Effects of Access to Formal Finance to the MSMEs on Sustainable Employment Generation in Bangladesh

Li Qi[1], Hero Rana Barua Mito[1], Mousumi Akter[1]

[1]School of Business Department, Zhengzhou University, Henan, China

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Conflicts of Interest
There are no conflicts to declare.

ABSTRACT

In recent years, MSMEs are playing very important role for the overall economic growth and development of Bangladesh. These MSMEs help distribute resources from macro level to micro levels of economy through employment generation and improved livelihood across the country. This study examines whether the access to formal finance has direct impact on the MSMEs in generating more employment opportunities in Bangladesh. The sample for this study contains data of local MSMEs which took formal finances in 2015 from private commercial banks. To understand the effect with relation sustainable employment, this study analyzes employment data of 2015 and that of 2018 for the same MSMEs regarding their full-time workers, full time skilled workers and full time low skilled workers by associating skill levels with worker information. The findings of the study clearly indicate that the access to formal finance to MSMEs in 2015 has aided to increase the employment generation in 2018 for full time workers. As for associating skill levels, access to formal finance has helped to increase employment for full time skilled workers whereas the effect is not significant for full time low skilled workers. Additionally, the study also suggests practical implications with regard to formal finance opportunities by private sector and its importance to uplift employment opportunities and provide training for sustainable employment and improved livelihood in Bangladesh's economy.

Keywords: MSME, SME, EMPLOYMENT GENERATION, FORMAL FINANCE, ACCESS TO FINANCE, BANGLADESH

Introduction

Micro Small and medium enterprises (MSMEs) mean independent businesses with different ownership models that employ less than a given number of workers or whose total investments fall below certain limits. Considering presences of MSMEs in Bangladesh economy, it is found that almost 90 per cent of the private enterprises are MSMEs and about 70-80 per cent of non-agricultural workforce are working there.

 In, Bangladesh, the MSMEs have contributed up to 25 percent of GDP including about 40 percent of gross manufacturing output and around 25 percent of the total labor force (Mintoo, 2007). Also, MSME employ 87 per cent of the civilian population (Express, 2021). MSMEs are crucial to Bangladesh's financial and economic

development. According to our recent World Bank report, close to 99 percent of non-farm enterprises in the country are MSMEs. In 2013 MSMEs created 20 million job opportunities in Bangladesh ("How can Bangladesh's micro, small, and medium businesses thrive?" 2019). Studies and research thus have associated MSMEs very pivotal for creating employment opportunities and therefore distributing resources across economy. Evidence from the contemporary literature suggests that employment opportunity is contributory to how economic resources get distributed in micro levels of the economy and how MSMEs play an important role in the value chain.

On the other hand, most businesses in Bangladesh are in need of small short-term loans to help finance their working capital needs or purchase of fixed assets. So when a bank brings about a momentous difference in these people's lives by meeting their demand (Chowdhury et al., 2013). While bank lending to MSMEs has tripled between 2010 and 2016. On a long term perspective, the commercial banks expect to gradually develop the creation of an entrepreneurial class across Bangladesh through proper financing and training.

Therefore, this study has taken employment data from 178 MSMEs that availed formal financing support in 2015, and analyzed if this formal financing support helped those MSMEs to create more employment opportunities in 2018. This study analyzes collected the data during 2019 period to observe how MSMEs have grown in terms employment generation from 2015 to 2018. Furthermore, this study has associated skill level to the job roles and differentiated between the skilled and low skilled workers considering sustainable employment that is the extent to which workers are able and willing to remain working now and in the future.

For comparison, this study has compared the data of number of Low Skilled, Skilled, total number of full time workers of 2015, when the loan was originated in 2015 and compares the same data with that of 2018, when the MSMEs were still maintaining the loan with those commercial banks.

Literature Review

Bangladesh Bank identifies Cottage, Micro, Small & Medium Enterprises (CMSMEs) as a top priority sector for rapid industrialization, employment generation, poverty reduction, gender equality & overall economic growth of Bangladesh (Bangladesh Bank, n.d). In the context of Bangladesh, the development of Small and Medium Enterprises (SMEs) can be considered as a vital instrument for poverty alleviation and ensure the rapid industrialization (Ahmed & Chowdhury, 2009). According to a research, empirical studies show that where developing counties have healthy MSME sectors then the distribution income for both labor and capital is improved underpinning more balanced growth models. Generally, MSMEs will employ intermediate technologies and tend to generate significant employment opportunities with modest capital inputs (O'Brien & Challenges Consulting, 2012). Also according to a research from World Bank (n.d.), Small and Medium Enterprises (SMEs) play a major role in most economies, particularly in developing countries. SMEs account for the majority of businesses worldwide and are important contributors to job creation and global economic development. They represent about 90% of businesses and more than almost 50% of employment globally. Formal MSMEs contribute up to 40% of national income (GDP) across emerging economies. The numbers

could be significantly higher if informal SMEs are also accounted. World Bank's estimates, 600 million jobs to be needed by 2030 to cater the growing global workforce, which makes SME and for Bangladesh, MSME development a priority for many governments. In emerging economies, most formal jobs are generated by SMEs that create 7 out of 10 jobs. Besides, MSMEs and to provide access to social protection for those that they employ ("UNDESA – Report on MSMEs and the Sustainable Development Goals", 2021), a study by IDLC Finance Limited and Policy Research institute in Bangladesh, has observed that 782 small and medium enterprises (SMEs) which availed loans from IDLC Finance across the country and covered information from their inception to 2019. The country's SME sector has created 15 lakh jobs between 2009 and June 2014 (SMEs with access to finance double employee numbers since inception, 2020). Similarly, SME Cluster Development could be an emerging force of entrepreneurship development, employment generation and poverty alleviation for any least developed country like Bangladesh (Begum, A., & Abdin, M., 2015). Accessibility to banks loans in other words, access to formal finance, no matter the magnitude, significantly affects MSMEs performance ("SME Financing and Entrepreneurship Development in Bangladesh: An Impact Analysis", 2019). A research by Khandker et al., (2013), found that, in less-developed economies such as Bangladesh, the farm sector is the major source of employment and income. However, access to finance is a key constraint to growth of SMEs, it is the second most cited obstacle facing SMEs to grow their businesses in emerging markets and developing countries. For example, Government of Bangladesh is subsidizing buying machineries in agro sector, but since farmers cannot get access to this government subsidy banks could help expedite this. by providing loans. ("Lack of access to finance big barrier to farm mechanisation", 2021). This study hence, will look into possible sources of formal finance for the MSMEs and in order to understand, the effect of access to formal finance, this study shall analyze the number of full time workers, Full time skilled and full time low skilled workers to understand the effect of access to formal finance on these variables.

MSME In Bangladesh

Time to time, the inconsistent definition of MSME has put limitation on research and evaluation in this arena. Cottage, Micro, Small and Medium Enterprises (CMSME) have been redefined in line with the National Industrial Policy-2016 and turnover for trading concern has been added as additional criteria for sector determination. Small and cottage industries are basically spread to private sector. It is also an important sector for investment production and employment in non-agriculture sector. (Ministry of Finance, Government of Bangladesh, 2017). *Table 1* contains the definition of MSMEs.

Table 1: Unified MSME Definition Adopted under the 2016 Industrial Policy

Type of Industry	Amount of Investment in Taka (Replacement Cost and Value of Fixed Assets, excluding Land and Factory Buildings)	Number of Workers Worked
Cottage Industry	Below 1 million	Maximum 15

Micro Industry		1 to 7.5 million	16 – 30
Small Industry	Manufacturing	7.5 to 150 million	31 – 120
	Service	1 to 20 million	16 – 50
Medium Industry	Manufacturing	150 to 500 million	121 – 300
	Service	20 to 300 million	51 – 20

Source: National Industrial Policy, Government of Bangladesh, 2016

Sources Of Formal Finances In Bangladesh

MSMEs can formally take finances from sources from the following four mainstream sources:

1. **Banks**: In Bangladesh there are two types of banks. First, the banks that follow under the Bangladesh Bank Order, 1972, also termed as Scheduled Banks. And second, the banks that are established for special and definite objective and operate under any act except that of the Scheduled Banks. Currently in Bangladesh, there are 61 Scheduled Banks and 5 Non Scheduled Banks. Among the Scheduled Banks, there are State Owned Commercial Banks (SOCBs), Specialized Banks (SDBs) and Private Commercial Banks (PCBs). Also, between the PCBs, there are two kinds- one that follows conventional process, and other that follows Islamic Shariah.

2. **Non-Banking Financial Institutions (NBFIs)**: Non-Bank Financial Institutions (NBFIs) are those financial institutions that are regulated under Financial Institution Act, 1993 and controlled by Bangladesh Bank. Currently, there are 34 NBFIs operating in Bangladesh while the first one was established in 1981.

3. **Micro Finance Institutions**: There are mainly four types of institutions involved in micro-finance activities. They are 1) Grameen Bank (GB), a member owned specialized institution, 2) around 1500 Non-Governmental Organizations (NGO) like BRAC, Proshika, ASA, BURO-Tangail, BEES, CODEC, SUS, TMSS, Action- Aid etc. 3) Commercial and Specialized banks like Bangladesh Krishi Bank (BKB), Rajshahi Krishi Unnayan Bank (RAKUB) and 4) Government sponsored micro finance projects/ Programs like BRDB, Swanirvar Bangladesh, RD-12 and others which are run through several ministries. Among these, we can call NGO like micro credit service providers the Micro Finance Institutions (MFIs). According to Microcredit Regulatory Authority (MRA), Government of Bangladesh (2020), there are 746 MFIs registered under MRA.

4. **Cooperative and Associations**: Besides the aforementioned ones, there are a large number of informal and semiformal financial service providers in Bangladesh. Apart from the usual informal financial service providers such as moneylenders and pawn brokers, there are various Rotating Savings and Credit Associations (ROSCAs) that operate in both urban and rural communities. Cooperatives form a significant part of the financial sector in Bangladesh (Banking with the Poor, 2009). They are governed and supervised by the Registrar of Cooperatives. Savings and credit cooperatives offer savings and micro loans for their member base

Apart from these, there are Impact Investors who provide formal finance specifically to startups in exchange for the equity in the business. This rather new yet old concept is increasingly getting popular in Bangladesh. There is emergence of platforms like BD angels, Better Stories that bring impact investors, angel investors and new startups with business in MSME segment together. Angel investor means an individual, acting alone or in a formal or informal group, who invests his or her own directly in an unquoted business and who after making the investment, takes an active involvement in the business (Mahmud, 2013). In this study, we will study the MSMEs that took loan from banks in Bangladesh.

Sustainable Employment And Definition Of Skilled And Low Skilled Workers

According to Bancine and Zevalkink (2007), cited in Nusrat and Naz, 2018, when nontechnical skills (Soft skills) are developed to complement technical skills, collaboration, synergy, and personal productivity, are increased, which eventually turn into improved business success rates, sustainable competitive advantage and increased profitability. It can be deduced from the argument that the skill levels influence sustainability of productivity, profitability of overall business and sustain employment. For sustainable employment, this study has identified two groups of workers from employment perspective, low skilled and skilled workers.

Low Skilled Workers correspond to Skill Level 1 from International Standard Classification of Occupation from the International Labour Organization (ILO).

Skilled Workers correspond to Skill Levels 2, 3, and 4 from the ILO.

Definitions of Skill Levels by ILO

Skill Level 1: typically involves the performance of simple and routine physical or manual tasks. For some occupations, completion of primary education or the first stage of basic education may be required. For competent performance completion of primary education or the first stage of basic education may be required. Skill Level 1 includes office cleaners, freight handlers, garden laborers, and kitchen assistants.

Skill Level 2 typically involves the performance of tasks such as operating machinery and electronic equipment: driving vehicles, maintenance and repair of mechanical and electrical equipment, and manipulation, ordering, and storage of information. For almost all occupations at Skill level 2 the ability to read information such as safety instructions, to make written reports of work completed, and to accurately perform simple arithmetical calculations is essential. Knowledge and skills usually obtained though completion of the first stage of secondary education. Bus drivers, secretaries, police officers, hairdressers, building electricians and motor vehicle mechanics.

Skill Level 3 typically involves the performance of complex technical and practical tasks that require an extensive body of factual, technical and procedural knowledge in a specialized field. Occupations in this skill level generally require a high level of literacy and numeracy and well developed interpersonal communication skills. Knowledge and skills usually obtained as the result of study at a higher educational institution for a period of 1-3 years following completion of secondary education. Sometime work experience may substitute for the formal education. Shop managers, medical laboratory technicians, legal secretaries, commercial sales representatives, computer support technicians.

Skill Level 4 typically involves the performance of task that require complex problem-solving, decision-making, and creativity based on an extended body of theoretical and factual knowledge in a specialized field. Occupations in this skill level generally require extended level of literacy and numeracy, sometimes at a very high level, and excellent interpersonal communication skills. Knowledge and skills usually obtained as the result of study at a higher educational institution for a period of 3-6 years leading to the award of a first degree or higher qualification.

Material And Process

Data

This study will use secondary data that was collected by an individual data collector. To collect the data, a questionnaire was prepared and was used to communicate with the MSMEs. The questionnaire had questions regarding an overview of their business including the type of their business, ownership and information regarding the number of their Full Time workers and to further understand the effect, break full time workers Skilled and Low Skilled workers.

Procedure

For analyzing the data, this study does both parametric and non-parametric tests for the group of data of Full time workers, skilled and low skilled workers over 2015 and the end of 2018. For parametric test, this study uses independent samples t-test and for non-parametric test, uses Mann-Whitney U test. According to APA dictionary of Psychology, a hypothesis test that involves one or more assumptions about the underlying arrangement of values in the population from which the sample is drawn. Common parametric tests include analysis of variance, regression analysis, chi-square tests, t tests, and z tests. Characteristics of a population are called parameters (Levin et al., 2021a). Parametric tests use the parametric statistics of samples that came from the population being tested. To formulate these tests, we made restrictive assumptions about the populations from which samples have been drawn (Levin et al., 2021b). To run these tests, SPSS has been used. Tor run the Independent samples t-test in SPSS, the two groups of variable has to be input and defined. Then go to Analyze > Compare means > independent sample t test > Insert test variable > Insert grouping variable > Define groups > Ok (Levin et al., 2021c). In independent samples t-test, we assume the hypotheses the mean of two groups of data are equal, for this study, the test statistic of 2015 and the end 2019 has been compared. Rejecting the null hypotheses with the given p-value would mean, that since taking formal finance from bank has affected the test statistic from 2015 to 2018. And for the tests, this study assumes a significance level of 0.05. On the other hand, for non-parametric test, Mann-Whitney U test can be used to determine whether two independent samples have been drawn from the same population. For same data set as used in independent samples t-test, click Analyze > Nonparametric Tests > Legacy Dialogs > 2 Independent Samples> Insert test variable > Insert grouping variable > Define groups > Ok ("Mann-Whitney U Test using SPSS Statistics", n.d.).

Furthermore, whereas a significant p-value tells us that there is an affect, an effect size provides an idea as to

how much it works. Effect size is a quantitative measure of the magnitude of the experimental effect. The larger the effect size the stronger the relationship between two variables (Mcleod, 2019). With reference to "Effect Size Calculators", (n.d.), for parametric test we will use Cohen's d to calculate the effect size.

Cohen's $d = M_1 - M_2 / \sigma_{pooled}$;

Where, $\sigma_{pooled} = \sqrt{[(\sigma_1^2 + \sigma_2^2) / 2]}$

Here,

M1 = Mean value of group 1

M2 = Mean value of group 2

σ_1 = Standard Deviation of group 1

σ_2 = Standard Deviation of group 2

As for Mann-Whitney U test we will use effect size, $r = Z/\sqrt{N}$

Here, Z is Z value from SPSS output and N would be the total number of observations. In order to understand the effect size from Cohen's d for parametric, and r for non-parametric test, the study will follow the thresholds of Table 2.

Table 2: Cohen's Standard and Relation between Cohen's d and Effect Size r

Cohen's Standard	D	r
	2.0	.707
	1.9	.689
	1.8	.669
	1.7	.648
	1.6	.625
	1.5	.600
	1.4	.573
	1.3	.545
	1.2	.514
	1.1	.482
	1.0	.447
	0.9	.410
LARGE	0.8	.371
	0.7	.330
	0.6	.287
MEDIUM	0.5	.243

		0.4	.196
		0.3	.148
SMALL		0.2	.100
		0.1	.050
		0.0	.000

Participants

The participants are mostly different owners of MSMEs in Bangladesh who took loan from a commercial bank in Bangladesh. Geographically, most of the participants are from Dhaka and outskirts, whereas there are more participants from Chittagong to Cox's Bazar and Sylhet. Besides the owners, in handful cases Managers provided us with the information this study required either due to unavailability of the owner of the MSME or lack of enough information from the owners.

Most of the MSMEs of the test statistics were traders either in retail or wholesale business. Out of 178 MSMEs 113 were wholesale business, and 28 in retail business. Retail and wholesale business constitute the 64% and 17% of the sample size accumulating to 81% together. Talking to these SMEs, it has been understood that the formal finance supports were requested for either increasing working capital, or to increase inventory to seasonal hike in business.
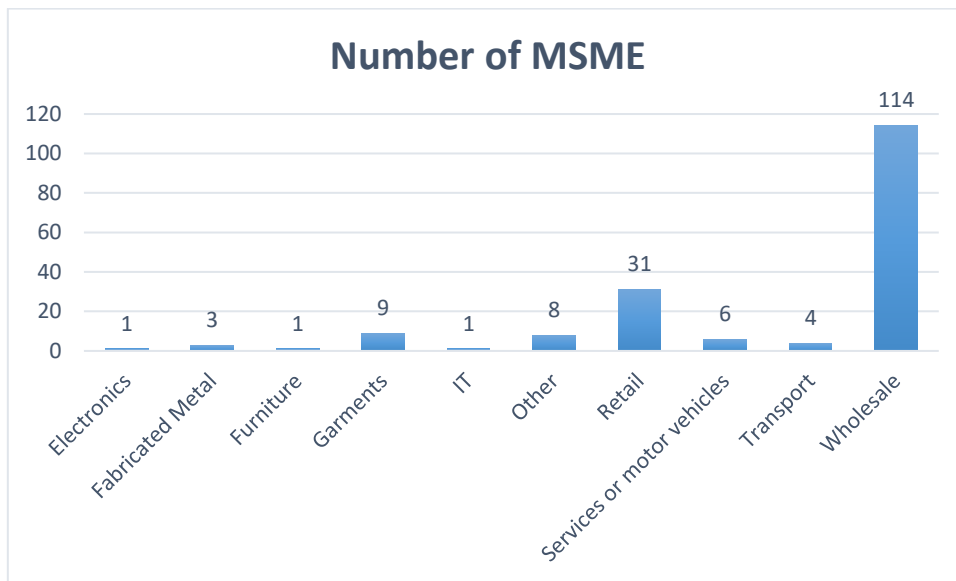

Figure 1: Distribution of MSMEs Genre across Their Business Type

As we look into the distribution sample size by their ownership, we notice that 94% of the MSMEs are sole proprietorship. Interestingly, questioning further about the ownership and looking into how their business work, it has been understood that most of the MSMEs from our sample size prefers providing document of sole proprietorship due to easier documentation, loan application and quicker processing whereas, if in case there are multiple partner, they maintain an internal agreement detailing the stake and responsibility of partners within the business. And one of the partners, in majority the partner with more stake or influence in the business acts

as the sole proprietor.
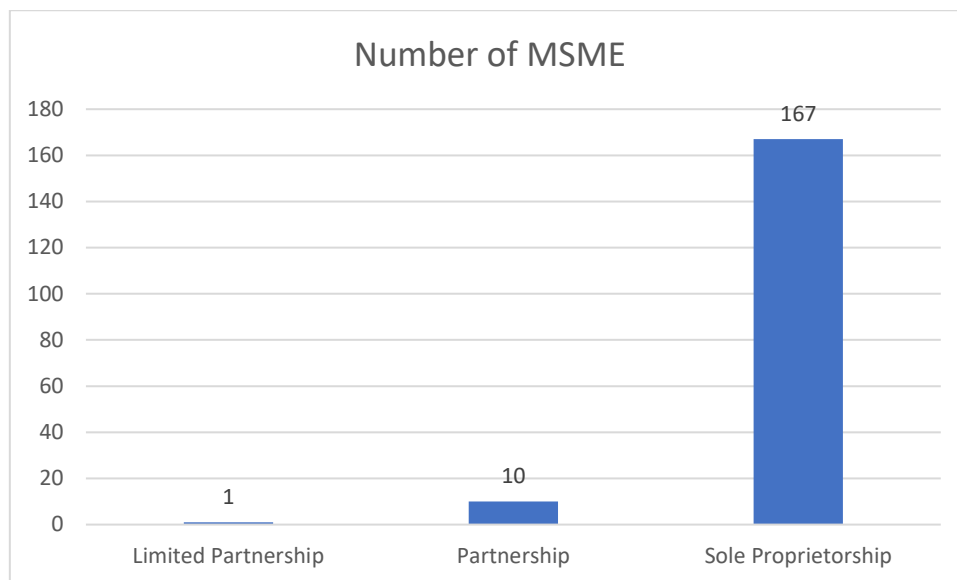
Figure 2: Ownership Style of the Sample MSMEs

During this study, it has been also noticed that only 14 out of the 178 MSMEs from the sample of this study were on paper have been by women entrepreneurs. And it has also been observed that some MSMEs applied showing female ownership in order to account for lesser tax and getting more convenient loan from the banks considering there are policies that make loan application and approval more convenient for women entrepreneurs.

Analysis And Results

Finding Effect On The Number Of Full Time Workers

Comparing the total number of full time workers of 2015 and that of 2018-year end, it has been found that only 10 of the MSMEs saw a decline in the number of full time workers out of 178 samples. However, few MSMEs had a sharp increase in the number of workers whereas most MSMEs had somewhat increase in the total number of full time workers. From observing the samples, it has been found that service oriented enterprises and manufacturing enterprises have most increase in the number of workers whereas the traders have little increase in the total number of full time workers.

To see the effect of access to formal finance on total number of full time workers, first an independent samples t-test which is a parametric test and then a Mann-Whitney U test is applied on the set of data taking the total number of full time workers in 2015 in group 1 and that 2018 in group 2 in SPSS.

The **null hypotheses** in the test would be that, the mean value of the total number of Full Time workers did not change from 2015 to 2018 due to access to formal finance. If we reject the null hypotheses, then there could be two **alternative hypotheses**; either the number of full time workers in the test statistic increased or decreased. By comparing our observation, if the null hypothesis is rejected we can come to a decision that the access to formal finance helped increase the number of full time workers.

Independent Samples T-Test

Table 3: Group Statistics- Total Number of Full Time Workers

Indicator	Frequency	Mean	Std. Dev	Std. Error
Year 2015	178	6.7865	13.59168	1.01874
Year 2018	178	10.5449	20.88334	1.56527

Table 4: Independent Samples Test - Total Number of Full Time Workers

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	**Sig.**	**t**	**Df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	**Lower**	**Upper**
Equal Variances Assumed	5.042	.025	-2.012	354	.045	-3.75843	1.86759	-7.43140	-.08545
Equal Variance not Assumed			-2.012	304.139	.045	-3.75843	1.86759	-7.43347	-.08339

From the independent samples t-test we can see that the **Levene's Test for Equality of Variances** gives P value of 0.025. Now, if p is smaller than or equal the significance level, the null hypotheses can be rejected ("Using SPSS for t-Tests", n.d.). Here P value of 0.025 is lower than the confidence interval and hence we can reject the null hypotheses of the assumption that mean of the total number of workers from 2015 and 2018 are equal, implied we accept the alternate hypotheses which is the means are not equal. This study can also interpret from the alternate hypotheses that, from taking loan there is an effect in full time employment for the MSMEs from 2015 to 2018. Also from the pooled t-test we find p value of .045 which is lower than .05, so we assume that there is significant effect on the number of workers in 2018. Furthermore, if we calculate Cohen's d we find **-0.21331700367351178**. The negative sign means that the mean of total number of workers of 2018 is significantly higher than that of 2015. Also since the value of Cohen's d is between 0.2 to .05, we can conclude that the effect of access to formal finance on increasing the number of full time workers in MSMEs is **medium**.

Mann-Whitney U Test

Table 5: Mann-Whitney U Test of Total Number of Full Time Workers

Indicator	N	Mean Rank	Sum of Ranks
Year 2015	178	155.48	27676.00
Year 2018	178	201.52	35870.00

Test Statistics[a]	
	Full-time workers
Mann-Whitney U	11745.000
Wilcoxon W	27676.000
Z	-4.253
Asymp. Sig. (2-tailed)	.000
a. Grouping Variable: Full Time Worker (2015 / 2018)	

From the Mann-Whitney U test we can see that the mean rank is sign higher for the total number of workers of 2018 compared to that of 2015. From the asymptotic p value, we can assume that there is significant effect on the total number of workers in 2018. Also, effect size, $r = Z/\sqrt{N} = 0.2254$, which has a medium effect according to Cohen's Effect Size Estimates with reference to effect size r value from Table 2.

Therefore, from both parametric and non-parametric test we can deduce that the access to formal finance affects the number of full time workers and the affect is medium where, the access to formal finance helped the MSMEs of this study to increase the number of full time workers from 2015 to 2018.

Finding Effect On The Number Of Full Time Skilled Workers

Most of the MSMEs rely mainly on the skilled workers. So considering the increase in the number of full time workers could be analogous to increase in the number of full time skilled workers. Therefor this study will run the similar test for the number of full time skilled workers between 2015 and end of 2018. To establish the fact, the analysis has to reject the null hypotheses of that, the mean value of the total number of Full Time Skilled Workers did not change from 2015 to 2018.

Independent Samples T-Test

Table 6: Group Statistics- Total Number of Full Time Skilled Workers

Indicator	Frequency	Mean	Std. Dev	Std. Error
Year 2015	178	4.7865	6.67988	.50068
Year 2018	178	6.9045	9.32083	.69863

Table 7: Independent Samples Test- Total Number of Full Time Skilled Workers

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	**Sig.**	**t**	**Df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	**Lower**	**Upper**
Equal Variances Assumed	8.023	.005	-2.464	354	.014	-2.11798	.85951	-3.80836	-.42759
Equal Variance not Assumed			-2.464	320.866	.014	-2.11798	.85951	-3.80896	-.42699

From the independent samples t-test we can see that the Levene's test gives p value of 0.025<0.05, alpha and hence we can reject the null hypotheses of the assumption that variance of the total number of full time skilled workers from 2015 and 2018 are equal, implied we accept the alternate hypotheses which is the variances are not equal. Also from the pooled t-test we find p value of .005 which is lower than 0.05, so we assume that there is significant effect on the number of skilled workers in 2018.

Cohen's d for this is -0.2612042720185035. The negative sign implies that the mean number of skilled workers in 2018 is significantly greater than that of 2015 and since the absolute value lies between 0.02 and 0.05, the effect is medium according to the point estimate of Cohen as referred to Table 2.

Mann-Whitney U Test

Table 8: Mann-Whitney U Test of Total Number of Skilled Full Time Workers

Indicator	N	Mean Rank	Sum of Ranks

Year 2015	178	161.13	28682.00
Year 2018	178	195.87	34864.00

Test Statistics[a]	
	Skilled workers
Mann-Whitney U	12751.000
Wilcoxon W	28682.000
Z	-3.206
Asymp. Sig. (2-tailed)	.001
a. Grouping Variable: Skilled Worker (2015 / 2018)	

From the Mann-Whitney U test we see that the mean rank is higher for fulltime skilled workers of 2018 than that in 2015. From the asymptotic p value is .001, so the test is significant. Also the effect size, $r = Z/\sqrt{N} = $ **0.16991766** which means the effect is **medium** according to according to Cohen's Effect Size Estimates with reference to Table 2.

Here from both, parametric test and the non-parametric test suggest in unison that the access to formal finance helped MSMEs to increase the number of full time skilled workers in those SMEs and the effect of access to formal finance on increasing the number of full time workers is medium

Finding Effect On The Number Of Low Skilled Workers

From observing the MSMEs, it has been found that 56 MSMEs out of the observed 178 MSMEs have low skilled workers. The MSMEs that do not have low skilled worker are mostly traders. The null hypotheses for the independent samples t-test would that, the mean value of the total number of low skilled workers did not change from 2015 to 2018.

Independent Samples T-Test

Table 9: Group Statistics- Total Number of Low Skilled Full Time Workers

Indicator	Frequency	Mean	Std. Dev	Std. Error
Year 2015	178	2.0000	11.60119	.86955
Year 2018	178	3.5843	17.61536	1.32033

Table 10: Independent Samples Test- Total Number of Low Skilled Full Time Workers

	Levene's Test for Equality of Variances		t-test for Equality of Means							
									95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal Variances Assumed	2.482	.116	-1.002	354	.317	-1.58427	1.58094	-4.69349	1.52495
Equal Variance not Assumed			-1.002	306.230	.317	-1.58427	1.58094	-4.69515	1.52661

From the Levene's test we find the p value is 0.116 which is not lower than 0.05 and also from the pooled t test p value is 0.317 which is not lower than 0.05, so we can assume that there is not significant effect on the number low skilled workers in the MSMEs.

Also, The Cohen's d is -0.1062252. Since the Cohen's d is between 0.0 to 0.20, we can say that the mean of low skilled workers increased in 2018 than that of 2015 but the effect is small according to the Cohen's point estimates.

Mann-Whitney U Test

Table 11: Mann-Whitney U Test for Total Number of Fulltime Low Skilled Workers

Indicator	N	Mean Rank	Sum of Ranks
Year 2015	178	172.41	30688.50
Year 2018	178	184.59	32857.50

Test Statistics[a]	
	Low skilled workers
Mann-Whitney U	14757.500

Wilcoxon W	30688.500
Z	-1.278
Asymp. Sig. (2-tailed)	.201
a. Grouping Variable: Low Skilled Worker (2015 / 2018)	

From the Mann-Whitney U test we find that the asymptotic p value is 0.201 which is higher than 0.05. Hence we can assume that the effect on low skilled worker is insignificant.

Unlike effect of access to formal finance on the number full time workers, and full time skilled workers, there has been no significant effect on the number low skilled workers in the MSMEs.

Discussion

From observing the responses of the SMEs and, from summarizing the descriptive statistics of the MSMEs in this study, we found out that due to convenience of getting bank loans for women entrepreneurs prompted the some MSMEs to be initiated by women whereas on paper whereas most of those MSMEs are managed by husband of women while the ownership is still under his wife. Also, lot of MSMEs prompt to apply for loan as a sole proprietorship business for convenience of loan application, whereas if there are multiple partners, they have internal agreement regarding the business with one person acting as the sole proprietor.

Coming to the quantitative analysis, to understand the effect on employment besides analyzing with the total number of full time workers, effect on skilled and low skilled workers has been analyzed. In terms of total number of full time workers, skilled full time workers, and low skilled full time workers, we find significant effect on the number of full time workers and also the number of skilled workers but the effect on the number of low skilled workers is not significant.

I.   Effect of access to formal finance has medium effect on full time workers on MSMEs in Bangladesh. Also, the effect is positive meaning access to formal finance help increase employment.

II. Similarly, access to formal finance has medium effect on Full Time Skilled Workers as well. And that, access to formal finance help MSMEs generate more employment for full time skilled employees.

III. But, the effect of formal finance on full time low skilled employees is not significant. And though the mean of the number of full time low skilled employees increased 2018 than that of 2015, the effect is small.

Practical Implications

The data from this paper reveals several practical applications worthy of future study-

Firstly, the outcome of the study demonstrates how the opportunity of formal financing support can assist to

generate more employment opportunities through MSMEs and therefore has a larger scope to contribute to the economy of Bangladesh. The study only analyzed the local MSMEs that took finance support from the private commercial banks. This study would be valuable to further examine the effects of formal financing from other sources as well.

Secondly, the study indicates the need to introduce friendly policies and guidelines by both commercial banks and other sources of formal financing to support more local MSMEs for employment generation.

Thirdly, the analysis states that the interest rate on SME loans have been decreasing over the years in Bangladesh to the aid of the MSMEs. The continuation of this exercise can play a vital role to ensure sustainable employment generation and economic improvement of the country.

Finally, the study illustrates that the number of full time low skilled employees in not increasing over time in the MSMEs as much as the number of full time skilled employees. Most of these low skilled workers are also identified as short-term or temporary workers. Therefore, to ensure sustainable employment opportunities, the key takeaway would be to focus on training, facilitating and improving the skill levels of these low skilled workers in the local MMSEs. This practice will increase the overall skill levels of the employees of local MMSEs so that formal financing support can result in sustainable employment generation in Bangladesh.

Limitations And Future Research Gaps

Although there are other sources of formal finances, the sample had been selected based on the MSMEs that took loan from commercial banks. The sample may represent the population of people who took finance support from commercial banks but not the population that takes any financing support from other source of formal finance. Also, the majority of the MSMEs in this study, are in trading and wholesale business. And there should be effect on the wholesale business and trading from both covid-19 and emergence of ecommerce in Bangladesh. A staggering 96% of micro, small and medium enterprises (MSMEs) in Bangladesh lost income during the Covid-19 pandemic, according to a recent study. MSMEs in the country reported a median loss in business of 82% during the "national holidays" and customer footfall reduced by an average of 67% ("96% MSMEs in Bangladesh lost income in Covid-19 pandemic", 2021). Only 0.4 per cent of the country's micro, small and medium enterprises (MSMEs) received financing from banks and financial institutions under the government's packages to recover from the Covid-19 pandemic-induced loss in their business (Express, 2020). Therefore, a similar study may provide different results.

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