

Economic Impact of Covid-19 on SMEs in Cumilla using Structural Equation Modelling

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Abstract

The enterprises, which are small and medium-sized (SMEs), are the backbone of the industrial sector of the overall economy in Bangladesh. This sector plays an essential role in spreading the economy of any country. The SMEs sector's most significant role is invaluable to eliminating poverty in any country like Bangladesh. But it is impossible to reduce poverty in the Covid-19 pandemic situation. The main objective of this research is to inquire about the economic impact of Covid-19 on SMEs in Cumilla. It is too early to find the impact of COVID-19 impressions on different aspects of the economy. In Bangladesh, SMEs have been experiencing a brutal impact; as such, the motivation of the study is to increase insight relating to what is experienced by SMEs and how they are handling it. This study used a method of primary data of descriptive analysis acquired by the questionnaire method. Using the structural equation model, we find Covid-19 badly hampered the economy. So those governments need to invest essential effects for mobilisation and efficient reallocation of resources through assistance of Banks and other nonbanks economic instructions. Unemployment decreased economic growth speed, and social insecurity might come to light that prevails in future. Moreover, new technologies need to be used to reduce the harmful impacts. Public awareness programs should be organised.

Keywords Bangladesh Economy · COVID-19 · SMEs · Structural Equation Modeling (SEM)

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1. Introduction

The enterprises, which are small and medium-sized (SMEs), are the backbone of the industrial sector of the overall economy in Bangladesh. This sector plays an essential role in spreading the economy of any country. The most crucial function of the SME sector is that it is inestimable to eliminate poverty in any country such as Bangladesh. But it is impossible to increase economic production in the Covid-19 pandemic situation. The COVID-19 pandemic has had historic ramifications around the whole world. To limit the expansion of the disorder, many countries adopted a lockdown system and social distancing measures. Although elastic in containing the virus, these measures have also precipitated an unprecedented economic problem for the country. We know small enterprise refers to the firm/business which is a private limited company and complies with the following criteria:

Table 1: Structure of Small Enterprise

Sector	Fixed Asset other than Land and Building (Tk.)	Employed Manpower (not above)
Service	50,000-50,00,000	25
Business	50,000-50,00,000	25
Industrial	50,000-1,50,00,000	50

Source: Alauddin and Chowdhury 2015

Medium Enterprise refers to the establishment/firm which is a private limited company and complies with the following criteria:

Table 2: Structure of Medium Enterprise

Sector	Fixed Asset other than Land and Building (Tk.)	Employed Manpower (not above)
Service	50, 00,000-10, 00, 00, 00	50
Business	50,00,000-10,00,00,000	50
Industrial	1,50,00,000-20,00,00,000	150

Source: Alauddin and Chowdhury 2015

These SMEs account for a large portion of production and employment in developing countries (Islam et al., 2020). Many countries have begun relaxing the lockdown to restart economic activities, which is expected to remain mitigated. Bangladesh started easing lockdown measures in June 2019, but the movement of people across the country and various economic activities is expected to

stay confined, as the number of COVID-19 cases has not reduced. Lockdown and social distancing measures have hit SMEs especially difficult. Because of lockdown, all activities are stopped, and people must stay home. They don't go to their working sector, so the production is badly hampered. According to the International Monetary Fund, the real GDP growth of Bangladesh is projected to depress to 2.0% in FY 2019-20, which is driven by reducing readymade garment exports, a decline in private investment growth and a more significant breakdown because of the problem of COVID-19 pandemic (Qamruzzaman 2020). Small and Medium enterprises are exceptionally compatible in the overpopulated countries like Bangladesh because the SME sector can provide enormous scope for employment for people with meagre investment. They are hoped to generate jobs, decrease poverty, and develop the overall national economy (Alauddin and Chowdhury 2015). But in this pandemic, people lost their jobs, so their income levels decreased, and their living standards also decreased. As a result, our economy is greatly hampered.

Decreasing poultry, dairy farm, and fisheries demand has led to a drastic price fall in the respective sectors. On top of that, due to industrial shutdowns, garment workers and urban day labourers lost their valuable jobs. Therefore, many people with no income shifted from cities to villages to lose their good jobs, putting the rural economy at a vulnerable stance. Egg prices dropped by 45%, milk prices felled around 35%, dry fish production decreased by 40%, and vegetable prices reduced significantly. Sizable and real-time support from the Government is needed to forestall the upcoming social and economic emergency in the rural sector (Qamruzzaman 2020). In this study, we will contribute to formulating policy for reducing the Covid-19 pandemic effect on the economy. Controlling this Covid-19 situation increases the speed of economic growth for SMEs. The study will contribute to the existing literature from Cumilla's perspective. We will also examine the worker and employment situation in the Covid-19 pandemic and compare the outcomes with the information with the initial data. The primary study focuses on the economic impact of Covid-19 on SMEs in the Cumilla city area during the Covid-19 pandemic with a social and physical distancing policy.

1.1 Statement of the Problem

COVID-19 pandemic has a demolishing impact on the whole economy of Bangladesh. The current COVID-19 pandemic has influenced businesses across the globe by affecting nearly every business sector, and industry and the SMEs have been highly hit due to limited resources, unskilled and limited expertise. It badly hampered the economy of Bangladesh. This study is an effort to analyse the impact and consequences of the Economic Impact of Covid-19 on SMEs in Cumilla using the Structural Equation Model.

1.2 Significance of the Study

Covid-19 hurts the economy, society and other sectors of the country. Our economy is becoming hampered day by day. It is a need for time to reduce the economic impact. The present study needs to understand how and identify its effects on the economy. We need to control it as much as possible. If we can control it, it would benefit the whole country. Public awareness should be required in this case; otherwise, it will hamper the entire economy by increasing unemployment and decreasing income and living standards.

1.3 Objective of the study

The study's main objective is to inquire about the economic impact of Covid-19 on SMEs in Cumilla.

Specific objectives are:

- I. To find out the social impact of Covid-19 on SMEs in Cumilla
- II. To determine the current scenario of the SME sector in Bangladesh in the Covid-19 pandemic situation
- III. To find out the critical problems of the SME sector in the Covid-19 pandemic situation in Bangladesh and recommend various suggestions for minimising this pandemic situation.

2. Literature Review

Le *et al.* (2020) have examined that SMEs were experiencing disturbance because of a lack of interest payment, stationary inventory, wages of workers, and rental charges during this pandemic. Robinson and Kengatharan (2020) have studied the potential effects of COVID-19 on Sri Lankan SMEs. SMEs are exceedingly suffering because of the scarcity of the material, the reduction in both global and local demand for their commodities and services, difficulties in loan repayment and interest, the objection of orders, dire shortage of cash, and deficiency of savings (even problems with payroll bills and utility bills). The study also examined that the COVID-19 pandemic is emotionally challenging for SME employees and owners, so the government needs to take policies.

Nyanga and Zirima (2020) have studied Zimbabwe to Covid-19, applying qualitative techniques to show that SMEs were negatively influenced by the lockdown and hampered their operations and had to lay off some of their employees. In most cases, production was hampered. Lu *et al.* (2020) have examined that in China, SMEs could not resume their operation due to a lack of an inadequate supply of raw materials, almost "zero" market demand, and employees' inability to come to work. It also shows a liquidity crisis. Garba (2020) has examined the effect of COVID 19 on SMEs' performance in Makurdi Metropolis, Benue State, Nigeria, applying convenience sampling techniques with the inferential analytical tool and

identified that the pandemic had created a challenging business environment like zero level sales, liquidity crisis, and insignificant market demand.

Ahmed (2004) has studied the lack of adequate national policy and suitable supportive system and the lack of reliability of the authority with quality certification. SMEs of Bangladesh have failed to ensure the good quality of products and services in the domestic and global markets. Lack of investment funds is one of the most eminent alleges of almost the entire SME sector in Bangladesh. Sulaiman (2005) examined 50.53% of SMEs without access to a formal financial source. Only 35.79 % of SMEs have no limitation, and 13.68% face limitation entry to formal credit. Bank credit provides financing of usually less than 20 % of their total outlay. Most SMEs (59.6 per cent) find funding from banks for their working capital, but everyone doesn't get a loan.

Hasan and Islam (2008) have examined that typically banks unexpressed their interest in SME financing due to lower operational cost, less return and high-risk rate of return associated with the SME financing. The primary reason for the higher risk is that the small and medium entrepreneurs are unlikely to comply with the collateral requirements as they typically do not have immovable properties. Shahbaz *et al.* (2020) have examined that SMEs face many difficulties operating their business, revenues, and finances due to the toCOVID-19 pandemic. Carruthers (2020) has identified that the COVID-19 pandemic has significantly impacted small companies due to a lack of financial resources and scale of business, which would be concerned for a troublesome issue requiring guidelines for the business community and entrepreneurs.

Beraha and Đurićin (2020) have studied gauging COVID-19 impact on SMEs in Serbia, and data was collected through an online survey during March and April. They find that SMEs undergo remarkable experiences like switching businesses, inability to pay the constant responsibility, laying off employees, and facing limitations when accessing resources.

Ratnasingam *et al.* (2020) have elaborated that they revealed two key issues: financial management and the supply chain breakdown that makes the major scratch on business activities. They also examined that most SMEs were operating their business under capacity, a sizeable economic strain on their viability. Elshenawi and Wang (2020) have elaborated that SMEs are concerned that the powerless and vulnerable members would drive away from the business while the more skilful and forward-looking SMEs need to return more robust quickly. Chowdhury (2020) has stated that many people were involved in small businesses. Unemployment will cause a causal income shock, diminishing consumption and rising out of unemployment, decreasing the well-being of the individual and decreasing the economy's total demand.

Galanakis (2020) has stated that the current coronaviruses that create a pandemic have shaken the entire business world internationally, and also, there is no exception in the food industry.

Duchek (2018) and Miao *et al.* (2017) have examined that entrepreneurs who have strong self-belief and resilience can significantly raise performance expectations, especially for business ventures. Huggins and Thompson (2015) discussed that entrepreneurs' psychological resourcefulness would be necessary when facing various economic challenging activities.

Blau (1964) has studied that to inquire about the role of entrepreneurial working efficiency, entrepreneurial resilience towards handling SMEs economic performance and also strives to underline if innovative work behaviour of efficient entrepreneurs can help moderate these linear relationships to favour make the most of the psychological resourcefulness of entrepreneurs to handle their business and also to improve financial performance.

3. Methods of the Study

3.1 Study Area and Data Sources

Cumilla district is the division of Chittagong in Bangladesh. It is located between 23⁰⁰2' and 24⁰⁴7' north latitudes and 92⁰³2' and 91⁰²2' east latitudes. It is surrounded by Brahmanbaria and Narayanganj districts on the north, Noakhali and Feni districts in the south, Tripura state in India on the east, and Munshiganj and Chandpur districts on the west. There are about 50 bricks of the field near human habitation in Cumilla. The study will use primary data to conduct the research. A questionnaire survey collected preliminary data on affected people and entrepreneurship. From the owner and workers of the SME sector, we have collected 220 respondents, and the survey was conducted in and around the SMEs sector. Collected data will be analysed by AMOS Statistical Tools Package software and plotted using Microsoft Office.

The study will use the primary data on the economic impact on workers and entrepreneurship, including living standards, consumable goods, income level, and unemployment rate explore the relationship among the variables.

3.2 Model Specifications

To conduct the study, we will use an appropriate econometric model, such as Structural Equation Model (SEM), to represent its tabulated form and graphs.

$$E_{SME} = \alpha_0 + \alpha_1 EI + \alpha_2 CG + \alpha_3 AP + \alpha_4 ES + \alpha_5 LI + \alpha_6 RMG + \alpha_7 HS$$

Where, E_{SME} = Economic Impact of Covid-19 on SMEs, EI = Educational institution, CG = Consumption goods, AP = Agro processing and agro-based sector, ES = The electrical and electronics sector, LI = Leather industry, RMG = RMG sector, HS = handicraft sector.

$$EI_w = \alpha_0 + \alpha_1 IL + \alpha_2 LS + \alpha_2 CG$$

Where, EI_W = Economic impact on workers, IL=income level, LS= living standard, CG= consumable goods.

$$EI_O = \beta_0 + \beta_1 IL + \beta_2 CG + \beta_3 EW + \beta_4 UR$$

Where, Economic impact on the owner of SME, IL=income level, CG= consumable goods, EW = Expel workers, UR = Unemployment rate.

3.3 Explanations of the Variables

In the first equation, the economic impact of Covid-19 on SMEs is estimated by an educational institution, consumption goods, agro-processing and agro-based sector, the electrical and electronics sector, leather industry, RMG sector, and handicraft sector. The second equation estimates the economic impact on workers by income level, living standard and consumable goods. There are positive and negative impacts on workers. The third equation estimates the economic impact on SME owners by income level, consumable goods, expelled workers, and unemployment rate. There are positive and negative impacts of entrepreneurship.

3.4 Sample Size

For sample size determination, we will use the Fischer's general formula,

$$n = \frac{Z^2 \times P(1-P)}{M^2}$$

Where n=sample size for an unknown population, Z=Z-score, p=population proportion (assumed to be 50%= 0.50), M=Margin of error and Z-score is based on a confidential level where confidence level indicates the probability that the value of a parameter falls within a specific range of values. For simplicity, we will use 220 samples in this content. Collected data are analysed by AMOS Statistical Tools Package software and plotted using Microsoft Office.

4. Current Scenario of SME Sector in Bangladesh

About 6.0 million SMEs are actively performing in Bangladesh, and of the total GDP, they contribute 25%, making employment opportunities for about 31 million people and providing 75% of domestic income. The growth of GDP edged down to a 30-year-low of 3.51% in fiscal 2019-20 due to the Covid-19 pandemic situation, according to the Bangladesh Bureau of Statistics (BBS) in its final Thursday report. The manufacturing sector logged more than 14% growth in fiscal 2018-19 but fell to 1.8% in FY20. The development turned around that is 5.77% in the previous fiscal year.

Small enterprises have enhanced their contribution over the past decade to the total output of the GDP (Gross Domestic product). Bangladesh's economy examines the significant contribution from SMEs industry that contributes 25% cumulated growth in GDP, 15% in creating employment, 7.8% acceleration in

export growth, and 31% advancement in entrepreneurship improvement according to Bangladesh Bank (2017) report. Most of the business as 90% of business units belong to small enterprises with a revised definition of SMEs and about 80% of present employees working in this business. 75% of GDP compound with SMEs output and export-oriented products come from the SME sector of Bangladesh, which is 65% of the total (according to the Bangladesh Bureau of Statistics, 2017). The most significant growth rate was addressed in 2013, and the lowest growth rate was in 2007and. The growth tendency confirms that the SME sector is developing in future, and it will occur eventually.

The COVID-19 pandemic has hit hard Bangladesh's economy. The SME sector- considered the lifeline of the country's economy (it employs around 7.8 million people directly and livelihood to over 31.2 million overall)- is prospective to play an essential role in ensuring how soon the overall economy could make a turnaround to come out of the Covid-19 devour. The findings of the rapid survey examined by the Business Initiative Leading Development (BUILD) and the Policy Exchange of Bangladesh identified that 69 per cent of respondents reported that they were unable to pay wages to staff in 2020 due to the Coronavirus pandemic while 61 per cent of respondents think The situation has not improved and their revenue would fall in 2021. Because of the Covid-19 pandemic, the industry sector decreased in 2020 to 29.65, which is 28.79 in 2019 (World Bank-2021). From 2016-to 2019 growth rate increased, but due to the Covid-19 pandemic situation, in 2020, the GDP decreased is 3.51% & 2021, it was 4.5%. We think if we control the Covid-19 situation, GDP will increase in the future (IMF 2021).

5. Empirical Results and Discussion

We analyse our data based on respondents' information. We have collected data through the questionnaire method. We perform our analysis based on Microsoft Excel rules and AMOS SPSS and do a descriptive analysis from this collected data. We conduct our analysis on our questionnaire. We collect data from 220 respondents by questionnaire method.

Table 3:Age Structure of the Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-30	60	27.3	27.3
	31-40	100	45.5	72.7
	More	60	27.3	100.0
	Total	220	100.0	100.0

Source: Field Survey

The people who are 21-30 aged respondents are 60, which is 27.3%, 31-40 aged respondents are 100, which is 45.5%, and more than 40 aged are 60, which is 27.3%.

Table 4: Gender of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	26	11.8	11.8	11.8
	Male	194	88.2	88.2	100.0
	Total	220	100.0	100.0	

Source: Field Survey

Male respondents are 194, 88.2%, and female respondents are only 26, 11.8%.

Table 5: Types of Respondents (Local People, Entrepreneurs and Affected People)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	local people	2	.9	.9	.9
	affected people	92	41.8	41.8	42.7
	Entrepreneur	126	57.3	57.3	100.0
	Total	220	100.0	100.0	

Source: Field Survey

One hundred twenty-six respondents are entrepreneurs, 57.3%, 92 respondents are affected people, 41.8%, and the local people are only 2, which is 0.9%.

Table 6: Qualification of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below SSC	39	17.7	17.7	17.7
	SSC	64	29.1	29.1	46.8
	HSC	73	33.2	33.2	80.0
	Honours	41	18.6	18.6	98.6
	Masters	3	1.4	1.4	100.0
	Total	220	100.0	100.0	

Thirty-nine respondents are below SSC, which is 17.7%, six 4respondent are SSC level which is 29.1%, 73 respondents are HSC level which is 33.2%, 41

respondents are Honours level which is 18.6%, and three respondents are Masters level which is 1.4%.

Table 7: Types of Enterprise

		Frequency	Percent	Valid Percent	Cumulative Percent
	Small	149	67.7	67.7	67.7
Valid	Medium	71	32.3	32.3	100.0
	Total	220	100.0	100.0	

Source: Field Survey

There are two types of enterprises, 149 are small, 67.7% and 71 are medium which is 32.3%.

Table 8: How many employees have before the pandemic?

	Frequency	Percent	Valid Percent	Cumulative Percent
Small	0-20	104	47.3	69.8
	20-40	34	15.5	22.8
	40-60	11	5.0	7.4
	Total	149	67.7	100.0
Medium	0-50	38	17.3	53.5
	50-100	19	8.6	26.8
	100-150	14	6.4	19.7
	Total	71	32.3	100.0

Source: Field Survey

In the small enterprise, they hire 0-20 employees, 104 respondents responded this, which is 47.3% 20-40 employees, 34 respondents answered this, which is 15.5%, 40-60 employees, 11 respondents responded this, which is 5%. In the medium, they hire 0-50, 50-100 and 100-150 employees, with 38, 19 and 15 respondents responding, respectively.

Table 9: Expel Employee Due to Pandemic

		Frequency	Percent	Valid Percent	Cumulative Percent
Small	5-10	109	49.5	73.2	73.2
	10-15	35	15.9	23.5	96.6
	15-20	5	2.3	3.4	100.0
	Total	149	67.7	100.0	
Medium	10-20	52	23.6	73.2	73.2
	20-30	16	7.3	22.5	95.8
	30-40	3	1.4	4.2	100
	Total	71	32.3	100.0	

Source: Field Survey

In the small enterprise, they expel 5-10 employees, 109 respondents responded, which is 49.5%, 10-15 employees, 35 respondents responded this, 15.9%, 15-20 employees, five respondents responded this, which is 2.3%. In the Medium, they expel 10-20, 20-30, and 30-40 employees, with 52, 16 and 3 respondents' responses.

Table 10: Investment Scenario

		Frequency	Percent	Valid Percent	Cumulative Percent
Small	50 thousand-50 lakh	102	46.4	68.5	68.5
	50 lakh-1 crore	45	20.5	30.2	98.7
	1 crore-1.5 crore	2	.9	1.3	100.0
	Total	149	67.7	100.0	
Medium	50 lakh-1 crore	34	15.5	47.9	47.9
	1 crore-10 crore	29	13.2	40.8	88.7
	10 crore-20 crore	8	3.6	11.3	100.0
	Total	71	32.3	100.0	

Source: Field Survey

In the small enterprise they invest, 50 thousand-50 lakh were 102 respondent responses which are 46.4%, 50 lakh-1 crore were, 45 respondent response this, which is 20.5%, 1 crore-1.5 crore where two respondent response this, which is .9%. In the Medium, 34 respondents invest 50 lakh- 1 crore.

Table 11: Paid Bank Loan Before and After Pandemic

Before Pandemic		Frequency	Percent	Valid Percent	Cumulative Percent
Small	Yes	119	54.1	79.9	79.9
	No	30	13.6	20.1	100.0
	Total	149	67.7	100.0	
Medium	Yes	70	31.8	98.6	98.6
	No	1	.5	1.4	100.0
	Total	71	32.3	100.0	
After Pandemic		Frequency	Percent	Valid Percent	Cumulative Percent
Small	Yes	46	20.9	30.9	30.9
	No	103	46.8	69.1	100.0
	Total	149	67.7	100.0	
Medium	Yes	5	2.3	7.0	7.0
	No	66	30.0	93.0	100.0
	Total	71	32.3	100.0	

Source: Field Survey

In the small enterprise, 119 respondents responded that they paid their loans before the pandemic, 54.1%, and 30 respondents did not pay their loans before the pandemic. Still, after the pandemic, 46 respondents paid loans; others did not. In the medium, 70 respondents responses that they spent their loan before the pandemic, which is 31.8% and one respondent did not pay, and after the pandemic, only five respondents paid the loan.

Table 12: Various Components related to SME

		Frequency	Per cent	Valid Per- cent	Cumulative Percent
Economic position	Decreasing	184	83.6	83.6	100.0
GDP level hampered	Yes	207	94.1	94.1	94.1
SME Worker	Yes	191	86.8	86.8	86.8
Express opinion	Negative	206	93.6	93.6	100.0

Source: Field Survey

Most of the respondents, about 184 respondents, which is 94.1%, said that economic position is decreasing, about 201 respondents which is 94.1%, said that GDP level is hampered, 191 respondents are SME workers, and 206 respondents are 93.6% expressed a negative opinion.

Table 13: Hamper Economic Position

	Frequency	Per cent	Valid Percent	Cumulative Percent
Yes	5	2.3	2.3	2.3
1.14	2	.9	.9	3.2
1.29	5	2.3	2.3	5.5
1.43	16	7.3	7.3	12.7
1.57	17	7.7	7.7	20.5
1.71	31	14.1	14.1	34.5
1.86	25	11.4	11.4	45.9
No	35	15.9	15.9	61.8
2.14	25	11.4	11.4	73.2
2.29	12	5.5	5.5	78.6
2.43	8	3.6	3.6	82.3
Valid 2.57	8	3.6	3.6	85.9
2.71	2	.9	.9	86.8
2.86	2	.9	.9	87.7
3.00	1	.5	.5	88.2
3.14	4	1.8	1.8	90.0
3.29	4	1.8	1.8	91.8
3.43	3	1.4	1.4	93.2
3.57	1	.5	.5	93.6
3.71	1	.5	.5	94.1
3.86	1	.5	.5	94.5
4.00	12	5.5	5.5	100.0
Total	220	100.0	100.0	

Source: Field Survey

Now combining seven segments (EI₁, EI₂, EI₃, EI₄, EI₅, EI₆, and EI₇), we conclude the respondents who examined that hampered economic position was five, which is 2.3% fully agreed. At point 2.00, where seven responses are entirely disagreeing, 35 respondents identified 15.9%. At point 3, 1 replied agreeing, two partially agreed, one disagreed, two partially disagreed, and one is in the not at all level, and one respondent identified this.5%; At point 4, where one response at partially agree, four partially disagree, and one is in the not at all level, 12 respondents identified this, which is 3.5%.

Table 14: Employee Find Impact

	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Yes	15	6.8	6.8	6.8
	1.33	27	12.3	12.3	19.1
	1.67	58	26.4	26.4	45.5
	No	54	24.5	24.5	70.0
	2.33	19	8.6	8.6	78.6
	2.67	10	4.5	4.5	83.2
	3.00	12	5.5	5.5	88.6
	3.33	7	3.2	3.2	91.8
	3.67	2	.9	.9	92.7
	4.00	9	4.1	4.1	96.8
	4.33	1	.5	.5	97.3
	4.67	1	.5	.5	97.7
	5.00	5	2.3	2.3	100.0
	Total	220	100.0	100.0	

Source: Field Survey

Now combining three-segment (AW_1, AW_2, AW_3), we conclude the respondent who noticed the employee found an impact where 15 respondents, 6.8%, fully agree. At point 2.00, where three partially agree, 54 respondents identified this, which is 24.5%; At point 3, where two responses partially agree, and one is in the not at all level, 12 respondents identified this, which is 5.5%; At point 4 where all are somewhat disagreeing, nine respondents identified this which is 4.1%; At point 5 where all are not at all level 5 respondents identified this which is 2.3%.

Now combining four-segment (AE_1, AE_2, AE_3, AE_4), we conclude the respondent who examined that Entrepreneur finds impact where two respondents, which is .9% fully agree, At point 2.00 where four partially agrees, 30 respondents identified this which is 13.6%; At point 3.00 were two responses at partially agree and one disagrees, and one is in the not at all level, nine respondents identified this which is 4.1%; At point 4.00 where all responses are partially disagreeing, eight respondents identified this which is 3.6%; At point 5.00 were four replies at not at all level, six respondents identified this which is 2%.

Table 15: *Entrepreneurs find impact*

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	2	.9	.9	.9
1.25	6	2.7	2.7	3.6
1.50	19	8.6	8.6	12.3
1.75	33	15.0	15.0	27.3
No	30	13.6	13.6	40.9
2.25	26	11.8	11.8	52.7
2.50	24	10.9	10.9	63.6
2.75	15	6.8	6.8	70.5
Valid 3.00	9	4.1	4.1	74.5
3.25	11	5.0	5.0	79.5
3.50	14	6.4	6.4	85.9
3.75	4	1.8	1.8	87.7
4.00	8	3.6	3.6	91.4
4.25	8	3.6	3.6	95.0
4.50	2	.9	.9	95.9
4.75	3	1.4	1.4	97.3
5.00	6	2.7	2.7	100.0
Total	220	100.0	100.0	

Source: Field Survey

Table 16: *Reliability Statistics for Components*

Components	No. of Items	Cronbach's Alpha	Decision
Hamper economic position	7	0.815	Desirable.
Employee find impact	3	0.709	Desirable.
Entrepreneur find impact	4	0.666	Acceptable

Source: Authors Calculation

In the first case, the data will be desirable when the alpha is seven or more. Here alpha is .815, so it is desirable. The data will be desirable in the second case when the alpha is seven or more. Here alpha is .709, so it is desirable. In the third case, the data will be acceptable when the alpha is 5 or 6. Here alpha is .666, so it is acceptable.

Structural Equation Model

Figure 1: Model of the economic impact of Covid-19 on SMEs

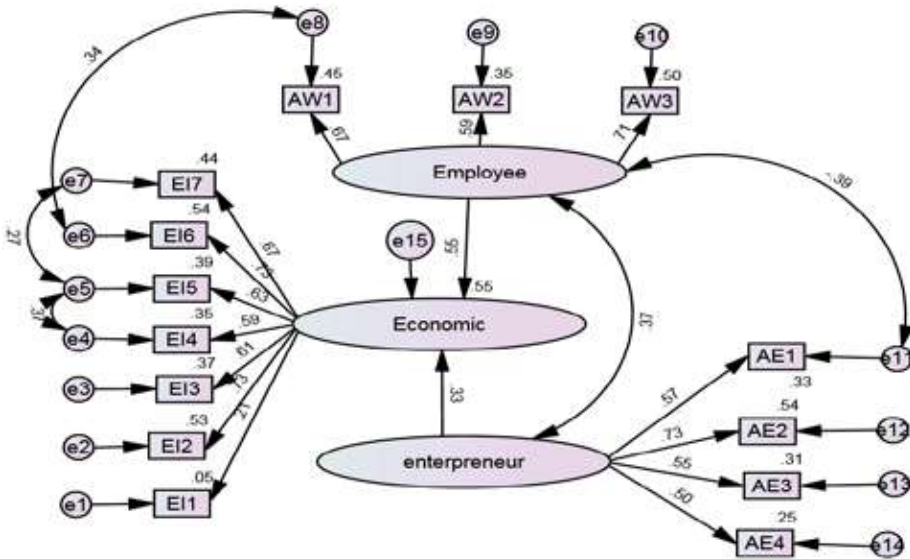


Table 17: Fit Indices for Structural Equation Model

Fit indices	Recommended value	Value Indices	Conclusion
Chi-square(CMIN)		107.903	
Df		70	
Chi square/degrees of freedom	< 3.00	1.541	Fit
GFI	> 0.90	.936	Fit
AGFI	> 0.90	.904	Fit
RMSR	≤ 0.10	.060	Fit
NFI	> 0.90	.888	Moderate
IFI	> 0.90	.957	Fit
CFI	> 0.90	.956	Fit
PNFI	≥ 0.50	.683	Fit
PGFI	≥ 0.50	.624	Fit
RMSEA	< 0.05	.050	Fit
TLI	> 0.90	.943	Fit

Source: Authors Calculation

For Absolute Model fit, the probability value is .002, which is acceptable, RMSEA is the .050, less than .08, and GFI is .936, more than .9, so we can say that the model is well fitted. For Incremental fit, AGFI is .904, CFI is .956, NFI is .888, and TLI is 943. Only NFI is close to .9, and all of these are more than

.9.so the model is good. For Parsimonious Model fit, Chi-Square/ df Minimum discrepancy is 1.541, which is less than 5.0.so it also fits the model. All of the values in the table are acceptable. Many authors also find the well-fitted model as all of these fulfil the condition as SMEs are significant contributors to economic growth. They are often the most vulnerable when they face various public crises. According to Runyan (2006), SMEs are most severely impacted in crises because of their low vigilance levels; susceptibility is higher, reliance on government and local agencies is higher, and the greater emotional and economic impact on the entrepreneurs. Numerous surveys have been conducted on the impacts and prospects of SMEs in Bangladesh. All of these surveys examined that there were almost 6 million micro, small and medium enterprises (MSMEs) which included enterprises with “more than 100 workers” employing a total of 31 million people, which is equivalent to 40% of the total population of the country of age 15 years and more (ICG and MIDAS 2003). The survey also stated that the industrial structure of SMEs consisted of elementary wholesale and retail trade & mending, that is 40%, agricultural goods production and sale, that is 22%, and service sector and manufacturing, only 15 per cent and 14 per cent cent, respectively.

Table 18: Results of Hypothesis Testing

Hypothesis	Path	Coefficient	SE	C.R	P value	Decision
H1	Economic<--Employee	0.551	.029	2.652	.008	Accepted
H2	Economic<--- entrepreneur	0.333	.021	2.312	.021	Accepted
H3	Employee<-->Entrepreneur	0.230	0.072	3.181	0.001	Accepted

Source: Authors Calculation

Here, Economic<--Employee, where the p-value is .008, significant. Economic<---entrepreneur, where the p-value is 0.021 which is significant, Employee<-->Entrepreneur, where the p-value is .002, which is substantial. From the table, we see the p-value is significant because all of these are less than 0.05, which many authors in the field have found. They also found positive results, and most importantly, extant literature suggests that entrepreneurial resistance is better for SMEs in this pandemic (Fatoki 2018). Connor and Davidson (2003) were employed to identify entrepreneurial resilience in the Covid-19 Pandemic situation. Innovative work behaviour has mainly been significant for SMEs (Omri 2015). The record also suggests that creative work behaviour can result in promising prospects for business in a pandemic situation. Structural equation modelling using Smart PLS 2.0 (Ringle, Wende and Will 2005) was used in the study, and they followed a two-stage approach according to the recommendations of (Hair et al.2017).

6. Conclusions and Recommendation

Our study attempts to assess the conditions of SMEs in Bangladesh in the context of the ongoing Covid-19 pandemic. This study aims to find out the most critical factors responsible for the decline of the living standard, income, and employment; it will be effective for future policymaking about the concerned economy and all other sectors of the country. We analyse our collected data by using SEM with AMOS, SPSS Statistics-20. There are two types of enterprises, 149 are small, and 71 are medium out of 220. In the small enterprise, 46.8% do not pay their loans after a pandemic, and 30% of people cannot repay their loans after the pandemic. After the pandemic, the economic position was greatly hampered. The covid-19 pandemic greatly affected the worker and the SMEs ownership. We construct a model that shows that entrepreneurs and workers are badly hampered because of the Covid-19 pandemic. The economic position is decreasing by about 83.6%, 94.1% said that GDP level is significantly hindered, 93.6% express negative opinion. The financial sector hampers the educational industry, increases price level, decreases the production of the group processing sector, and hampers the electrical and leather industry and RMG and handicraft sector. Workers are hampered by reduced income levels, decreased living standards, and consumable goods in the SME sector. This pandemic also hindered the entrepreneur. We construct an SEM model that is well fitted. The entire Cronbach's alpha is greater than .6, which is acceptable. From the above model and table, we find that all values are accepted in the fit indices where most respondents said there is a negative impact. We find that the p-value is significant in the hypothesis testing, and all other values fit the model. The economic position is also hindered when workers or SME owners are hampered.

To recover our economic position, we need to take various policies that are explained below:

Use of modern technology: Indigenous technology is a crucial characteristic of most SMEs, and they are also involved in developing their existing production techniques and processes. Enterprises are not competitive if there is less use of modern technology and innovation does not occur in an internal sector. By using modern technology, we can reduce this impact.

Setting Help Desks in Banks and Business: To spread the outreach of SME development, especially in respect of women entrepreneurs and need to make a help desk with modern computers and better internet opportunities that must be set up in every branch of a bank. If they are complete skilfully about internet facilities, people efficiently operate their business by staying home.

Development of SME Infrastructure: Currently, the most critical constraint that obstructs the growth of SMEs is due to lack of infrastructure facilities, face limitations when access to good market opportunities, technology, experience, and complete information and communication about business. Providing applicable infrastructure for SME improvement should be very helpful in overcoming this problem.

Increasing training Facilities for SME workers and Entrepreneurs about online business: Bangladeshi workers are experts at learning and copying production skills. Various training facilities for SME workers and improvement of entrepreneurial knowledge are not sufficient in our country. Various programs must establish training institutes regarding entrepreneurship enhancement and help them overcome their losses because of the Covid-19 situation.

Increasing the Role of NGO: Various NGOs may take essential steps to ensure continuous economic support to the expected SMEs in Bangladesh. The government needs to carry out multiple policies to cheer women's entrepreneurship.

A suitable implementation of SME policy: The government needs to reformulate the policy and rules of SMEs to accept SMEs as essential players in growth acceleration and decrease poverty. The government takes many techniques and provides various opportunities and incentives for the improvement and development of SMEs to end this problem.

Increasing online business facilities: People can buy any goods without outgoing at home by increasing online business facilities. They maintain social distance and help control the pandemic situation by doing this. They can earn more revenue after doing this.

The action of the government and deserving strategies need to be taken to promote economic growth in the country. The SMEs must construct potential financial control and management skills for their progress and survival. However, the government needs to develop better tricks and rules to improve SMEs' growth in this crisis.

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