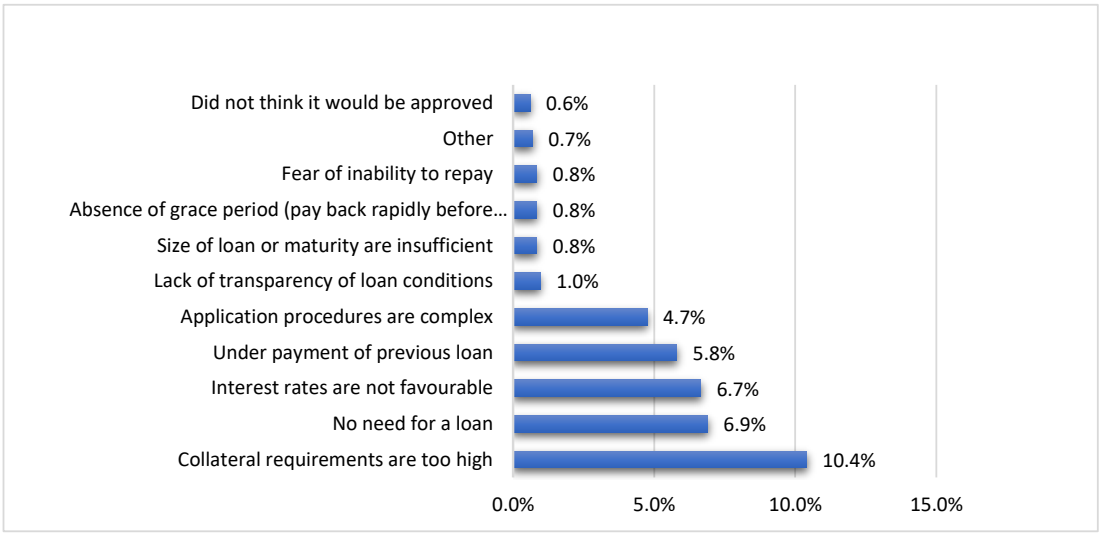

Figure 2. Factors Determines Loan Application

As indicated in table 4, 48.4%, 36.8%, 10.5%, and 4.2% of the enterprises which did not apply for a loan due to the complexity of the application procedure are micro, small, medium, and large enterprises, respectively. Similarly, 55.1%, 36%, 7.9%, and 1.1% of the enterprises which did not apply for a loan because of the inability to meet high collateral requirements are micro, small, medium, and large enterprises, respectively. The same fashion of analysis works for the remaining variables. This result implies that as the size of the enterprise increases, the constraining power of factors which are making them not apply for loans gets lower and lower. And the reverse is true when the size of the enterprise decreases. In general, the Ethiopian credit markets are relatively underdeveloped even compared with developing countries (World Bank, 2019).

Table 4. Constraints that Made Enterprises not to Apply for Loan

Reasons Why the enterprise did not apply for loan	Size of Enterprise			
	Micro	Small	Medium	Large
Application procedures are complex	48.40%	36.80%	10.50%	4.20%
Interest rates are not favorable	61.10%	34.40%	4.40%	
Collateral requirements are too high	55.10%	36.00%	7.90%	1.10%
Size of loan or maturity are insufficient	47.20%	44.40%	8.30%	
Absence of grace period	51.20%	44.20%	4.70%	
Did not think it would be approved	61.80%	32.40%	5.90%	
Lack of transparency of loan conditions	61.30%	35.50%	3.20%	
Fear of inability to repay	78.30%	13.00%	8.70%	

Source: own computation from survey data

MSMEs Loan Application Rejection Rate and the Reasons for Rejections

As shown in table 5, of the total enterprises which applied for a loan, 34.12% of applications were rejected. However, among the credit-constrained enterprises, there may be some that were rejected for good reasons, such as insufficiently productive projects or a poor repayment history. To be more specific, 9.8% of the enterprises from the enterprises whose loan applications were rejected because of the default faced on the previous loan, as indicated in Table 5 below. Therefore, 9.8% is deducted from the 34.12 % of applications that were rejected. Thus, it can be said that 24.32% of loan applications were rejected due to the constraints indicated in Table 5 below. The reason placed in the first place by the respondent was inadequate or non-existence of collateral (82.7%), followed by default on the previous loan (9%).

Table 5. Rejection Rate of Loan Application

Have you ever been refused or denied credit from a bank or MFI?				
		Frequency	Percent	Valid Percent
Valid	Yes	275	32.8	34.12
	No	530	63.2	65.88
	Total	805	95.9	100.0

Source: own computation from survey data

MSMEs Access to Loan

It is understood that the size of enterprises matters in their access to finance. Accordingly, as presented in Table 6, of the total enterprises which have participated in this study, except those who do not need loans, 55.5% of micro enterprises, 47.5% of small enterprises, 33.3% of medium enterprises, and 28.2% of large enterprises haven't accessed finance from the formal financial institutions.

Table 6. Cross-tabulation Between the Size of Enterprise and Access to Loan

Cross tabulation between size of enterprise and access to loan			
		Access to finance from financial institution	
		NO	Yes
Size of Enterprise	Micro-enterprise	55.5%	44.5%
	Small- enterprise	47.5%	52.5%
	Medium enterprise	33.3%	66.7%
	Large enterprise	28.2%	71.8%
Total		51.7%	47.8%

Source: own computation from survey data

The table 7 below reveals that 42.5% of surveyed enterprises have faced challenges on the repayment of previous loans. The remaining 57.5% of the respondents answered that they didn't face a challenge on repayment of the last loan.

Table 7. Status on Previous Loan Repayment

Have you ever had a problem repaying a loan from a financial institution?			
		Percent	Valid Percent
Valid	Yes	29.9	42.5
	No	40.5	57.5

Source: own computation from survey data

MSMEs Finance Gap

As shown in figure 3, the average demand and supply of finance per enterprise for each size was presented. The disparity among the values indicates that there is a significant gap between demand and supply. Data from the Ministry of Trade and Industry as of February 30, 2021 indicates the presence of 2,291,913 active enterprises in the country. To compute the financial gap for the entire MSMEs, large enterprises (2%) are deducted from the total enterprises. Similarly, 7% of the total enterprises were reduced because 7% of them were not looking for loans, as the assessment result shows. After estimating the valid total number of MSMEs, which is 2,085,640, and multiplying this by the average finance gap of MSMEs, which is 15178 USD, the cumulative MSMEs financial gap is estimated to be USD 31.7 billion USD. This result deviates from the result of a study conducted by (International Finance Corporation (IFC, 2017). The possible reason for the occurrence of the difference between the findings of this study and the previous one is the methodological difference they used to estimate the MSME finance gap. Because of the unavailability of firm level data in developing countries, the International Finance

Corporation (2017) used developed country data as a benchmark to undertake the estimation of the MSME finance gap in developing countries.

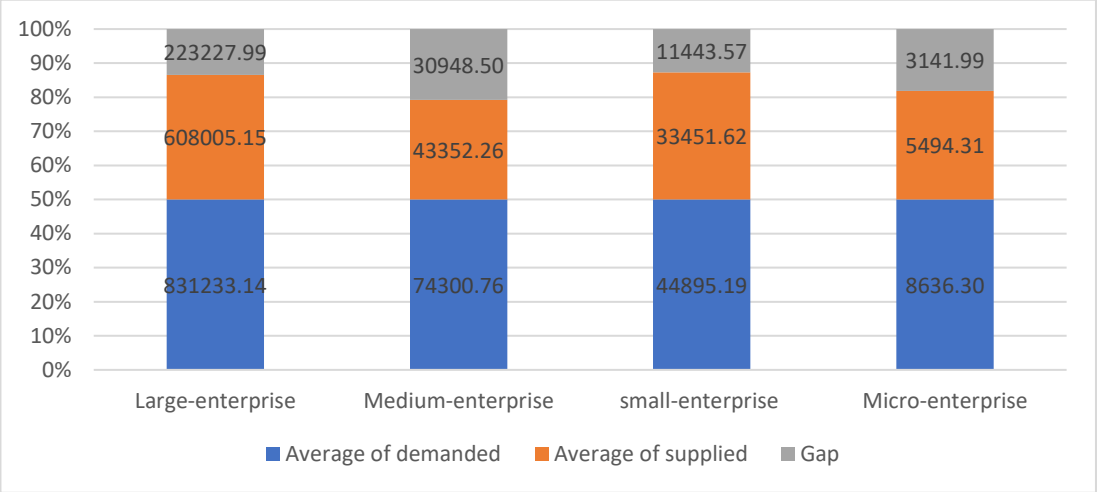

Figure 3. Average Loan Size Demanded, Supplied and Gap by Size of Enterprises

As seen in Figure 4 below, 46% of the enterprises, which is the sum of 24% of loan applications rejected and 22% of the enterprises discouraged from applying because of the reasons stated in Figure 2 above, were fully credit constrained enterprises. Of the total enterprises that applied for a loan, 33.3% of loan applications were partially approved, which is 22% of the total respondents. On the other hand, of those enterprises that applied for and received loans, only 32.7% of the loan applications were approved as per their needs, which is 14.6% of the total respondents. And as indicated in figure 2, 7 % of the enterprises didn't need a loan from financial institutions because they are capable of satisfying their financial interests by themselves, and 10.3% of the enterprises were because of underpayment of previous loans. Thus, the sum of these three values, which is 32% of the total enterprises, was non-credit constrained enterprises during the period that the study covered. This result is similar to the finding of the International Finance Corporation (2017) study, which showed that the share of MSME that are fully unable or can only partially access credit for low-income countries was 67 % in 2017.

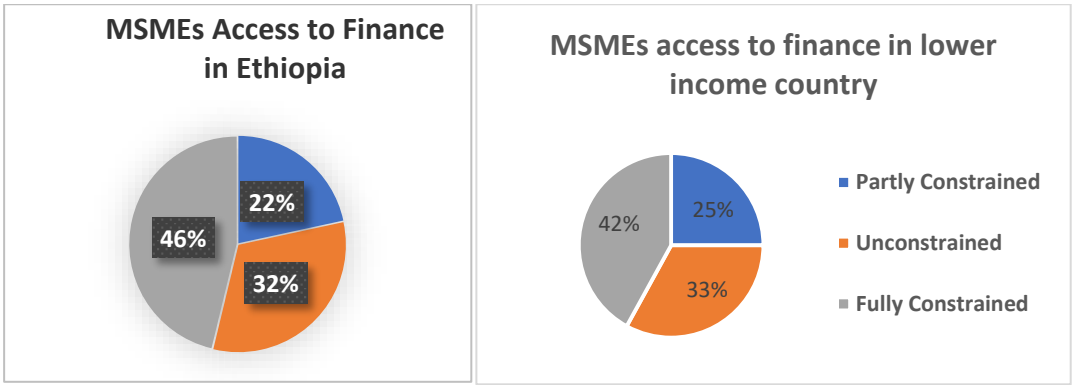

Figure 4. MSMEs Finance Gap

CONCLUSIONS

The study attempted to assess micro, small and medium enterprises' access to finance constraints in Ethiopia from a demand-side perspective. Accordingly, the result of this study shows that about 76% of the enterprises established were backed by initial capital generated from sources other than the formal financial institutions, such as own savings, family or friends, Equub, and saving and credit cooperatives among others. Only the remaining 24 % of the enterprises are established with a major source of initial capital from financial institutions (banks and MFIs).

The result of this study also indicates that a considerable portion of the enterprises, 39.4% of enterprises, did not apply for loans from financial institutions. To be more specific, 35.3% of medium enterprises, 38.1% of small enterprises and 43.5% of micro enterprises didn't apply for loans in the last three years and five months in financial institutions. The primary reason reflected by most of the enterprise operators that made them not apply for loans was the high collateral requirements asked by financial institutions, which they could not meet. Complex application procedures, unfavorable interest rates, insufficient loan size and maturity period, absence of grace period, lack of transparency, and fear of inability to repay are some of the other terms and conditions that discourage businesses from applying for loans.

In terms of the financial gap between the average demand and supply, this study estimates a 3241 USD gap for micro-enterprises, an 11443.57 USD gap for small-enterprises, a 30948.5 USD gap for medium-enterprises, and a 223228 USD gap for large enterprises. The total financial gap estimated for all MSMEs is USD $31.7 billion. From the total

enterprises, 22%, 46%, and the remaining 32% of the enterprises were partially credit constrained, fully credit constrained, and non-credit constrained enterprises, respectively.

Recommendations

The recommendations derived from the finding of this study are:-

- Design and implement Capacity building (Business Skills development) programs (financial literacy and the use of Fintech) for MSMEs. Many MSMEs need to adopt a more business skill such as business mindset, feasible business plan, proper business bookkeeping, effective financial reports and other which helps for loan process;
- Improve governance and increase independence of government affiliated MFIs by including shareholders and board members from the private sector. This will help to reduce the Politicization of microfinance service, political intervention and improve the efficiency of the service;
- Establish public credit guarantee scheme: Since loan service in financial institutions is highly constrained with collateral, it is advisable to establish the public credit guarantee scheme to mitigate the collateral constraints for MSMEs;
- Determine the optimal share of MSMEs loan from total loan portfolio for both MFIs and Commercial bank;
- Apply alternate credit scoring methods such as psychometric testing for a more efficient loan process. It enables to evaluate personal characteristics like honesty, ethics, drive, motivation, optimism, intelligence, and business skills (Beck et al., 2008);
- Expand loan products that meet MSMEs' needs. Implement movable collateral registries to cover their perceived risks of lending. Expand supply chain finance, where small businesses are financed through the relationships they have with their major suppliers or customers. And introduce cash flow-based lending products rather than being dependent on traditional collateral-based appraisal techniques and
- Automate and Strengthen MFIs accounting standards: - this helps the accessibility and efficiency of the service and enables to interconnect the head office with their branches digitally and to provide core banking service for clients.

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Informed Consent Statement: This manuscript does not include details, images, or videos relating to individual participants.

Data Availability Statement: The data used in this study are available on request from the corresponding author. The data are not publicly available due to restrictions.

Conflicts of Interest: The author ensures that there are no conflicts of interests concerning the publication of this article.

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