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Small and Medium Enterprises (SMEs) Financing Through One Semi-Formal Sector Bank and Five Formal Sector Banks to Create Entrepreneurs: An Empirical Study

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Abstract
Small and medium enterprises are a pivotal key to the socio-political-economic development of developing countries like Bangladesh. Today SMEs contribute to lump sum of Bangladeshi exports contributing to higher national income. SMEs have also reduced poverties through creating job opportunities in the country. Thus, it is crucial to study the financing and investment on the SMEs through both the semi-informal sector such as Grameen Bank a non-scheduled bank and formal sector which includes a number of scheduled commercial banks offering SME banking facilities. Research question of the study is whether Grameen Bank and commercial banks through financing SME sector can help to attain financial deepening to create entrepreneurs which in turn reduce poverty in Bangladesh? The study has chosen Grameen Bank and five commercial banks and used quantitative analysis to see their impacts on the socio-political-economic development in Bangladesh by creating entrepreneurs through SME financing. As such empirical analyses through econometric methods are being used. Results were found mostly to be significant, thus both the formal and semi-formal sectors are successful in developing the nation through entrepreneurship creation by SME financing. There are wider scopes to develop SME sector in Bangladesh through appropriate financing to create entrepreneurs thus reducing poverty as suggested by the authors.

Key Words: *SME Financing, Poverty Reduction, Financial Sector, Development Economics, Political Economics, Entrepreneurship, Grameen Bank, Commercial Bank, Women Empowerment, Econometric Methods, Economic Growth.*

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1. INTRODUCTION

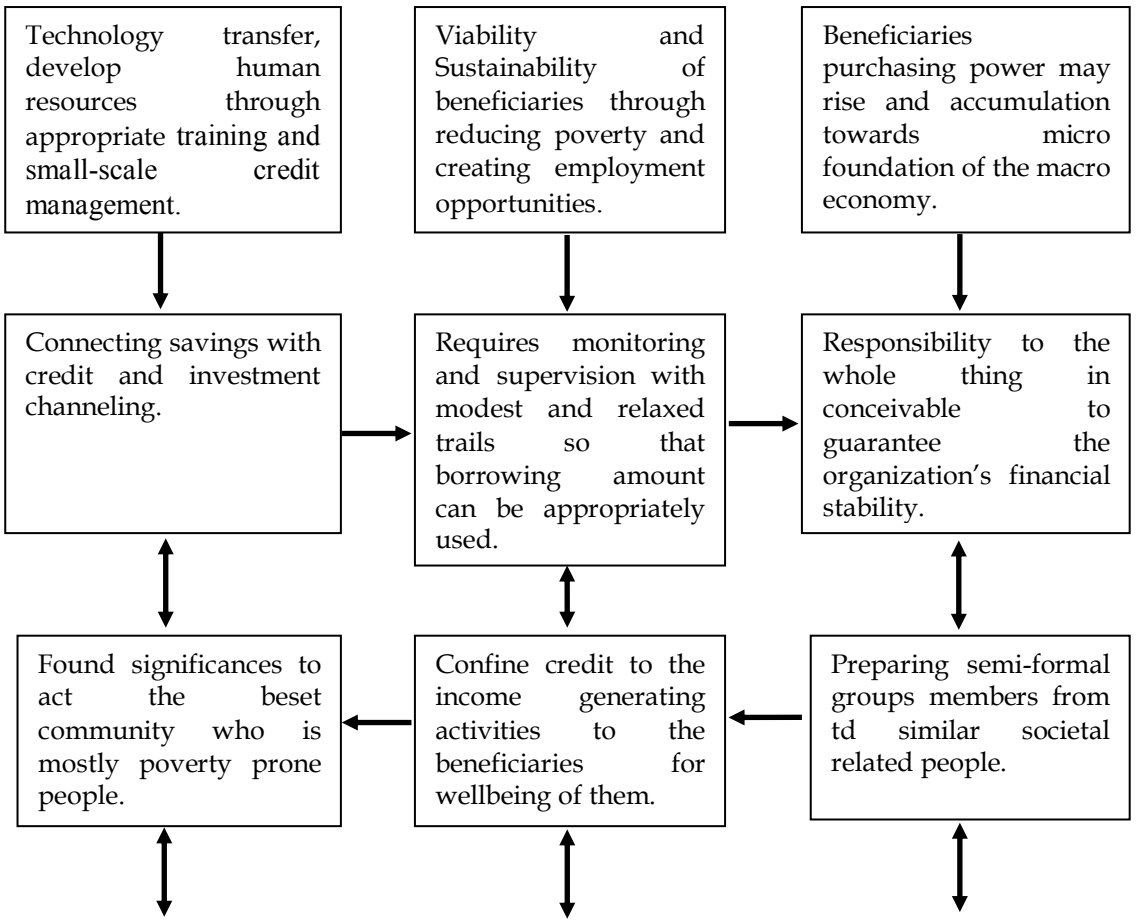
Financial sectors' development is a wide varying and expanding procedure through which financial organizations can deliver diversities of facilities and tools to the country that aimed at well-organized conversation of belongings besides existing, innovative and creative facilities. Todaro, & Smith (2012) described that development economics considers adding to existence of the well-organized distribution of current unusual fruitful resources and through their continuous advancement over the time period, its necessity arrangement by the economic, social, political, and institutional actors, together public and private sector, essential to carry out around quick and significant enhancements in stages of living for the peoples of multifarious countries. They also argued that political economy is the effort of combining economic investigation with practical politics so that opinion of economic movement can be cutting-edge to the condition at an inflexible situation. This helps to reduce poverty, lowering income inequalities and also provides assistance to attain social justice which may be earned through growth with equity. As a resultant factor macro-economic scenario of an emerging economy is meticulously related to the financial stability of a country for which financial development can lead to transformation through political economy and economic development. Not only financial inclusion but also it relates to economic development of a country like Bangladesh. As a subsequent influence, financial sectors' development led to economic development as strong and proper utilization of political economy and to lead to macroeconomic stability of a country like Bangladesh. Macrotrends (2022) showed that prior to the onset of COVID-19 pandemic, Bangladesh reached the zenith of Economic Growth in 2019 with an economic Growth rate of 8.15%. Chowdhury, & Salman (2018) depicted that the service and manufacturing sub-sectors in SMEs in Bangladesh were taking partial entree to disburse loans through diverse sorts of financial institutions, which sustenance them.

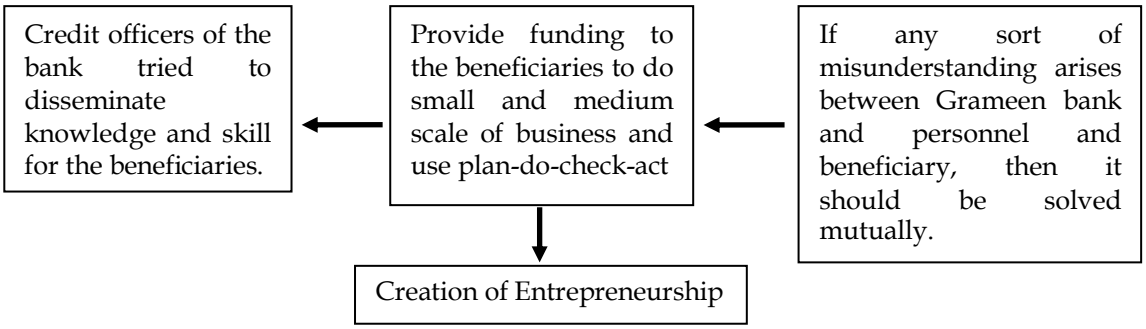
In Bangladesh, banking sector as a whole has expanded its business horizon to diversified areas of banking and catering demand of clients. Given the importance of the financing SME sector, the study is focusing heavily to build entrepreneurs through reduction of poverty, women empowerment and financial inclusion. As a result of financial deepening has been occurring. Khalily et al. (2019) argued that the government of Bangladesh identifies the character of small and medium enterprises (SMEs) in economic growth, restructuring of income and job creation subsequent methods similar the part of expansion method, bunch of expansion method, and females' entrepreneurship expansion method and more than 98 percent of the enterprises in Bangladesh are SMEs. Khuda(2019) depicted that Bangladesh takes extraordinary development in falling poverty, maintained by continued economic growth and poverty line of $1.90 per person per day, poverty declined from 44.2 percent in 1991 to 13.8 percent in 2016/17. He opined that life expectancy, literacy rates and per capita food production improved meaningfully and advancement was supported by 6 percent plus growth over the decade and reaching to 7.3 percent in 2016/2017and as such profligate growth allowed Bangladesh to reach the lower middle-income country rank in 2015.

According to Bangladesh Bank, which is central Bank of Bangladesh (viewed on 10th October, 2022) Grameen Bank of Bangladesh is a semi formal bank like other non-Government organizations. Moreover, out of 5 non-scheduled banks in Bangladesh, Grameen bank is one of them for which the study chooses Grameen Bank for the study. Bangladesh Bank (viewed on 1st

October 2022) also noted that in the country presently total 61 scheduled banks are prevailing out of which the study took 5 commercial banks as a sample size. Both type of scheduled and non-scheduled banks was considered for their activities and deliveries in the SME sectors of the country to attain economic development with the framework of political economy of the country. Financial deepening denotes towards augmented delivery of financial facilities by a broader optimal facility pitched towards entirely diversified areas of the culture. Although Grameen Bank was started informally in the village of Jobra, Bangladesh, in 1976 by Dr. Yunus but in 1983 it was established in the semi-formal sector in the year 1983. Grameen bank is a widespread and foremost prototypical of the country's microfinance system. Grameen bank arrangements take be situated increasing profligate besides talented to spread lowest deprived section of the country. As such the study shows Grameen Bank on Poverty reduction and Financial Stability: A conceptual framework has been shown in Chart: 1 below:

Chart 1: A Conceptual Framework of Grameen Bank

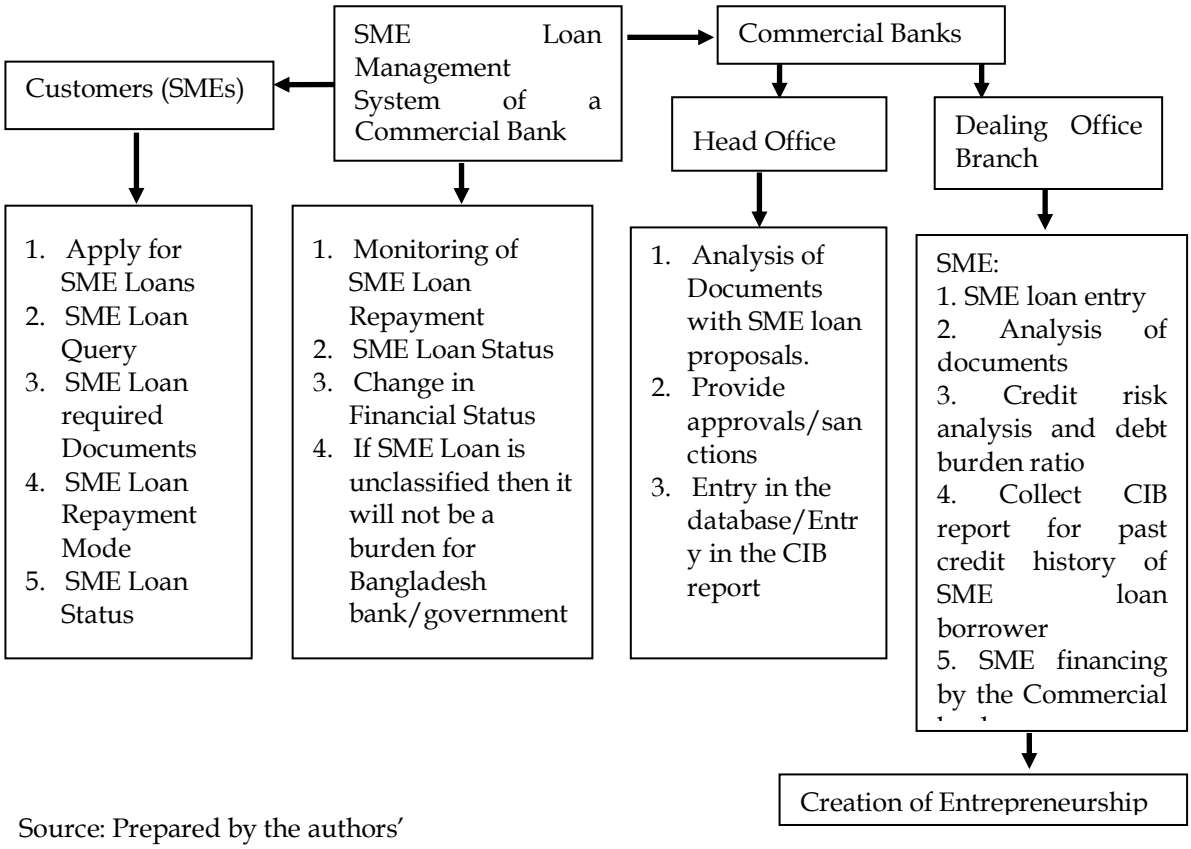




Source: Prepared by the authors based on grameenbank.org

Below the study was prepared a conceptual framework of commercial bank's SMEs credit model in Chart 2.

Chart 2: Conceptual Framework of Commercial Bank's SMEs Credit Models



Source: Prepared by the authors'

Note: Debt Burden Ratio (DBR) = (Equated monthly installment (EMIs) + Credit Limit)/(Income) x *100*

The Five selected Commercial Banks and their Very Brief Description:

I. Sonali Bank Limited

It was established as a nationalizedstate-owned commercial bank a year post independence in 1972. This is the largest bank of Bangladesh. One of the main issues to develop economy of the country is through SME banking for poor income stratum. Their mission and vision are as follows:

Vision:

Socially committed leading banking institution with global presence.
(Source: https://www.sonalibank.com.bd/)

Mission:

Dedicated to extend a whole range of quality products that support divergent needs of people aiming at enriching their lives, creating value for the stakeholders and contributing towards socio-economic development of the country.
(Source: https://www.sonalibank.com.bd/)

II. South East Bank Limited

It was established as a private commercial bank in 1995.They also do SME banking in the Bangladesh. Their vision and mission are as follows:

Vision:

To become a pioneer banking institution of the country and contribute significantly to the growth of the national economy.
(Source: https://www.southeastbank.com.bd/)

Mission:

To create and generate an environment of trust and discipline that encourages and motivates everyone in the Bank to work together for achieving the objectives of the Bank. A commitment to quality and excellence in service is the hallmark of their identity.
(Source: https://www.southeastbank.com.bd/)

III. Islamic Bank Bangladesh Limited

It was established as the first Islamic Bank in South Asia in 1983. Their mission and vision are as follows:

Vision:

To always strive to achieve superior financial performance, be considered a leading Islamic Bank by reputation and performance.

Mission:

To establish Islamic Banking through the introduction of a welfare-oriented banking system and also ensure equity and justice in the field of all economic activities, achieve balanced growth and equitable development in through diversified investment operations particularly in the priority sectors and least developed areas of the country.
(Source: https://www.islamibankbd.com/)

IV. Rupali Bank Limited

It was established as a public commercial bank in 1972.The bank developed as the largest Public Limited Banking Company on December 14, 1986. Following are the bank's vision and mission:

Vision:

To expand their loyal customer base by being known as the financial partner of choice that constantly exceeds customer expectations.

Mission:

Uphold ethical values and meet banks customer's financial needs in the fastest and most appropriate way and continue innovative works in order to achieve human resource with superior qualities, technological infrastructure and service packages *(Source:https://rupalibank.com.bd/)*

V. Uttara Bank Limited

Though it was established as one of the public banks in 1972 but denationalized in 1983. It has no specified mission or vision statement.

At present the bank has 245 branches and 21 sub-branches all are under online network. In addition, its effective and diversified approach to seize the market opportunities is going on as continuous process to accommodate new customers by developing and expanding rural, SME financing and offshore banking facilities. Besides these traditional delivery points, the bank is also very active in the alternative delivery area.
(Source:https://www.uttarabank-bd.com/)

2. LITERATURE REVIEW

Shaw (1973) observed that the financial sector of an economy doesn't matter in economic development where his theory based on two important factors "Financial repression" and "financial liberalization". Galbis (1977) opined that high real interest rates are development- endorsing, smooth if total real savings is interest insensitive since they carry around an upgrading in the fineness of the capital stock with a sound clear wisdom. McKinnon, & Pill (1996) argued that better-quality banking rule with higher capital and reserve necessities might assistance and Controls on cross-border activities of financial capital are one suitable tool. Morduch (1999) opined that the variety of advanced devices out their group-lending agreements, the dimension of financial sustainability, the approximation of economic and social influences, the expenses and assistances of subsidization, and the possible to decrease poverty over savings plans somewhat than reasonable advances. Fry (2000) depicted that financial repression is a predominantly destructive quasi-tax from the viewpoint of economic progress. Quoting Stubbs, & Underhill (1999) "We need to focus on determining the political constituencies that need to be challenged in order to correct the balance of costs and benefits of aspects of global economic integration, particularly the problem of inequality and poverty." Papa et al. (2006) observed that "The Grameen Bank implementing the microfinance system by which people were able to take small amount of collateral free flexible loans and use them for income generation to uplift themselves from poverty." Bayulgen (2008) opined that in the Grameen Bank model the prevailing

microcredit-and extra generally the microfinance-literature to outline the conducts in which microcredit can subsidize to the political consciousness and involvement of the deprived, i.e., their political enablement. Zhuang et al. (2009) argued that financial deepening is usually referring to an augmented ratio of money supply to GDP otherwise roughly price index and denotes to liquid money while the extra liquid money is obtainable pioneering an economy, the further chances happen aimed at continuous advancement. Ahmed, Islam (2010) argued that there are two opinions: One group observed that similar to any other influences that aid as an element for economic development, the development of the financial sector is not an essential ailment but can only justly be graded *pari passu* with additional many inputs where as other group commented that the financial system has a slight share to perform e in the expansion of the general economy and purely allows the group of actors in the private sector to 'make' and 'lose' money. Sonne (2010) depicted that a majority of rural poor are landless poor and the sector that is likely to have the largest poverty alleviating impact is the non-farm sector and its entrepreneurs and small enterprises. Suzuki et al. (2011) observed that the achievement of the Grameen Bank(GB) style of microcredit can too be clarified such as the high interest rate composed of small transaction charges which consequence after the high level of confidence usual amid group of actors donates toward generate sufficient rent chances aimed at the GB to assume collateral-free dangerous microcredit activities. Chowdhury, Azam, & Islam (2013) found that "Bangladesh SMEs have assumed special significance for poverty reduction programmes and potential contribution to the overall industrial and economic growth. Thus Government, associations of Chambers of Commerce and Industry, credit information bureau (CIB), Bangladesh Bank and Stock Exchange Commission (SEC) should take necessary measures to overcome the problems faced by SME sectors and must implement policies to make SME sector more efficient. Alauddin, & Chowdhury (2015) argued that the key inputs of SMEs are finance, market information, training, infrastructural expansion, R&D, management competencies, technologies, skills and links through organizations aimed at provision facilities. Stokvik et al. (2016) argued that value creation is dominant to the considerate together entrepreneurship and innovation, since the situation remains the result of together procedures. Subhanij (2016) depicted that through creation of repetition of commercial banks' viable benefit, the nation can create an added market-friendly location aimed at SME capital. This willpower too protections that forward to small-business clients are not heaviness to the government and are self-reliant in the long-lasting path. Maniruzzaman (2017) argued that SME deliberates as the apparatus of economic growth through contribution at significant services and revenue receiving chances on comparatively low costs, particularly in the rural parts. If the SMEs become the financial funding continually with comparatively lesser interest rate from Banks and others financial institutions, the situation remains expected that this segment determination improvement awakes by fineness and donate a ration fashionable GDP. Yoshino & Aghizadeh-Hesary (2018) opined that where SMEs represent the main parts of their economies, thus it is necessary to diversify SMEs' channels of financing. Sharma (2018) described that in India Commercial and specialized banks donate meaningfully and definitely in directing and if advances aimed at the expansion of enterprises. World Bank (2018) argued that industries collected of minor firms

produce quicker in nations through a better-developed financial area, signifying that financial development is mainly significant aimed at the progress of industries that are obviously calm of small businesses. Hill & Genoni (2019) commented that deprived households take higher rates of entree to microcredit than non-poor households, reflecting extra prevalent usage of microcredit facilities amid deprived urban households than non-poor urban households.
Khuda (2019) described that small and medium enterprises (SMEs) has engaged in recreation a vigorous character in encouraging economic development, poverty decrease, and employment creation. Mahal & Rahman (2019) argued that micro financial institutions assistance towards permit female work force to participate, to quicken countryside segment expansion, to decrease joblessness and to tackle active SME sector of the state.
Qamruzzaman & Jianguo (2019) described that well-functioned SME financing is an essential form nonetheless there is insufficient scope to exploit the possibilities of SMEs in Bangladesh therefore the government must boost financial institutions for fetching innovative behaviors of SME financing through safeguarding cost-effective monetary facilities by a unvarying charges schedule. Shawaqfeh (2019) described that involvement of the governments signified by the central banks to perform an additional vigorous character in backup small and medium enterprises done the creation of a sovereign component to care and monetary involvement in diversified schemes, then to ask commercial banks to deliver a bigger quantity of advances at suitable interest rates, stretch them lengthier grace times, deliver sensible assurances that appropriate the scope of the schemes, and over the yielding of tax exclusions to entrepreneurs particularly on the start of the scheme, by way of, the formation of lawmaking and rules occupied to funding these schemes and removing hindrances to them. Islam (2020) commented that SME development is implicitly vital for safeguarding all-encompassing development in addition resulting poverty lessening. ADB(2020) described that through six ways microfinance can benefit deprived communities: Supporting microfinance organizations to settle resources for low-income borrowers; Permitting females through providing money to micro, small and medium-sized enterprises; Allocating entry to education through backing for rural females; Helping to renovate post-conflict societies and recover females livings; Leveraging microfinance to contribution productions and livings outside capital cities; Nurturing small businesses to advantage differentiate economies. Adhikari (2020) depicted that financial development takes an encouraging influence on economic growth together in the long-run as well as the short-run, with a resultant factor that financial development has been a main supplier and a significant apparatus of growth act in the Nepalese economy. Kayani et al. (2021) described that Grameen Bank assisted Bangladesh in dropping the income disparities between the rural and urban parts by arranging self-employment chances to the unskilled and semi-skilled rural workforce. Rahid (2022) opined that few restraints are connecting with SME financing, such as higher interest rates, multifaceted documentation, etc. and SME debtors' express many problems before and after the permission of SME loans. Though initiatives connected with SME financing have been accepted freshly, maximum are not up till now applied while SMEs' current financing rules are insufficient, ill planned, besides unreliable. World Bank (0ctober 06, 2022) described that Bangladesh takes a solid path greatest of progress and expansion, smooth in areas

of raised worldwide ambiguity. World Bank (1st December, 2022) described that In Bangladesh, the entree to money for Females SMEs schemes purposes towards generate an allowing atmosphere to enlarge entree to money to females SMEs through being supportive of the founding of credit guarantee scheme, issue of SME Finance Strategy, and establishing bulk of the controller and segment. With nearly 10 million SMEs contributing to 23% of the GDP, 80% of jobs in the industries sector and 25% of the total labor force, the SME Finance Strategy will show an essential part in improve SME financing.

From the aforesaid literature review, the study observed that though most of the articles were written in the light of different countries but they did not mostly consider SMEs financing in Bangladesh through semi-informal sector and formal sector to create entrepreneurs in turn reducing poverty. As such the study has been undertaken.

3. OBJECTIVES OF THE STUDY

i) To assess how Grameen bank is helping to finance SME sector of the country to create entrepreneurs;
ii) To investigate how commercial banks are serving finance SME sector of the country to accomplish entrepreneurs;
iii) To provide some suggestions to achieve generate entrepreneurs to reduce poverty in Bangladesh.

Research question of the study is whether Grameen Bank and commercial banks through financing SME sector can help to attain financial deepening to create entrepreneurs which in turn reduce poverty in Bangladesh?

Plan of the study includes: the introductory section brief discussion relates to the title, conceptual framework of Grameen bank to create entrepreneur, brief introduction of five commercial banks, objectives of the study and research questions. In the 2nd section of the article the study will do the literature review. Section: 3 depicts methodology of the study while section:4 reports estimated results. Section: 5 gives discussion while Section: 6 written about Conclusion, Implication and future research. The above noted is followed by references which are also given in the article.

4. METHODOLOGY OF THE STUDY

In the light of the literature review, the study will use secondary sources of data for empirical analysis with the assistance of econometric methods. As such annual reports of different years were used. The study has chosen Grameen bank as non-scheduled bank and also considered five scheduled banks i.e. Sonali Bank Limited; South East Bank Limited; Islamic Bank Bangladesh limited, Rupali Bank Limited; Uttara Bank limited to assess the financing of SME sector to create entrepreneurs in turn to reduce poverty and women empowerment and financial deepening as a positive impact on financial sectors development. Out of 61 total commercial banks the study choose five commercial banks out of which Sonali Banks is the largest public limited bank in Bangladesh and do treasury function in absence of Bangladesh ban where it branches are not available. The study did quantitative research. Time period of the study is from 1, July, 2022 to 30 November, 2022 with a data set from 2000 to 2022 for the Grameen Bank. However, for Grameen bank the study did following: Kendall's tau-b (τb) correlation coefficient; Spearman's rho correlation coefficient; Two ordinary regression equations were also done

with D.W.stat.is being determined to see autocorrelation situation. One equation's dependent variable is Total Number of Grameen Bank (GB) Branches while another equation's dependent variable is Below Poverty. Some graphical representations of the data set of Grameen Bank will be given.

For five commercial banks the study did the following:

ARDL stands for autoregressive distributed lag model. ARDL may have a general form as in the first equation of this study; other equations are also being determined in a similar way:

$$\Delta GNIPC_t = \beta_0 + \sum_{i=1}^{p} \beta_{1i} \Delta \ln GNIPC_{t-i} + \sum_{i=0}^{q} \beta_{2i} \Delta \ln TNLSMELH_{t-i} + \sum_{i=0}^{q} \beta a_{3i} \Delta l \, n \, TSMELD_{t-i}$$

Where:

GNIPC = Gross National Income Per Capita converted into Bangladesh Taka considering 2017 PPP in USD
TNLSMELH = Total no. of SME loan holders
TSMELD = Total No. of SME Loan Disbursed

Other ARDL equations were also estimated.

Kripfganz & Schneider (2016) depicted that ARDL models are frequently used to examine dynamic relations with time series data in a single-equation outline and present value of the dependent variable is permissible to depend on its own past realizations – the autoregressive part – as well as current and past values of additional explanatory variables – the distributed lag part and the variables can be stationary, non-stationary, or a mixture of the two types.

The more the value of the log-likelihood, the improved a model fits a dataset.

The study also wanted to do some extensive work. As such the work did augmented Dickey–Fuller test (ADF) to tests the null hypothesis which a unit root is present in a time series sample. Verma (2021) argued that "Before going into the ADF test, we must know about the unit root test because the ADF test belongs to the unit root test". Zhang, Robinson, & Yao (2018) described that a simple, direct and model-free method for identifying co-integration relationships among multiple time series of which different components series may have different integration orders and The method boils down to an eigen-analysis for a nonnegative definite matrix.

Breusch-Godfrey (BG) Test is being used to detect autocorrelation up to any pre designated order p.

For ARDL and augmented Dickey–Fuller test (ADF) dataset of five commercial banks were from 2004 to 2020 while for Johansen tests for co-integration dataset of five commercial banks were from 2002 to 2020. The Johansen test is applied to exam co-integrating relations among some non-stationary time series data.

STATA 17 will be used to analyses data of the study.

5. ESTIMATED RESULTS

Grameen Bank:

The study did Kendall's tau-b(τb) correlation coefficient which result is given in Table: 1.This is a nonparametric measure of the strength and direction of association that occurs between two variables measured on at least an ordinal scale. In the table, Correlation of coefficient which is significant is shown by given "*" symbol.

Table: 1, Kendall's tau-b (τb) Correlation Coefficient

Kendall's tau_b		Years	Total No. of GB Branches	Total No. of Members	Total No. of Assets (BDT)	Total No. of Borrowing (BDT)	Repayment rate %	Below Poverty	GNI Per Capita	Inflation	Unemployment	Population Growth	Total Population	Poverty Rate	Trade (% of GDP)	Net investment Rate(BDT)
Total no. of GBBranches	Correlation Coefficient	.916**														
	Sig. (2-tailed)	0.000														
Total no. of Members	Correlation Coefficient	.998**	.914**													
	Sig. (2-tailed)	0.000	0.000													
Total no. of Assets	Correlation Coefficient	.952**	.877**	.959**												

(BDT)	Sig. (2-tailed)	0.000	0.000	0.000												
Total no. of Borrowing (BDT)	Correlation Coefficient	-0.134	-0.198	-0.130	-0.181											
	Sig. (2-tailed)	0.382	0.218	0.397	0.251											
Repayment rate %	Correlation Coefficient	0.082	0.134	0.087	0.086	-0.201										
	Sig. (2-tailed)	0.605	0.420	0.585	0.600	0.206										
belowpoverty	Correlation Coefficient	0.215	0.127	0.220	0.244	0.116	-0.193									
	Sig. (2-tailed)	0.171	0.441	0.162	0.128	0.458	0.234									
GNI Percapita	Correlation Coefficient	1.000***	.916**	.998**	.952**	-0.134	0.082	0.215								
	Sig. (2-tailed)		0.000	0.000	0.000	0.382	0.605	0.171								
Inflation	Correlation Coefficient	0.143	0.236	0.139	0.171	-.472**	.374*	-.376*	0.143							
	Sig. (2-tailed)	0.352	0.143	0.367	0.277	0.002	0.018	0.017	0.352							
Unemplo ymen	Correlation Coeffic	.506**	.472**	.503**	.467**	0.082	0.000	0.000	.506**	-0.004						

t	ient															
	Sig. (2-tailed)	0.001	0.003	0.001	0.003	0.592	1.000	1.000	0.001	0.978						
Population Growth	Correlation Coefficient	-.870**	-.784**	-.868**	-.810**	0.004	-0.091	-0.081	-.870**	-0.117	-.515**					
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.978	0.566	0.608	0.000	0.446	0.001					
Total Population	Correlation Coefficient	1.000**	.916**	.998**	.952**	-0.134	0.082	0.215	1.000**	0.143	.506**	-.870**				
	Sig. (2-tailed)		0.000	0.000	0.000	0.382	0.605	0.171		0.352	0.001	0.000				
Poverty Rate	Correlation Coefficient	-.967**	-.948**	-.965**	-.927**	0.152	-0.118	-0.222	-.967**	-0.179	-.466**	.833**	-.967**			
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.332	0.468	0.166	0.000	0.254	0.003	0.000	0.000			
Trade (% of GDP)	Correlation Coefficient	0.065	0.180	0.069	0.152	-.377*	0.246	-.367*	0.065	.489**	-0.030	0.013	0.065	-0.081		
	Sig. (2-tailed)	0.672	0.266	0.652	0.334	0.014	0.121	0.019	0.672	0.001	0.844	0.933	0.672	0.608		
Net investment rate BDT	Correlation Coefficient	0.004	-0.123	0.009	-0.029	.342*	0.018	0.107	0.004	-0.177	-0.264	-0.013	0.004	0.036	-0.169	
	Sig. (2-tailed)	0.978	0.446	0.955	0.856	0.026	0.909	0.494	0.978	0.248	0.085	0.933	0.978	0.820	0.271	

(Source: Computed by the Authors')

**. Correlation coefficient is significant at the 0.01 level (2-tailed).

*. Correlation coefficient is significant at the 0.05 level (2-tailed).

From the table: 1, the study found that total numbers of bank branches are significant with years at the 0.01 level of significance. Total numbers of members are significant with both year and total numbers of branches are significant with years and total number of branches at the 0.01 level of significance. Total numbers of assets are significant with years, total umbers of branches and Total number of members at the 0.01 level of significance. Gross national income per capita are significant with total number of branches, total number of members, total number of assets at the 0.01 level of significance. Inflation is negatively significant at the 0.01 level of significance with total numbers of borrowings while also negatively significant with both repayment rate in percentage and below poverty line at the 0.05 level of significance. Unemployment is positively significant with years, total number of branches, total number of members and total number of assets, Gross national income per capita at the 0.01 level of significance. Population growth rate are negatively significant with years, total number of branches, total number of members, total number of assets, Gross national income per capita and unemployment at the 0.01 level of significance. Total population are significant with years, total number of branches, total number of members, total number of assets, gross national income per capita, unemployment and negatively population growth at the 0.01 level of significance. Poverty rate are negatively significant with years, total number of branches, total number of members, total number of assets, gross national income per capita, unemployment, population growth and total population at the 0.01 level of significance. Trade percentage of Gross domestic product are negatively significant with both total number of borrowings and below poverty line at the 0.05 level of significance while positively significant with inflation at the 0.01 level of significance.Net investment rate is significant at total number of borrowings at the 0.05 level of significance. Market capitalization is significant with total number of branches at the 0.01 level of significance while with inflation at the 0.05 level of significance.

In table: 2, among the variables of the Grameen Bank, the study reported the Spearman's rho measures the strength of association between two variables. In the table, the study shown Correlation coefficient is significant at the 0.01 level (2-tailed) and Correlation coefficient is significant at the 0.05 level (2-tailed).

Table 2: Spearman's rho Correlation Coefficient

Spearman's rho		**Years**	**Total No. of GB Branches**	**Total No. of Members**	**Total No. of Assets (BDT)**	**Total No. of Borrowing (BDT)**	**Repayment rate %**	**Below Poverty**	**GNI Per capita**	**Inflation**	**Unemployment**	**Population Growth**	**Total Population**	**Poverty Rate**	**Trade (% of GDP)**	**Net Investment rate (BDT)**
Tota	Correl	.965	1.00	.965	.95	-	0.1	0.0	.96	0.2	.65	-	.96	-	0.2	-

l no. of GB Branches	ation Coefficient	**	0	**	7**	0.055	89	02	5**	50	2**	.883**	5**	.975**	37	0.094
	Sig. (2-tailed)	0.000		0.000	0.000	0.808	0.401	0.994	0.000	0.262	0.001	0.000	0.000	0.000	0.288	0.677
Total no. of Members	Correlation Coefficient	1.000**	.965**	1.000	.988**	0.126	0.107	0.052	1.000**	0.130	.687**	-.950**	1.000**	-.990**	0.102	0.061
	Sig. (2-tailed)	0.000	0.000		0.000	0.576	0.635	0.819	0.000	0.563	0.000	0.000	0.000	0.000	0.651	0.787
Total no. of Assets (BDT)	Correlation Coefficient	.986**	.957**	.988**	1.000	0.060	0.093	0.073	.986**	0.171	.652**	-.929**	.986**	-.979**	0.181	-0.014
	Sig. (2-tailed)	0.000	0.000	0.000		0.797	0.687	0.752	0.000	0.457	0.001	0.000	0.000	0.000	0.434	0.951
Total no. of Borrowing(BDT)	Correlation Coefficient	0.125	-0.055	0.126	0.060	1.000	-0.254	.437*	0.125	-.645**	0.163	-0.176	0.125	-0.078	-.501*	.457*
	Sig. (2-tailed)	0.580	0.808	0.576	0.797		0.254	0.042	0.580	0.001	0.468	0.434	0.580	0.732	0.018	0.033
Repayment rate %	Correlation Coefficient	0.106	0.189	0.107	0.093	-0.254	1.000	-0.302	0.106	.548**	-0.025	-0.119	0.106	-0.161	0.367	0.040
	Sig. (2-tailed)	0.640	0.401	0.635	0.687	0.254		0.172	0.640	0.008	0.911	0.597	0.640	0.474	0.093	0.859
Below pov	Correlation Coefficient	0.051	0.002	0.052	0.073	.437*	-0.302	1.000	0.051	-.553**	0.015	0.011	0.051	-0.052	-.563**	0.175

erty	cient															
	Sig. (2-tailed)	0.821	0.994	0.819	0.752	0.042	0.172		0.821	0.008	0.948	0.960	0.821	0.819	0.006	0.437
GNI Percapita	Correlation Coefficient	1.000**	.965**	1.000**	.986**	0.125	0.106	0.051	1.000	0.133	.688**	-.950**	1.000**	-.990**	0.099	0.060
	Sig. (2-tailed)		0.000	0.000	0.000	0.580	0.640	0.821		0.556	0.000	0.000		0.000	0.662	0.789
Inflation	Correlation Coefficient	0.133	0.250	0.130	0.171	-.645**	.548**	-.553**	0.133	1.000	-0.003	-0.134	0.133	-0.193	.667**	-0.261
	Sig. (2-tailed)	0.556	0.262	0.563	0.457	0.001	0.008	0.008	0.556		0.990	0.553	0.556	0.390	0.001	0.240
Unemployment	Correlation Coefficient	.688**	.652**	.687**	.652**	0.163	-0.025	0.015	.688**	-0.003	1.000	-.705**	.688**	-.655**	-0.042	-0.330
	Sig. (2-tailed)	0.000	0.001	0.000	0.001	0.468	0.911	0.948	0.000	0.990		0.000	0.000	0.001	0.852	0.133
Population Growth	Correlation Coefficient	-.950**	-.883**	-.950**	-.929**	-0.176	-0.119	0.011	-.950**	-0.134	-.705**	1.000	-.950**	.940**	-0.042	-0.077
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.434	0.597	0.960	0.000	0.553	0.000		0.000	0.000	0.852	0.732
Total Populati	Correlation Coefficient	1.000**	.965**	1.000**	.986**	0.125	0.106	0.051	1.000**	0.133	.688**	-.950**	1.000	-.990**	0.099	0.060

on	Sig. (2-tailed)		0.000	0.000	0.000	0.580	0.640	0.821		0.556	0.000	0.000		0.000	0.662	0.789
Poverty Rate	Correlation Coefficient	-.990**	-.975**	-.990**	-.979**	-0.078	-0.161	-0.052	-.990**	-0.193	-.655**	.940**	-.990**	1.000	-0.112	-0.022
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.732	0.474	0.819	0.000	0.390	0.001	0.000	0.000		0.619	0.924
Trade (% of GDP)	Correlation Coefficient	0.099	0.237	0.102	0.181	-.501*	0.367	-.563**	0.099	.667**	-0.042	-0.042	0.099	-0.112	1.000	-0.290
	Sig. (2-tailed)	0.662	0.288	0.651	0.434	0.018	0.093	0.006	0.662	0.001	0.852	0.852	0.662	0.619		0.191
Net investment rate ($US)	Correlation Coefficient	0.060	-0.094	0.061	-0.014	.457*	0.040	0.175	0.060	-0.261	-0.330	-0.077	0.060	-0.022	-0.290	1.000
	Sig. (2-tailed)	0.789	0.677	0.787	0.951	0.033	0.859	0.437	0.789	0.240	0.133	0.732	0.789	0.924	0.191	
Market capitalization	Correlation Coefficient	.470*	.628**	.459*	0.450	-.461*	0.345	-0.010	.470*	0.427	0.131	-0.373	.470*	-.504*	0.332	-0.066
	Sig. (2-tailed)	0.043	0.004	0.048	0.061	0.047	0.149	0.968	0.043	0.069	0.594	0.116	0.043	0.028	0.165	0.789

(Source: Computed by the Authors')

**. Correlation coefficient is significant at the 0.01 level (2-tailed).
*. Correlation coefficient is significant at the 0.05 level (2-tailed).

In Table:2, total number of branches are positively significant with years, total number of members, total number of assets, gross national income per capita, unemployment, total

population at the 0.01 level of significance while population growth rate and poverty rate is negatively significant at the 0.01 level of significance. Total number of members are significant with years, total number of branches, total number of assets, gross national income per capita, unemployment, total population at the 0.01 level of significance while negatively significant with population growth rate and poverty rate at the 0.01 level of significance. Total number of assets are significant with years, total number of branches, total number of members, gross national income per capita, unemployment, total population at the 0.01 level of significance while negatively significant with population growth rate and poverty rate. Total number of borrowings are negatively significant with inflation at the 0.01 level of significance while significant with below poverty line is at the 0.05 level of significance and negatively significant with Trade percentage of GDP at the 0.05 level of significance. Repayment rate in percentage is significant with inflation rate at the 0.01 level of significance. Below poverty line is significant with total number of borrowings at the 0.05 level of significance and negatively significant at inflation and trade percentage of GDP at the 0.05 level of significance. Gross national income per capita are significant with years, total number of branches, total number of members total number of assets, unemployment and total population at the 0.01 level of significance while negatively significant with population growth rate and poverty rate at the 0.05 level of significance .Inflation are significant with repayment rate in percentage and trade percentage of gross domestic product at the 0.01 level of significance while negatively significant are total number of borrowings and below poverty line at the 0.01 level of significance. Unemployment is significant with years, total number of branches, total number of members, total number of assets, gross national income per capita, total population at the 0.01 level of significance while negatively significant with population growth and poverty rate. Trade percentage of GDP is significant with total number of branches and repayment rate at the 0.05 level of significance while negatively significant with below poverty at the 0.05 level of significance. Market capitalization is significant with years, total number of branches, total number of members ,total number of assets ,gross national income per capita and total population at the 0.05 level of significance while negatively significant with population growth and poverty rate at the 0.05 level of significance.

Table: 3
Equation: 1

Dependent Variable	**Independent Variables**
Total Number of GB Branches	Total No. of Members
	Repayment rate %
	Below Poverty
	GNIPercapita
	Inflation
	Trade (% of GDP)
	Market capitalization

Model Summary					
R	**R Square**	**Adjusted R Square**	**F stat.**	**Sig.**	**D.W. Stat.**
.997	.995	.988	138.216	.000	1.59

Variables	**Coefficient**	**T stat.**	**Sig**
(Constant)	1651.793	.675	.521
Total No. of Members	7.85	8.735	.000
Repayment rate %	1.98	-1.014	.000
Below Poverty	174.095	2.961	.021
GNIPercapita	-.103	-.441	.673
Inflation	1.723	.507	.628
Trade (% of GDP)	2.725	.565	.590
Market capitalization	-1.002	-.499	.633

(Source: Computed by the Authors')

From the regression equation-1, the study found that total no. of members is significant at 1% level, repayment rate is significant at 1% level of significance while below poverty is significant at 5% level of significance. This equation gives a very good fit explanation about 98.8% of the observed variation in the total number of Grameen Bank branches. At level of significance α = .05, D.W. stat. indicated that no auto correlation prevails.

Table: 4
Equation: 2

Dependent Variable	**Independent Variables**
Below Poverty	Total No. of Assets (BDT)
	Repayment rate %
	GNIPercapita
	Inflation
	Trade (% of GDP)
	Net investment rate (BDT)
	Unemployment

Model Summary				
R Square	**Adjusted R Square**	**F stat.**	**Sig.**	**D.W. Stat.**
.998	.996	455.528	.000	1.05

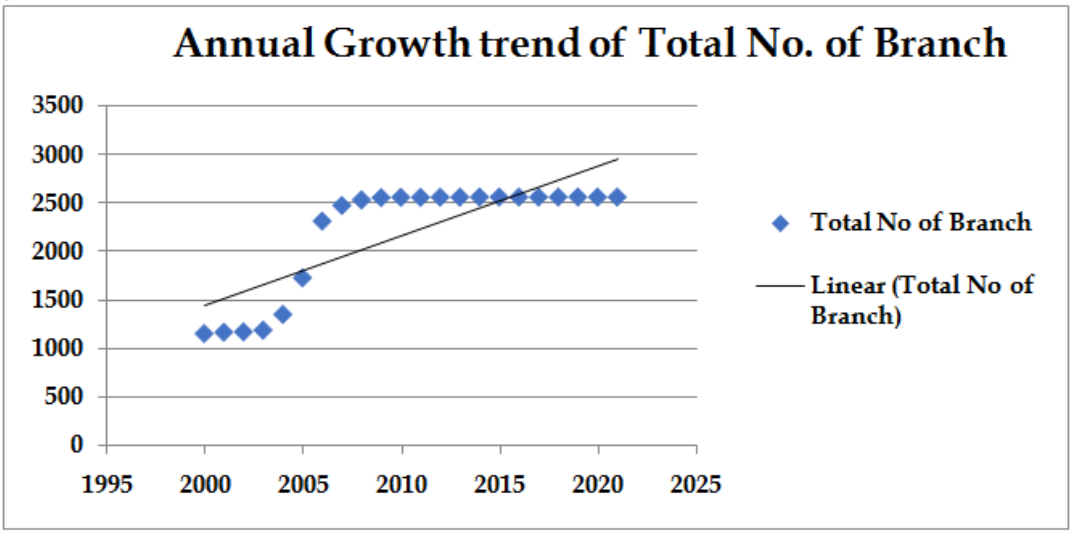
Variables	**Coefficient**	**T stat.**	**Sig**
(Constant)	65.782	.675	.521
Total no. of Assets (BDT)	-4.219	8.735	.000

Repayment Rate %	-.203	-1.014	.000
GNI Percapita	-.002	2.961	.021
Inflation	-.121	-.441	.673
Trade (% of GDP)	-.066	.507	.628
Net investment rate (BDT)	.00063970	.565	.590
Unemployment	.093	5.424	.001

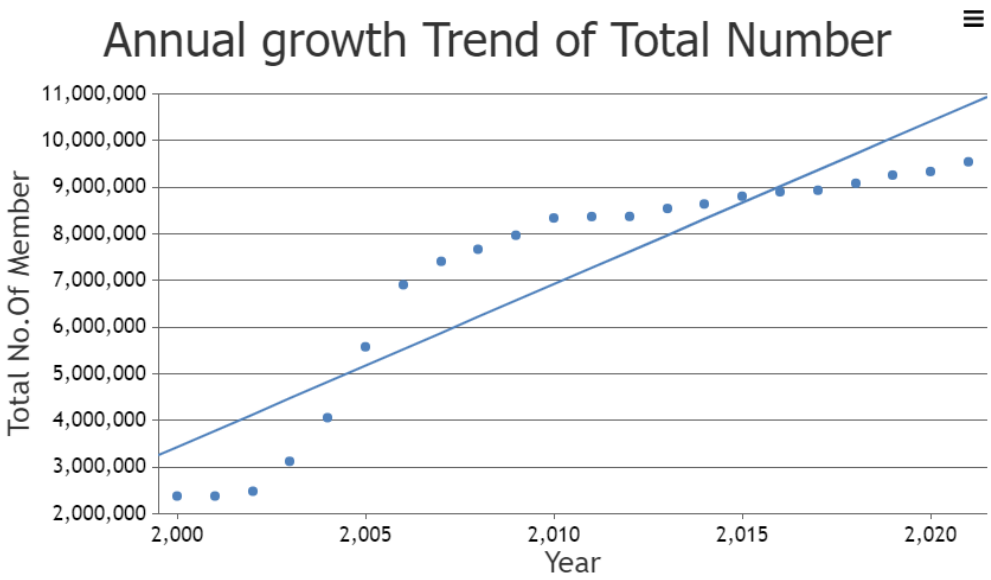
(Source: Computed by the Authors')

From the regression equation, the study found that total no. of assets is negatively significant at 1% level, repayment rate is negatively significant at 1% level of significance while Gross national income per capita is significant at 5% level of significance and unemployment is significant at 1% level. This equation gives a very good fit explanation about 99.6% of the observed variation in the Below Poverty., D.W. stat. indicated autocorrelation in the inconclusive region is at 1 % level.

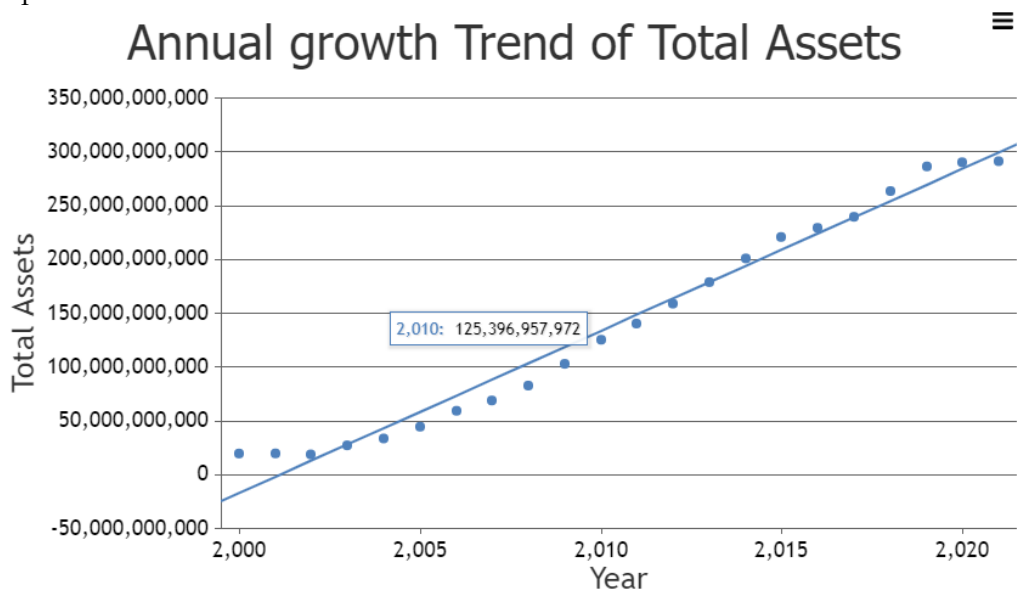
Diagrammatic Explanation:



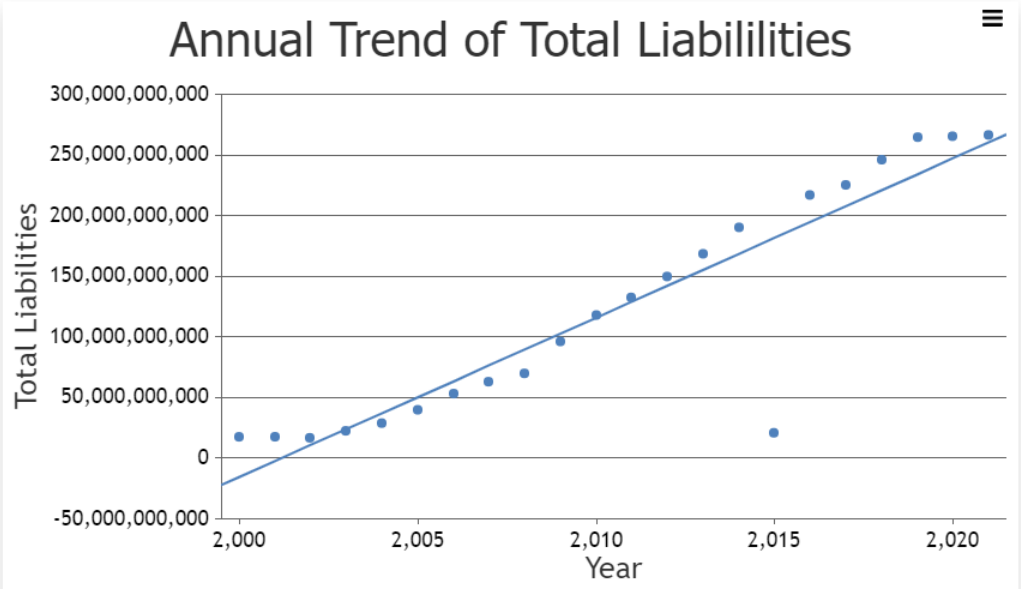
In Figure: 1, Scattered diagram showing the growth trend of Grameen bank branches over the years is positive



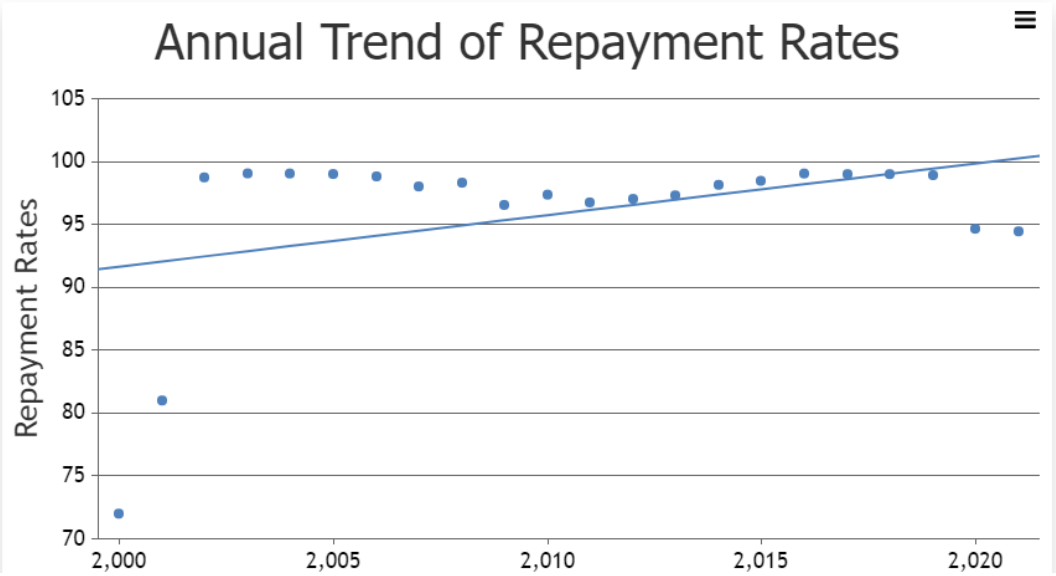
In Figure: 2, Scattered diagram showing the growth trend of Grameen bank members over the years is positive.



In Figure: 3, Scattered diagram showing the growth trend of Grameen bank's Total Assets over the years is positive.



In Figure: 4, Scattered diagram showing the growth trend of Grameen bank's Total Liabilities over the years is positive.



In Figure: 5, Scattered diagram showing the growth trend of Grameen bank's Loan Repayment Rates over the years is moderately positive.

For Five Commercial Banks:

Equation: 3

Growth of SME banking has affected poverty reduction in Bangladesh for which result will be seen below using ARDL equation:

Test	Dependent Variable	Independent variables
ARDL	GNI per Capita, PPP (Constant 2017 converted to Bangladesh Taka as per the time period's prevailing exchange rate.	Total number of (5 commercial banks) SME loan holders Total amount of (5 commercial banks) SME loan disbursed (In Million Taka)

(Source: Computed by the Authors')

Here the study found that for Gross national income per capita for lag first period is significant at 5% level of significance. Total no. of SME loan holders is significant in the second and third period at 5% level of significance. Total amount of SME loan disbursed is negatively significant at second and third period at the level of significance 5%. Log likelihood ratio is negative and it is -55.793775 and higher value.

ARDL (4,4,4) regression

Sample: 2004 - 2020	Number of obs	=	17
	F (14, 2)	=	3319.90
	Prob > F	=	0.0003
Log likelihood = -55.793775	R-squared	=	1.0000
	Adj R-squared	=	0.9997
	Root MSE	=	18.7854

GNIPercapita	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
GNIPercapita						
L1.	2.172164	.4865495	4.46	0.047	.0787109	4.265618
L2.	-1.388182	1.028995	-1.35	0.310	-5.81559	3.039226
L3.	.1497689	.7891328	0.19	0.867	-3.245595	3.545133
L4.	.4140405	.3240644	1.28	0.330	-.9802961	1.808377
noSME						
--	-.0001658	.000135	-1.23	0.344	-.0007466	.000415
L1.	.0004679	.0002394	1.95	0.190	-.0005621	.0014979
L2.	.0010181	.0002389	4.26	0.051	-9.85e-06	.002046
L3.	.001895	.0002999	6.32	0.024	.0006045	.0031856
L4.	.0012479	.0006928	1.80	0.213	-.0017332	.004229

Loandistribution						
--	-.0000756	.0004524	-0.17	0.883	-.0020222	.001871
L1.	-.0027597	.0004553	-6.06	0.026	-.0047189	-.0008005
L2.	-.0030595	.0007204	-4.25	0.051	-.0061593	.0000402
L3.	-.0032966	.0007159	-4.60	0.044	-.006377	-.0002163
L4.	-.0027165	.0011362	-2.39	0.139	-.0076051	.002173

Equation: 4, Using ARDL equation poverty headcount ratio at national poverty live depends on Total No. of SME loan holders and Total amount of SME loan disbursed by five commercial banks:

Test Name	**Dependent Variable**	**Independent Variables**
ARDL	Poverty headcount ratio at national poverty lines (% of population)	Total No. of SME loan holders
		Total amount of SME loan disbursed (In Million Taka)

(Source: Computed by the Authors')

In the equation: 4, the estimated results showed that poverty rate is not significant in any level of time period. Total amount of SME loan disbursed is significant in the third period of lag at 10% level of significance. Total numbers of SME loan holders are insignificant. Constant value is also insignificant. Log likelihood ratio is 33.355353.

ARDL (4,4,4) regression

Sample: 2004 - 2020	Number of obs	= 17
	F (14, 2)	= 4238.33
	Prob > F	= 0.0002
Log likelihood = 33.355353	R-squared	= 1.0000
	Adj R-squared	= 0.9997
	Root MSE	= 0.0992

PovertyRate	Coef.	Std. Err.	T	p> |t|	[95% Conf.	Interval]
PovertyRate						
L1.	1.375031	.6343827	2.17	0.162	-1.354497	4.104559
L2.	.1372548	1.104893	0.12	0.912	-4.616718	4.891228
L3.	-1.139693	.7279459	-1.57	0.258	-4.271791	1.992406
L4.	.6335194	.512476	1.24	0.342	-1.571487	2.838526
growth						
--	-.0002273	.0086469	-0.03	0.981	-.0374317	.0369771
L1.	.0138158	.0110907	1.25	0.339	-.0339038	.0615354

L2.	.0123021	.0146753	0.84	0.490	-.0508408	.0754449
L3.	0.163996	.0048032	3.41	0.076	-.004267	.0370662
L4.	.014175	.0099144	1.43	0.289	-.0284832	.0568332
noSME						
--	1.16e-06	7.16e-07	1.63	0.246	-1.92e-06	4.25e-06
L1.	-2.82e-08	1.44e-06	-0.02	0.986	-6.20e-06	6.15e-06
L2.	2.10e-06	1.49e-06	1.41	0.295	-4.32e-06	8.52e-06
L3.	-1.46e-07	1.93e-06	-0.08	0.947	-8.47e-06	8.18e-06
L4.	-2.89e-06	2.82e-06	-1.02	0.414	-.000015	9.26e-06
_cons	-3.171264	1.8138	-1.75	0.223	-10.97541	4.632885

(Source: Computed by the Authors')

Equation: 5

Test Name	**Dependent Variable**	**Independent Variables**
ARDL	Proportion of population pushed below the $1.90 poverty line which was converted to equivalent BDT	Total no. of SME loan holders
		Trade (% of GDP)

In the following table, from equation: 5, the study found that below poverty is significant at first period of lag value at 5% level of significance and constant lag time period :1 at 5% level of significance. Others are not significant. Log likelihood ratio is 18.588911.

ARDL (4,0,0) regression

Sample: 2004 - 2020	Number of obs	=	17
	F (6, 10)	=	17.49
	Prob > F	=	0.0001
Log likelihood = 18.588911	R-squared	=	0.9130
	Adj R-squared	=	0.8608
	Root MSE	=	0.1057

belowpoverty	Coef.	Std. Err.	T	p> |t|	[95% Conf.	Interval]
belowpoverty						
L1.	.9154261	.2990538	3.06	0.012	.2490926	1.58176
L2.	-.2756538	.4193429	-.066	0.526	-1.210008	.6587005
L3.	.2144825	.4010105	0.53	0.604	-.6790245	1.10799
L4.	-.3132407	.2100339	-1.49	0.167	-.7812254	.1547439
noSME	-2.08e-07	2.59e-07	-0.80	0.440	-7.84e-07	3.68e-07

Trade	-.0042313	.0052692	-0.80	0.441	-.0159717	.0075092
_cons	1.867841	.6697423	2.79	0.019	.3755622	3.36012

(Source: Computed by the Authors')

Equation: 6

Test Name	Dependent Variable	Independent Variables
ARDL	Inflation	Total no. of SME loan holders
		Total amount of SME loan disbursed (In Million Taka)

From the table, the study found that for equation: 6, inflation is insignificant. Total no. of SME loan holders is significant the 1st period of lag at 10% of level of significance. Total amount of SME loan disbursed is significant 4th period of lag at 1 % level of significance. Constant is insignificant. Log likelihood ratio is -11.179272.

ARDL (4,3,4) regression

Sample: 2004 - 2020	Number of obs	=	17
	F (13, 3)	=	29.57
	Prob > F	=	0.0087
Log likelihood = -11.179272	R-squared	=	0.9923
	Adj R-squared	=	0.9587
	Root MSE	=	1.1118

Inflation	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
Inflation						
L1.	.6801844	.410182	1.66	0.196	-.6251977	1.985566
L2.	1.226221	.5918856	2.07	0.130	-.6574234	3.109865
L3.	2.177002	1.11151	1.96	0.145	-1.360318	5.714322
L4.	1.854275	1.107723	1.67	0.193	-1.670994	5.379544
noSME						
--	-4.10e-06	8.01e-06	-0.51	0.645	-.0000296	.0000214
L1.	.0000841	.0000322	2.61	0.080	-.0000184	.0001865
L2.	.0000573	.0000292	1.97	0.144	-.0000355	.0001502
L3.	.0000878	.0000565	1.55	0.218	-.0000921	.0002677
Loandistribution						
--	-.0001843	.0000713	-2.58	0.082	-.0004113	.0000428
L1.	-.0001066	.0000628	-1.70	0.188	-.0003063	.0000932
L2.	-.0001337	.0000738	-1.81	0.168	-.0003686	.0001012
L3.	-.0002679	.000119	-2.25	0.110	-.0006465	.0001107

L4.	.0001831	.0000346	5.29	0.013	.000073	.0002932
_cons	-26.21976	12.39654	-2.12	0.125	-65.67107	13.23154

(Source: Computed by the Authors')

Equation: 7

Test Name	Dependent Variable	Independent Variables
ARDL	Trade (% of GDP)	Total no. of SME loan holders
		Total amount of SME loan disbursed (In Million Taka)

In equation: 7, Trade percentage of GDP is significant at 5% level of significance. Total no. of SME loan holders is significant for the period of the lag period: 2 at 5% level of significance. Total amount of SME loan disbursed is negatively significant for the period of the lag period: 2 at 5% level of significance. Constant is insignificant. Log Likelihood ratio is -35.123542.

ARDL (1,4,2) regression

Sample: 2004 - 2020	Number of obs	=	17
	F (9, 7)	=	9.26
	Prob > F	=	0.0039
Log likelihood = -35.123542	R-squared	=	0.9225
	Adj R-squared	=	0.8230
	Root MSE	=	2.9767

Trade	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
Trade						
L1.	.7606055	.2517582	3.02	0.019	.165292	1.355919
noSME						
--	-1.33e-06	.0000143	-0.09	0.928	-.0000351	.0000324
L1.	3.95e-06	.0000133	0.30	0.774	-.0000274	.0000353
L2.	.0000414	.000014	2.95	0.021	8.18e-06	.0000745
L3.	.0000199	.0000111	1.79	0.117	-6.46e-06	.0000462
L4.	-.0000143	.000013	-1.10	0.308	-.0000449	.0000164
Loandistribution						
--	3.98e-06	.0000217	0.18	0.859	-.0000473	.0000553
L1.	-2.74e-06	.000023	-0.12	0.908	-.0000571	.0000516
L2.	-.0000824	.000029	-2.84	0.025	-.0001511	-.0000137
_cons	4.150728	6.100515	0.68	0.518	-10.2747	18.57615

(Source: Computed by the Authors')

Equation: 8

Test Name	Dependent Variable	Independent Variables
ARDL	Net investment rate	Total no. of SME loan holders
		Total amount of SME loan disbursed (In Million Taka)

In case of equation: 8, the study found that net investment rate is negatively significant during the lag period of 1 and 2, both at the 10% level of significance. For total number of SME loan holder lag period of 1 and 2, both are significant at the level of 10% level of significance. Total amount of SME loan disbursed is significant at l0% level of significance, and lag period 2 it is negatively significant at 5% level of significance. Constant's coefficient value is very low despite negatively signifcantat10% level significance. Log likelihood ratio is -339.24191.

ARDL (3,3,4) regression

Sample: 2004 - 2020	Number of obs	=	17
	F (12, 4)	=	4.40
	Prob > F	=	0.0823
Log likelihood = -339.24191	R-squared	=	0.9295
	Adj R-squared	=	0.7180
	Root MSE	=	2.315e+08

netinvestment	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
netinvestment						
L1.	-1.164612	.445152	-2.62	0.059	-2.400552	.0713283
L2.	-1.016937	.465002	-2.19	0.094	-2.30799	.2741155
L3.	-.313866	.2573952	-1.22	0.290	-1.02851	.4007776
noSME						
--	-768.4507	1018.607	-0.75	0.493	-3596.556	2059.655
L1.	2593.697	1028.355	2.52	0.065	-261.4735	5448.867
L2.	4119.542	1684.093	2.45	0.071	-556.2499	8795.333
L3.	2251.053	2238.757	1.01	0.372	-3964.733	8466.839
loandistribution						
--	4130.34	1730.452	2.39	0.075	-674.1649	8934.844
L1.	2381.11	2176.276	1.09	0.335	-3661.201	8423.421
L2.	-6713.923	2255.127	-2.98	0.041	-12975.16	-452.6855
L3.	-5989.917	4533.693	-1.32	0.257	-18577.47	6597.633
L4.	-4006.689	2291.462	-1.75	0.155	-10368.81	2355.43
_cons	-1.47e+09	6.85e+08	-2.15	0.098	-3.38e+09	4.28e+08

(Source: Computed by the Authors')

Equation: 9 Now the study did general equation for an augmented Dickey–Fuller test (ADF) tests the null hypothesis that a unit root is present in a time series sample

General Equation

Test Name	**Variable/s**	**Lags**
Augmented Dickey Fuller model unit root test	Total no. of SME loan holders	0

From the equation: 9, the study found that total number of SME loan holders is negatively coefficient at 1% level of significance. However, for the model, Mckinnon approximate p-value for z(t) is 0. 1406. No lags in the model was considered.

. dfuller noSME, trend regress lags (0)

Dickey-Fuller test for unit root Number of obs = 20

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
		----------Interpolated Dickey-Fuller----------		
Z (t)	-2.970	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 0.1406

D.noSME	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
noSME						
L1.	-.7238039	.243686	-2.97	0.009	-1.237936	-.2096714
_trend	1141.296	4344.018	0.26	0.796	-8023.781	10306.37
_cons	280508.3	98756.2	2.84	0.011	72150.98	488865.7

(Source: Computed by the Authors')

Equation: 10

Here the study considered Total no. of SME loan holders with three lags. The study found that no. of SME loan during 1st lag period is significant negatively at the level of 5 % level of significance. Constant is significant at 5% level significance. Mckinnon approximate p-value for z(t) is 0.4832.

Test Name	**Variable/s**	**Lags**
Augmented Dickey Fuller model unit root test	Total no. of SME loan holders	3

Augmented Dickey-Fuller test for unit root Number of obs = 17

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
		----------Interpolated Dickey-Fuller----------		

Z (t)	-2.212	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 0.4832

D.noSME	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
noSME						
L1.	-1.141758	.5162073	-2.21	0.049	-2.277923	-.0055939
LD.	.372917	.4393003	0.85	0.414	-.5939765	1.339811
L2D.	.3020669	.399236	0.76	0.465	-.5766456	1.180779
L3D.	.2225641	.3681582	0.60	0.558	-.5877466	1.032875
_trend	412.8275	6551.202	0.06	0.951	-14006.27	14831.93
_cons	461665.8	205679.9	2.24	0.046	8967.449	914364.1

(Source: Computed by the Authors')

Equation: 11

Here the study considered total amount of SME loan disbursed by 5 banks. No lags are taken. Loan distribution is negatively significant at 5% level of significance. Trend and constant term both indicate significant at 10% level of significance. Mckinnon approximate p-value for z(t) is 0.2461.

Test Name	**Variable/s**	**Lags**
Augmented Dickey Fuller model unit root test	Total amount of SME loan disbursed (In Million Taka)	0

Dickey-Fuller test for unit root Number of obs = 20

	Test Statistic	----------Interpolated Dickey-Fuller---------- 1% Critical Value	5% Critical Value	10% Critical Value
Z (t)	-2.676	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 0.2461

D.loandist~m	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
loandist~m						
L1.	-.6036737	.2255681	-2.68	0.016	-1.079581	-.1277667
_trend	5235.089	2639.1	1.98	0.064	-332.9252	10803.1
_cons	68921.43	34677.65	1.99	0.063	-4242.005	142084.9

(Source: Computed by the Authors')

Equation: 12 is considering rate of interest of borrowing with 3 trend regression lags. Only trend is negatively significant at 10% level of significance. Mckinnon approximate p-value for z(t) is 0.9738.

Test Name	**Variable/s**	**Trend Regress lags**
Augmented Dickey Fuller model unit root test	Rate of interest of borrowing	3

Augmented Dickey-Fuller test for unit root Number of obs = 17

	Test Statistic	----------Interpolated Dickey-Fuller---------- 1% Critical Value	5% Critical Value	10% Critical Value
Z (t)	-0.690	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 0.9738

D.borrowing	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
borrowing						
L1.	-.3986381	.5775289	-0.69	0.504	-1.669771	.8724944
LD.	-.6428272	.516609	-1.24	0.239	-1.779876	.4942214
L2D.	-.5608826	.528398	-1.06	0.311	-1.723879	.6021134
L3D.	-.2364469	.5579485	-0.42	0.680	-1.464483	.9915895
_trend	-.2147965	.1040436	-2.06	0.063	-.4437949	.0142018
_cons	7.922343	9.296341	0.85	0.412	-12.53877	28.38345

(Source: Computed by the Authors')

Equation: 13 is considering rate of interest of borrowing with trend regression lag as zero. The equation indicates that borrowing and trend both is negatively significant at 5% level of significance while constant is positively significant at 5% level of significance. Mckinnon approximate p-value for z(t) is 0.3622.

Test Name	**Variable/s**	**Trend Regress lags**
Augmented Dickey Fuller model unit root test	Rate of interest of borrowing	0

Dickey-Fuller test for unit root Number of obs = 20

	Test Statistic	----------Interpolated Dickey-Fuller---------- 1% Critical Value	5% Critical Value	10% Critical Value
Z (t)	-2.433	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 0.3622

D.borrowing	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
borrowing L1.	-.7332339	.3013605	-2.43	0.026	-1.369049	-.0974189

_trend	-.1570589	.0658745	-2.38	0.029	-.296042	-.0180758
_cons	12.08266	4.499508	2.52	0.022	1.956589	22.20874

(Source: Computed by the Authors')

Equation: 14 indicates that rate of repayment is being considered. Here repayment is negatively significant at 5% level of significance while constant is positively significant at 5% level of significance. Mckinnon approximate p-value for z(t) is0.5244.

Test Name	**Variable/s**	**Trend Regress lags**
Augmented Dickey Fuller model unit root test	Rate of repayment	0

Dickey-Fuller test for unit root Number of obs = 20

	Test Statistic	----------Interpolated Dickey-Fuller---------- 1% Critical Value	5% Critical Value	10% Critical Value
Z (t)	-2.139	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 0.5244

D.repayment	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
Repayment						
L1.	-.4728664	.2211066	-2.14	0.047	-.9393606	-.0063723
_trend	.5649743	.4801863	1.18	0.256	-.4481303	1.578079
_cons	27.19843	11.66127	2.33	0.032	2.595302	51.80155

(Source: Computed by the Authors')

Equation: 15 considered total number of defaulters in SME banking of five banks with three trend regression lags for Augmented Dicky Fuller model of unit root test. The study found that defaulters $L_1$are negatively related to 5% level of significance, in the third lags this is positively significant at 10% level of significance and trend is negatively significant at 5 % level of significance and constant is positively significant at 5%levelof significance. Mckinnon approximate p-value for z(t) is 0.1675.

Test Name	**Variable/s**	Trend Regress lags
Augmented Dickey Fuller model unit root test	Total no. of defaulters	3

Augmented Dickey-Fuller test for unit root Number of obs = 17

	Test Statistic	----------Interpolated Dickey-Fuller---------- 1% Critical Value	5% Critical Value	10% Critical Value

Z (t)	-2.885	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 0.1675

D.defaulter	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
Defaulter						
L1.	-1.513955	.5247633	-2.89	0.015	-2.668951	-.3589587
LD.	.7403927	.4503925	1.64	0.128	-.2509145	1.7317
L2D.	.5836433	.3889063	1.5	0.162	-.2723336	1.43962
L3D.	.525165	.2895731	1.81	0.097	-.1121812	1.162511
_trend	-5100.222	1984.476	-2.57	0.026	-9468.024	-732.4205
_cons	166719	61396.19	2.72	0.020	31586.94	301851.1

(Source: Computed by the Authors')

Equation: 16 considers total no. of defaulters. The study found that defaulter $L_1$is negatively significant at 1 % level of significance. Trend is also negatively significant at 10% level of significance. Constant is significant at 1% level of significance. Mckinnon approximate p-value for z(t) is .0552 which is significant at 10% level of significance.

Test Name	**Variable/s**	Trend Regress lags
Augmented Dickey Fuller model unit root test	Total no. of defaulters	0

Dickey-Fuller test for unit root Number of obs = 20

	Test Statistic	----------Interpolated Dickey-Fuller---------- 1% Critical Value	5% Critical Value	10% Critical Value
Z (t)	-3.372	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 0.0552

D.defaulter	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
defaulter						
L1.	-.7703643	.2284533	-3.37	0.004	-1.252359	-.28837
_trend	-2541.906	830.0655	-3.06	0.007	-4293.192	-790.6214
_cons	80406.55	24690.54	3.26	0.005	28314.07	132499

(Source: Computed by the Authors')

Equation: 17 considering growth of SME banking. Here growth $L_1$is negatively significant at 1%levelof significance. Trend is significant at 5% level of significance. Mckinnon approximate p-value for z(t) is .0028

Test Name	**Variable/s**	Trend Regress lags
Augmented Dickey Fuller model unit root test	Growth of SME banking	0

Dickey-Fuller test for unit root Number of obs = 20

	Test Statistic	----------Interpolated Dickey-Fuller---------- 1% Critical Value	5% Critical Value	10% Critical Value
Z (t)	-4.332	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 0.0028

D.growth	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
growth						
L1.	-1.08347	.2500913	-4.33	0.000	-1.611116	-.5558231
_trend	2.188973	1.03	2.13	0.049	.0158624	4.362084
_cons	17.66838	10.85861	1.63	0.122	-5.241278	40.57804

(Source: Computed by the Authors')

Equation: 18 deals with Johansen tests for co-integration. Here constant is trend while Total no. of SME loan holders, Total amount of SME loan disbursed (In Million Taka), Total amount of SME loan outstanding (In Million Taka), GNI per capita, Inflation. Granger causality test is beingled to establish the method of the associations between the variables. The significances for the stationarity test accessible a mixture of diverse orders of integration. The co-integration test exposed whether a steady long-run association amongst the variables succeeds or not.

Test Name	**Dependent Variable**	**Trend**
Johansen tests for co-integration	Total no. of SME loan holders	Constant
	Total amount of SME loan disbursed (In Million Taka)	
	Total amount of SME loan outstanding (In Million Taka)	
	GNI per capita, PPP (constant 2017 international $ was converted into the Bangladesh taka as per exchange rate .	
	Inflation (annual %)	

Johansen tests for cointegration

Trend: constant — Number of obs = 19
Sample: 2002-2020 — Lags = 2

maximum rank	parms	LL	eigenvalue	trace statistic	5% critical value
0	30	-827.10255	.	152.1518	68.52
1	39	-795.90434	0.96252	89.7553	47.21
2	46	-770.8678	0.92831	39.6823	29.68
3	51	-754.49192	0.82161	6.9305	15.41
4	54	-751.03848	0.30478	0.0236	3.76
5	55	-751.02666	0.00124		

(Source: Computed by the Authors')

Equation: 19 considers GNI per capita, PPP (constant 2017 international $ was converted into the Bangladesh taka as per exchange rate. Independent variables are Total no. of SME loan holders, Total amount of SME loan disbursed, Total amount of SME loan outstanding, Total No. of defaulters. The study found that total amount of SME loan outstanding and constant both are positively significant at 1% level of significance. Total No. of defaulters is negatively significant at 1% level of significance. Breusch-Godfrey Serial Correlation LM test indicates that no autocorrelation prevails.

Test Name	**Dependent Variable**	**Independent Variables**
Regression	GNI per capita, PPP (constant 2017 international $ was converted into the Bangladesh taka as per exchange rate .	Total No. of SME loan holders
		Total amount of SME loan disbursed (In Million Taka)
		Total amount of SME loan outstanding (In Million Taka)
		Total No. of defaulters

Source	SS	df	MS		
Model	24852243.2	4	6213060.79	Prob > F	0.0000
Residual	759218.85	16	47451.1781	R-squared	0.9704
Total	25611462	20	1280573.1	Adj R-squared	0.9629
				Root MSE	217.83

Number of obs = 21
F (4,16) = 130.94

GNIPercapita	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
noSME	2.28e-06	.0007714	0.00	0.998	-.0016331	.0016377

loandistribution	-.0010637	.002352	-0.45	0.657	-.0060498	.0039224
loanoutstanding	.0110573	.0026666	4.15	0.001	.0054044	.0167101
defaulter	-.0227355	.0044276	-5.13	0.000	-.0321215	-.0133495
_cons	4145.919	330.2156	12.56	0.000	3445.893	4845.945

(Source: Computed by the Authors')

Test Name	Dependent Variable	Independent Variables
Breusch-Godfrey Serial Correlation LMtest	GNI per capita, PPP (constant 2017 international $ was converted into the Bangladesh taka as per exchange rate .	Total No. of SME loan holders
		Total amount of SME loan disbursed (In Million Taka)
		Total amount of SME loan outstanding (In Million Taka)
		Total No. of defaulters

Breusch-Godfrey LM test for autocorrelation

lags (p)	chi2	df	Prob > chi2
1	1.154	1	0.2828

H0 : no serial correlation

(Source: Computed by the Authors')

In equation: 20, Inflation is dependent value. Independent variables are: Total no. of SME loan holders, Total amount of SME loan disbursed (In Million Taka), Total amount of SME loan outstanding (In Million Taka), Total no. of defaulters, Poverty headcount ratio at national poverty lines (% of population). Only constant variable is significant at 5% level of significance. No autocorrelation prevails.

Test Name	Dependent Variable	Independent Variables
Regression	Inflation	Total no. of SME loan holders
		Total amount of SME loan disbursed (In Million Taka)
		Total amount of SME loan outstanding (In Million Taka)
		Total no. of defaulters
		Poverty headcount ratio at national poverty lines (% of population)

Source	SS	df	MS	Number of obs =	21
				F (4,16) =	1.06
Model	134.776972	5	26.9553945	Prob > F =	0.4201
Residual	381.384769	15	25.4256513	R-squared =	0.2611
Total	516.161742	20	25.8080871	Adj R-squared =	0.0148
				Root MSE =	5.0424

Inflation	Coef.	Std. Err.	t	p> |t|	[95% Conf.	Interval]
noSME	-7.56e-06	.0000251	-0.30	0.768	-.0000612	.000046
loandistribution	-7.93e-06	.0000545	-0.15	0.886	-.0001241	.0001082
Loanoutstanding	-.0000414	.000063	-0.66	0.522	-.0001757	.000093
Defaulter	.0001665	.0002304	0.72	0.481	-.0003247	.0006576
PovertyRate	-.9491935	.6303541	-1.51	0.153	-2.292762	.3943745
_cons	36.83071	16.58353	2.22	0.042	1.483749	72.17767

(Source: Computed by the Authors')

Test Name	**Dependent Variable**	**Independent Variables**
Breusch-Godfrey Serial Correlation LMtest	Inflation	Total no. of SME loan holders
		Total amount of SME loan disbursed (In Million Taka)
		Total amount of SME loan outstanding (In Million Taka)
		Total no. of defaulters
		Poverty headcount ratio at national poverty lines (% of population)

Breusch-Godfrey LM test for autocorrelation

lags (p)	chi2	df	Prob > chi2
1	1.578	1	0.2091

H0 : no serial correlation

(Source: Computed by the Authors')

6. DISCUSSION

From the study's estimated results, it is observed that both non-scheduled bank Grameen bank and scheduled five commercial banks are working for the development of small and medium enterprises through entrepreneurial financing. Starting from the low-income stratum to middle income stratum works for developing enterprises which in turn helps to reduce poverty and accelerate economic growth have been undertaken. The government is trying to back the

microfinance segment through expressing improved strategies and also emerging structure across the country. SME entrepreneurs of the country are greatly lacking in decision-making assistants and remain unused to planning in the rural -urban sectors. SME banking can authorize financial inclusion and financial deepening in the economy to endure regardless of gender, cultivation, confidence, culture, rigid opinions, etc. done with broader excellent facilities and improved entree for diverse people of the society. SME segment bears competition and subsequently, it has competitors. Gross national income per capita is improving due to SME banking as evident from the estimated results. Women were crudely half of the population of the country. As such the growth procedures of the country can be faster to safeguard through their vigorous contribution which has helped women to enable combined advancement to the extremely deprived section of the people. Shaw (1973)'s theory is based on two segments out of which one is financial repression and through SME banking the ultra-poor of the country get a financial dominating position which creates improvement in the socio-economic structure of the country. As a resultant factor poverty is also declining and SME entrepreneurs are creating employment opportunities in the rural and urban areas as well as increasing purchasing power parity of the country. Ministry of Finance Government of the People's Republic of Bangladesh, central bank (Bangladesh Bank) , Palli Karma Sahayak Foundation , Microcredit Regulatory Authority , Small and Medium Enterprise Foundation , Bangladesh NGO foundation, Bangladesh Academy for Rural Development, etc .are trying hard to develop entrepreneur through financing in the SME sector of the country. Besides, the banking sector in the formal sector, semi-formal sector like Grameen bank and non-governmental organizations are working to improve social justice and reducing income inequality through various development organizations.

Total number of Grameen bank branches are significantly related to total no. of members repayment rate and below poverty level in Bangladesh. This indicated that positive financial inclusion has been occurring through the total number of Grameen bank branches expansion. Financial intermediation helps in the economy through bridging between surplus units and deficit units. Kayani et al. (2021)s' results about Grameen Bank have been found positive in Bangladesh. The study found that total no. of assets is negatively related to below poverty level which implies that if asset rises then poverty level decreases. Below poverty level is negatively related to repayment rate which indicates that if one is poor then he /she cannot pay the amount in due time. Gross national income per capita is related to below poverty level which implies that as Gross national income per capita rises then poverty level declines. Unemployment decreases then poverty level will decrease which implies upliftment of the people. Disregarded and indigent individuals are assumed superior beneficiaries of various schemes of the Grameen banking. Sharma (2018)'s findings about commercial banking in India is applied to Bangladesh's commercial banking system.

Commercial banking sector as a whole is providing essential funds to start SMEs and money for vital schemes and commercial endeavors for the economic development of the country through creating entrepreneurs which ultimately reduce poverty. For commercial banks, the study did ARDL and augmented Dickey–Fuller test (ADF) and also Johansen tests for cointegration. The Johansen test this will have an impact on the poverty reduction of the country and SME loan creates entrepreneurs. An enormous amount of small and medium enterprises credits has been further worked as a part of the process, giving banking services of the country a new dimension.

From the study, it is observed that SME loan holders played a vital role in the economy. Rate of interest of borrowing is very important for the disbursement of a loan. In order to expand small and medium businesses, the commercial banks engaged stages to endorse clients' diversified products. Women are getting priorities in the banking sectors through utilization of SME loans. To reduce poverty, the banks are helping helpless people who include landless women, lower income stratum, widowed and divorced women, special children and inactivated people. However, defaulter loans have a negative impact on the expansion of banking loan giving scope as loan pricing will rise and non-performing loans will lead to decrease lending capacity of banks. Inflation rate of the country is related to total no. of SME loan holders, Total amount of SME loan disbursed, total amount of SME loan outstanding, Total No. of defaulters, Poverty headcount ratio at national poverty lines. The study found that the broad progress of the SME banking sector and the situation at the rural and urban areas affect the social, political, legal and economic development of the country. SME banking too safeguards through financial inclusion individuals irrespective of gender, marginalized, cast, special person, tribals, religion, pauper and also unbanked people. SME banking helps the agricultural sector, agro- based industries, small and medium enterprises, non-farm activities as well as creating employment of unemployed people along with disguised employed persons. Scarcity of human beings can be decreased by the SME financing and creating entrepreneurs by the commercial banks. This is relating to financial relegation of the country on political steadiness, decrease of poverty through innovativeness and creativities by technology transfer, besides frequently measuring poverty, decrease to originalities to expand the resilience capacity of poverty decline, increase of domestic and international trade and to adopt and mitigate problems of resource scarcity through political economic ideologies for economic development of the country.

7. CONCLUSION, IMPLICATION AND FUTURE RESEARCH

The study with the help of econometric models tried to find out SME financing through scheduled banks and non-scheduled banks to create entrepreneurs. Entrepreneurs can create employment opportunities as well as empowerment of women with gender balances. As banks are related to the financial sector, decent services towards the clients ultimately safeguard the concentration of the masses. Positive impact on economic growth with fulfillment of basic needs leads to creating opportunities for the nation to have a better livelihood and lowering Gini index. Repayment of SME loans with large amounts of loans should be regularly taken from the borrowers so that funds for advancing can be properly managed by the banking system. Current democratic stable political conditions are essential for the achievement to generate entrepreneurship and expansion of the SME sector. For the SME sector, the current interest rate is okay but if adjusted with inflation rate in future then there is a chance to raise the rate of interest on advance which may lead to default culture. Training in the SME sector by the banking system is very much significant so that borrowers can be able to build up their capacity building. The overall growth of the SME banking sector ought to work without any hindrance and supplement by the NGOs. From March2020, the adverse effects of the COVID-19 pandemic, aftermath of COVID-19 and Russia -Ukraine war have hampered the world economy which has also affected Bangladesh's economy. Business environment friendly measures must be taken by the

government. So that SME's entrepreneurs can act without any sort of hindrance and they can work in the corruption free scenario. Banks should come forward not only providing credit to the entrepreneurs but also providing consultancy services, business advice, policy advocacies for arranging technological transfer, marketing, managerial, trading, operational and administrative efficiencies and effectiveness in lieu of a nominal charge. However, Grameen bank needs to change their non-scheduled banking behavior towards their beneficiaries as their different types of services are becoming older with comparatively other NGOs and also non-scheduled banks to sustain in the long run for which they must take a strategic planning with the changing business environment of the SME in the country and also all over the world and they need to go for business process reengineering as well they must execute their new business model for SME financing and creation of entrepreneurs. Social entrepreneurship ideology and social business philosophy must work pro-people accessible development framework and to get rid of poverty.

Entrepreneurs of SMEs need to build three types of plans starting from operational plan, tactical plan and strategic plan to sustain both in the short run and long run. Small and medium scale business management of credit by the entrepreneurs require appropriate training and knowledge and skill for which banks should come forward to help entrepreneurs. Banks can also help social networking and to ease trading business for genuine entrepreneurs of the SME sectors. To produce quality products subject to the price is very much important for the entrepreneurs for which global benchmarking may be used and the Ministry of Commerce, Bangladesh may facilitate them. SME product price should not be below average variable cost rather it should be price must equal to average cost to sell at the normal price. In the SME sector repatriation of the exportable fund should be done by the official channel i.e. banking system as a whole.

SME banking has a positive impact on domestic economy and helps to accelerate financial development of the country which in turn propel the economic development through creating self-employment, job opportunities, market access, vertical and horizontal coordination between both import substitution industrialization process and export-oriented growth strategies, rise of purchasing power parity, poverty reduction, self-esteem and freedom from ignorance. However, SME sector need to be cautious from the impact of negative market externalities for which internal and external stakeholders of SME banking must be vigilant and play a significant role and continuous monitoring and evaluation is being needed. Digitization process should be mandatory for SME credit borrowers as well as banking sectors so that real gross time processing can be feasible and fraudulent activities can be checked. Small borrowers of SME sector should not be punished unless valid reason can be detected. Moreover, under SMEs those entrepreneurs will export their product at abroad, their sale proceeds must come through the official channel and when bank will open any letter of credit (except non-scheduled bank) must be careful about under invoicing and over invoicing and to prevent such type of malpractices. National Board of Revenue (NBR), Bangladesh should promote SME entrepreneurs for the sake of the nation by using appropriate fiscal policies and should not limit only SME friendly Tax/Vat rules. Moreover, hope that in Bangladesh appropriate definition of not only small and medium enterprises but also cottage and micro enterprises need to be declared by the Finance Ministry of the Government of Bangladesh which will be same all over the country so that nobody can take any misleading chances of differences in definition.

In future a study may be done by considering the competitive advantage's scenario of SME banking and creation of entrepreneurs among Bangladesh, India, Nepal, Sri Lanka, Thailand, Philippines considering both quantitative dataset and qualitative methods. As such researchers may take more time to do the research work with the help of grants from any donor agencies to obtain realistic, thorough and comprehensive study on SME banking and creation of entrepreneurs.

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