Impact of Bank Based Rural and Urban Financing on Economic Growth of Bangladesh

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Foreword

As a part of the ongoing dissemination of BIBM research outputs, the present research monograph contains the results and findings of the research project titled "Impact of Bank Based Rural and Urban Financing on Economic Growth of Bangladesh".

The relationship between bank credit and economic growth has been an extensive subject of empirical research in both developing and under developing countries since the development of the innovation theory of Schumpeter (1911). In Schumpeterian world, bank credit plays a pivotal role in economic growth. Fundamentally, bank credit is defined as the aggregate amount of credit/funds provided by commercial banks to individuals, business organizations, industries and government. Individuals obtain credit for both consumption and investment purposes, business organizations and industries borrow loans to invest in plant and machinery and in working capital, whereas government borrows loans to spend for recurrent as well as capital purposes. In other words, bank credit finances production, consumption and capital formation, which further stimulates the economic growth. On the contrary, economic growth may encourage credit expansion through its demand for financial services. The introduction of economic reforms in Bangladesh, particularly reforms in the banking sector, although boosted and edged up the profits and improved efficiency of the banks, an unwarranted consequence was the decline in credit to the less developed states and regions. In this backdrop, this paper intends to analyze the relationship and causality between bank credit and economic growth. Further, the study attempts to examine the effect of credit on economic growth in case of Bangladesh.

In brief, the study suggests that urban economic growth strongly related with urban financing; whereas rural economic growth is also strongly related with rural financing. One of the primary reasons behind this strong relationship might be the fact that the economy in Bangladesh is predominantly financing by bank-based financing, which implies that there should be a strong influence of the bank-based financing over the economic development. Furthermore, as the economy mostly depends on bank-based financing, rather than on equity-based financing, there must be a financial leverage effect as well. Apart from that, the velocity of money also works for having multiplier effect on the economic development of the bank financing. However, the relationship is stronger in case of urban financing. One of the causes behind this phenomenon might relate to the nature and size of the industry to which the credit is being disbursed. As in urban area the credit disbursed is mainly channels towards large and medium industry, it generates greater profit and more employment than the credit disbursed in the rural area resulting in greater influence on the urban development.

It gives me immense pleasure to publish and distribute this research output to the practitioners of the banks as well as to the academics and common readers. I hope this monograph will be useful to understand the significant impact of bank based rural and urban financing on the economic growth of Bangladesh.

Md. Akhtaruzzaman, *Ph.D.*
Director General, BIBM

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It was a great experiment for the entire research team to conduct the study on "Impact of Bank based Rural and Urban Financing on Economic Growth of Bangladesh" since there was hardly and study conducted in Bangladesh before and also very few studies were conducted globally. We have completed the research project with the immense support from many resources persons and think tanks from both the banking sector and academia.

We would like to extend our gratitude to Mr. Md. Nazimuddin, the then Executive Director of Bangladesh Bank, and honorable Director General of BIBM as well for his valuable guidance and suggestions to complete the study in a comprehensive manner.

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Research team is grateful to the eminent discussants of the seminar Professor Dr. Barkat-e-Khuda, Dr. Muzaffer Ahmad Chair Professor of BIBM; Mr. Helal Ahmed Chowdhury, the then Supernumerary Professor of BIBM; Mr. Md. Yasin Ali, Supernumerary Professor of BIBM; Mr. Md. Ali Hossain Prodhania, the then Managing Director of Bangladesh Krishi Bank; Mr. Naser Ezaz Bijoy, Country Chief Executive Officer, Standard Chartered Bank and Dr. Mahfuzul Hoque, Professor, Department of Accounting & Information Systems, University of Dhaka and the participants of different banks for their valuable suggestions and comments on the paper. We are also thankful to support team of BIBM, especially Ms. Papon Tabassum, Research Officer of BIBM, and Ms. Shamema Afroj Sharna, Research Associate of this project, for their continuous and persistent effort for successful completion of the research.

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Abbreviations

ACD	Agricultural Credit Department
ADF	Augmented Dicky Fuller Test
ARDL	Autoregressive Distributed Lag
BB	Bangladesh Bank
BBS	Bangladesh Bureau of Statistics
BFI	Banking Financial Institution
BRDB	Bangladesh Rural Development Board
CAMELS	Capital Adequacy, Asset Quality, Management Ability, Earnings, Liquidity, Sensitivity
CIB	Credit Information Bureau
CMSME	Cottage, Micro, Small & Medium Enterprise
FCB	Foreign Commercial Bank
GDP	Gross Domestic Product
GVA	Gross Value Added
MDGP	Millennium Development Goal Program
MFI	Micro Finance Institution
NBFI	Non-Bank Financial Institution
NPL	Non-Performing Loan
OLS	Ordinary Least Squares
PCB	Private Commercial Bank
SB	Specialized Bank
SDG	Sustainable Development Goal
SOCB	State Owned Commercial Bank
VAR	Vector Auto Regressive Model
VECM	Vector Error Correction Model

Commercial banks' lending activity helps to improve efficiency and rational distribution of resources between the various entities. Due to increased banks' lending activities volumes more attention is paid to their impact on the national economies. Lending activities can be defined as the variation in the volume of loans and usually the main sectors which are classified in lending are non-financial corporations and households sectors. Gross Domestic Product (GDP) is related to the country's economic activity, the country's gross domestic product is an indicator that reveals the country's economic situation and its trends. In scientific literature there are plenty of studies that analyses the relationship between lending and economic activities.

Economy of Bangladesh cannot develop and promote without appropriate monetary policy. The basic aim of economic policies is to enhance to promote the wellbeing of the general public. Monetary Policy accomplish this important objective through promote the price stability. The connection between financial development and production growth is bidirectional for all countries. It means that the impact of credit is not always being positive on economic growth. It is not difficult to understand the real way in which the growth of credit influences economic growth. When credit grows, consumers can borrow and spend more, and enterprises can borrow and invest more. A rise of consumption and investments creates jobs and leads to a growth of both income and profit. Furthermore, the expansion of credit influences also the price of assets, thereby increasing their obtained value. The rise of asset prices offers the owner the chance to borrow more, due to the increase of wealth. This cycle of credit expansion leads to increased costs, investments, to the creation of new jobs, to prosperity, followed by a new loan, which produces the sensation of increased wealth, and which makes people feel happier as long as they are moving within the kingdoms of this ring. In order to increase economic growth with the help of credit, a more relaxed economic policy is required. There is completion of the privatization process as well as increased consumption of goods produced by economy. Finally, all economic expansion induced by credit comes to an end when one or more essential economic sectors become unable of paying off their debts.

Financial development can raise economic growth by increasing saving, improving assigned efficiency of loanable funds, and promoting capital accumulation. Moreover, a long sequence of contemporary empirical studies shows that a variety of financial indicators is strongly and positively associated with economic growth. Bank credit can be sub divided into two: credit to the urban sector and credit to the rural sector. This has been empirically proven that credit to the urban sector is weak in generating growth within the economy because they are prone to waste and politically motivated programmers which may not deliver the best result to the populace.

The study suggests that urban economic growth strongly related with urban financing; whereas rural economic growth is also strongly related with rural financing. One of the primary reasons behind this strong relationship might be the fact that the economy in Bangladesh is predominantly financing by bank-based financing, which implies that there should be a strong influence of the bank-based financing over the economic development. Furthermore, as the economy mostly depends on bank-based financing, rather than on equity-based financing, there must be a financial

leverage effect as well. Apart from that, the velocity of money also works for having multiplier effect on the economic development of the bank financing. However, the relationship is stronger in case of urban financing. One of the causes behind this phenomenon might relate to the nature and size of the industry to which the credit is being disbursed. As in urban area the credit disbursed is mainly channels towards large and medium industry, it generates greater profit and more employment than the credit disbursed in the rural area resulting in greater influence on the urban development.

Impact of Bank Based Rural and Urban Financing on Economic Growth of Bangladesh

1. Introduction

The ever-changing tendencies in globalization, forthcoming liberalization and the contemporary Asian business disaster have fetched rehabilitated attention going on significance of the bank credit and its influence on commercial growth. Nowadays, a world without finance cannot be imagined. In simple words, finance is the soul for economic activities. Certain resources are needed to execute any economic undertaking, which are assembled in terms of money (i.e., in the arrangement of cash currency notes, coinage and other valuables, etc.). Finance is a precondition for attaining physical resources. That is needed to accomplish productive actions and performing business operations e.g., sales, unascertained liabilities pay compensations, reserve for contingencies and consequently on.

Credit played an important role in economic growth and development of the developing countries like Bangladesh. The liquidity strains in the banking industry always limit the growth of the industrial sector as well as the rural sector of the country consequently taper the cumulative growth of the country. The distribution of credit to the different private sector has also significant impact upon the economic growth. In Bangladesh, credit distribution was tilted towards capital intensive sector (industrial sector) and the flow of credit to priority sector like agriculture was found low.

Businesses habitually do not construct their resources organization fully by their owner equity capitals, in direction to fulfill their monetary needs of businesses particularly small partnerships which consume insufficient causes of floating resources (White & Cestone, 2015), (Galor & Zeira, 2016). The basic function or role of banks and other financial institution in economy is to mobilize surpluses from income holders as their savings to others who need it on interest. Thus, the banks convert the savings into loanable funds. These loanable funds are channel to investors who borrow to meet the financial need of their businesses.

Commercial banks' lending activity helps to improve efficiency and rational distribution of resources between the various entities. Due to increased banks' lending activities volumes more attention is paid to their impact on the national economies. Lending activities can be defined as the variation in the volume of loans and usually the main sectors which are classified in lending are non-financial corporations and households sectors. Gross Domestic Product (GDP) is related to the country's economic activity, the country's gross domestic product is an indicator that reveals the country's economic situation and its

trends. In scientific literature there are plenty of studies that analyses the relationship between lending and economic activities.

These diverse views generate curiosity about the relationship, as well as, direction of relationship, between bank credit and economic growth among the academicians. However, there are no unanimous opinion on the relationship between credit and economic growth so far. Banking activity is confirmed to be a significant factor in driving local economic growth, in line with the empirical literature on the relationship between finance and economic growth (Caporalea et al., 2016). However, the link between bank lending and economic growth has important policy implications for development strategies. Especially, in the field of increasing the rate of economic growth in spite of the limited role of the banking sector to control the money supply and its effects on the economy.

2. Connection between Bank Credit and Economic Growth

Economic growth and bank credit adopted various studies. We can define economic growth as positive change in the level of establishment of goods and national income and services which are provided by country over a specific period of time. This is usually measured in terms of the level of production within the economy. Other parameters of growth which ranges from real per capital GDP, the velocity of corporeal capital accretion etc. (McKinnon) (Allen and Ndikumama), According to (Bencivenca & Smith), spending goods in the economy are shaped from labor and capital. An entrepreneur, who lends credit from the bank used for capital invested in the business, which he uses to utilize labor in respect to induce goods & services for the Economic Growth.

Economy of Bangladesh cannot develop and promote without appropriate monetary policy. The basic aim of economic policies is to enhance to promote the wellbeing of the general public. Monetary Policy accomplish this important objective through promote the price stability. The connection between financial development and production growth is bidirectional for all countries (Luintel and Khan). It means that the impact of credit is not always being positive on economic growth. It is not difficult to understand the real way in which the growth of credit influences economic growth. When credit grows, consumers can borrow and spend more, and enterprises can borrow and invest more. A rise of consumption and investments creates jobs and leads to a growth of both income and profit. Furthermore, the expansion of credit influences also the price of assets, thereby increasing their obtained value. The rise of asset prices offers the owner the chance to borrow more, due to the increase of wealth. This cycle of credit expansion leads to increased costs, investments, to the creation of new jobs, to prosperity, followed by a new loan, which produces the sensation of increased wealth, and which makes people feel happier as long as they are moving within the kingdoms of this ring. In order to increase economic growth with the help of credit, a more relaxed economic policy is required. There is completion of

the privatization process as well as increased consumption of goods produced by economy. Finally, all economic expansion induced by credit comes to an end when one or more essential economic sectors become unable of paying off their debts.

Financial development can raise economic growth by increasing saving, improving assigned efficiency of loanable funds, and promoting capital accumulation. Moreover, a long sequence of contemporary empirical studies shows that a variety of financial indicators is strongly and positively associated with economic growth (Gurley and Shaw), (Goldsmith), (McKinnon), (Shaw), and (Beck et al.). Bank credit can be sub divided into two: credit to the urban sector and credit to the rural sector. This has been empirically proven that credit to the urban sector is weak in generating growth within the economy because they are prone to waste and politically motivated programmers which may not deliver the best result to the populace.

2.1 Economic Growth

Economic growth is a sustained expansion of production possibilities measured as the increase in real GDP over a given period (Slavin, 2009, p. 390). Alternative theories of economic growth of classical growth theory, neoclassical growth theory, and new growth theory provide insights into the process of economic growth, but none provides a complete and definite answer to the fundamental questions: What causes economic growth and why do growth rates vary? Why are poor countries poor? How design policies that can help them grow? How our own growth rate is affected by shocks and our government's policies? Economics has some way to go before it can provide definite answers to these questions. The growth theories have developed over time, each building upon and replacing the previous theory (Parkin, 2012, p. 37). Accordingly, the variable economic growth is considered as a dependent variable in this study.

2.2 Schumpeter's View

Schumpeter made the first articulated statement about how financial transactions take an essential stage in economic growth. It is necessarily a phenomenon of development, though only when no central authority directs the social process. He makes possible the carrying out of new combinations, authorizes people, in the name of the society as it were, to form them (Schumpeter, 1939, pp. 1–20).

2.3 The Solow Growth Model

Solow's theory on growth supports the neoclassical view that the economy naturally adjusts to achieve stable equilibrium growth. Before the Solow model, the most commonly referred to model in growth is Harrod-Domar, which mostly focuses on the potential shortcomings of growth such as the coexistence of growth and increasing unemployment.

We assume that the economy produces a single good Y_t by means of two factors of production – capital, K_t and labor, L_t. The production function:

$$Y_t = f \{ K_t, L_t \}$$

The Solow growth model is designed to show how growth in the capital stock, growth in the labor force, and advances in technology interact in an economy, and how they affect a nation's total output of goods and services. To meet the overall objective of this study, the Solow growth model is adopted for examining the impact of Gross Capital Formation, labor, and bank lending on economic growth.

3. Literature Review

Marco Pagano, checked the relationship between financial intermediation and economic growth. There are some financial factors that can affect growth are, funneling saving to firms, improving the allocation of capital, affecting the saving rate and house hold borrowings. Financial intermediation can affect economic growth by acting on the saving rate, on the fraction of saving channeled to investment, or on the social marginal productivity of investment. Usually, financial development has a positive effect on growth. They made some tests and tests of the models have shown that some of the forecast correlations are really present in cross-country data, but little is known about how the development of different markets affects economic growth. Levine, Loayza and Bek, examine the casualty between financial intermediaries and economic growth. He used both traditional and recent techniques, instrumental variable procedures and cross-sectional panel technique respectively. They found that financial intermediary's exogenous components for development are positively related to economic growth. Policy implications by the researcher after results were that the contract enforcement, accounting practices and legal reforms for accounting can accelerate financial development and boost up the economic growth. Cottarelli, Giovanni Dell-Ariccia and Ivanna Vladkova-Hollar, examined the bank credit and its growth to GDP. They developed hypothesis that are these developments consistent through a process of conjunction and structural monetary extending by estimating an equilibrium level of bank credit to GDP ratio. They concluded that although there were no clear evidence that the recent increase in bank credit ratio is not consistence with financial development and economic growth. The policy implication for financial stability and macroeconomic development the policy makers will have to carefully evaluate the implications. Ngai Wa, based on the model of augmented production function, explore a possible channel by which the banking industry can make its contribution to the productive capacity of the economy. He concluded that although the elasticity of output with respect to bank credit has fluctuated over time and exhibited a downward trend, our research does provide a possible channel by which the banking industry can make a quantified contribution to the growth of the economy. However, the

contribution of domestic bank credit had been less significant in this growth process as large-scale tourism projects had been largely financed by foreign funds. Usai and Vannini investigate the role of specific categories of bank played in economic growth in Italy. Data was used for estimation during 1970 to 1993. By stemming the panel data regression model with fixed effect they concluded that the over-all magnitudes of financial sector have weal impact on local growth. Moreover co-operative and special credit banks have positive influence on growth that the public bank and national interest banks. These banks have negative impact on economic growth. Vaithilingam, Guru and Shanmugem, analyzed the note of commercial bank lending on economic growth in Malaysia. By using VECUM model they found that real income is directly affected by an increase in commercial bank credit to private sector and vice versa. Researchers recommended that developing economies such as Malaysia that are highly dependent on banking sector should develop their capital market to position themselves against the reliance on private sector. Nkurunziza , examine the effect credit and convergence on economic growth in Kenya in 1990s. The researcher found that firms that use credit grow faster than larger one. Barros, Managi and Matousek, explore the productivity changes in Japan through bank credit. The data covered the period from 2000 to 2006. Through traditional accounting method of growth the researchers conclude that the analysis is ambiguous. Adams et al., investigate empirically dynamic of relationship between bank lending, insurance and economic growth. They covered the study in Sweden and used time series data for the period 1830 to 1998. The data was used through two test granger causality and procedure of Toda and Yammato. The second one used to non-stationary nature of time series data. The results show that credit and insurance is important perquisite to stimulate economic growth. Moreover for developing countries this could have important policy implications. Aurangzeb, investigated the contributions of banking sector in economic growth of Pakistan. The data used in this study were collected from the period of 1981 to 2010. Augmented Dickey Fuller (ADF) and Philip Perron unit root test, ordinary least square and granger causality test have been used. Unit root test confirms the stationary of all variables at first difference. Regression results designated that deposits, investments, advances, profitability and interest earnings have significant positive impact on economic growth of Pakistan. The Granger-Causality test confirms the bidirectional causal relationship of deposits, advances and profitability with economic growth. On the other side we found unidirectional causal relationship of investments and interest earnings with economic growth runs from investments and interest earnings to economic growth. It is recommended that the policy makers should make policies to enhance the banking sector in Bangladesh because banking sector is significantly contributing in the economic growth of Bangladesh. Izhar and Ahmad determined the relationship between financial indicators and human development in Bangladesh.

Nwaru and Okorontah (2014) observed that real output causes financial development, but not vice versa, and that export was not significant in driving financial development, but growth in the financial sector was highly dependent on foreign capital inflows. Additionally, the MDGP and banking sector reforms indicators (BF) move differently with one not predicting the other within the study period, and there is a causal effect from manufacturing output growth to banking development or a bi-directional relationship (Owolabi et al., 2013), and (Ndlovu, 2013) reveal that there is unidirectional causality from economic growth to financial development. Financial system development is, therefore, an outcome of the pressure for institutional development in capital markets and the introduction of modernized financial instruments.

Smith (2012) provides some preliminary but consistent evidence that there is a causal impact of remittance flow on banking sector development in Fiji. Simwaka (2012) finds that Granger causality tests results show that economic growth drives financial development with no feedback effects. Liang and Huang (2011) shows that The Granger Causality result shows that d(M2) does not Granger Cause d(GDP), and d(GDP) Granger Cause d(M2). The bank credit affects real GDP per worker through its role of domestic capital accumulation and efficient resource allocation (efficiency) and hence, in total factor productivity in the long-run (Murty et al., 2012). Accordingly, a pro-active policy of growth and reform of the financial sector will help enhance economic growth in an open developing economy like Saudi Arabia (Masih et al., 2010).

In addition, the efficient development of modern banking sector of bank lending is a useful instrument to promote economic growth in Nepal (Timsina & Pradhan, 2016). With regards to the bi-directional causality, (Fosu, 2013) provides evidence that there exist bidirectional causality between financial development and growth. Yazdi and Khanalizadeh (2013) suggest that there is bidirectional causality between agricultural economic growth and financial development. Guttentag (2011) shows that the existence of a stable long-run relationship between financial development measures and economic growth. Results show different causality patterns between the two models. Jordaan (2010) finds that evidence of supply-leading and demand-leading views. When the ratio of deposit liabilities to non-mineral GDP is used as a proxy for financial development, the causality runs from financial development to economic growth, which supports Schumpeter's supply-leading view. Egbetunde and Akinlo (2010) show the need to develop the financial sector through appropriate regulatory and macroeconomic policies.

4. Objectives of the Study

Based on the aforementioned literature and identifying the linkage between bank credit and economic growth, we could set following three objectives in this study:

i. To investigate the impact of bank based urban financing in the economic growth of Bangladesh.

ii. To investigate the impact of bank based rural financing in the economic growth of Bangladesh.

iii. Based on objective (i) and (ii), establishing a linkage between banks based urban and rural financing and their impacts in the economic growth of Bangladesh.

5. Research Methodology

In calculating the Real GDP of Bangladesh, the economic sectors have been classified into three sectors: Agriculture, Industry, and Services. Each of these sectors have its own sub-sectors which ultimately composed the real GDP of Bangladesh. Since the study considered the published secondary data, it was quite difficult to differentiate the economic sub-sectors under the broad headings of rural and urban. That's why the study only considered the amount of loan disbursements in the rural area as well as urban area. Loan disbursements in the rural area does not indicate that those were financed by only the rural branches of the commercial banks rather than the entire banking system. Similarly, the loan disbursement in the urban area does not also indicate that those were only financed by urban branches of commercial banks. Based on our title of the study, we did not consider the lending role of Micro Credit organizations, NGOs, and other private lenders. To identify the impacts of bank based urban and rural financing, we used 37 years of data during 1981-2017 in order to run regression and econometric analysis. But to show the trend of loan disbursement in the rural and urban area, division wise loan distribution, and bank wise loan distribution in both rural and urban area, we used the data from 2009 to 2018. The Augmented Dickey-Fuller (ADF) unit root test was conducted by using Schwarz info criterion technique and the results for the unit root test of variables level as well as in first and second difference were measured presented. ADF test values of variables was presented in level as well as with first and second difference as a pattern with intercept, trend and intercept and with none. The presences of unit root or the null hypothesis of non-stationary for any variable will not be rejected when the absolute value of t-statistic will less than tabulated or critical value. The significance will be checked from p-value. For a model with linear trend, the critical value is at the 5% of level of significance. If p-value is greater than 5 percent we will reject the null hypothesis and accepts the alternative that represented no unit root mean data are stationary.

6. Bangladesh Bank (BB) Policy for Urban and Rural Financing

Although there is no such policy guideline issued by BB for urban financing, but BB was always somber enough to provide a comprehensive guideline for agricultural and rural financing.

6.1 Agricultural & Rural Credit Policy of 2018-2019

Bangladesh Bank in its ACD Circular No-1, dated 25th July 2018, published 'Agricultural & Rural Credit Policy & Program'. Considering the growing demand for agricultural and rural credit, state-owned commercial and specialized banks will determine their own target level and private and foreign commercial banks will allocate 2 percent of net loans and advances for agricultural and rural credit and thus total expected level of agricultural and rural credit disbursement in the current fiscal year will be BDT 21,800 crore which will be 6.86 percent higher than previous fiscal year. In addition to that, Bangladesh Samabay Bank Limited and Bangladesh Rural Development Board (BRDB) will disburse BDT 20 crore and BDT 780 crore of agricultural and rural credit from their own sources.

6.2 Core Features of the Agricultural and Rural Credit Policy of 2018-2019

To give strong emphasize on agricultural and rural credit, BB imposed certain restrictions to the banks. If the banks failed to achieve the aforementioned (6.1) target, they will have to deposit the residual amount (the difference between the targeted amount and the actual amount they provided) to BB or the amount equal to 3 percent of the Net Loans and Advances mandatorily they will have to deposit to BB. The core features of this program are presented below:

- In agricultural and rural credit, priority should be given to the three core areas, i.e. crops, fisheries, and livestock.

- At least 60%, 10%, and 10% financing will be provided to crops, fisheries, and livestock respectively.

- The loan application should be readily available to the possible agro-borrower.

- Loan application of the farmers should be acknowledged. If any loan application is rejected, bank should inform it to the applicant through letter.

- For the fastest disposal of loan application process, all sorts of instructions should be provided to the borrower at the time of receiving application form.

- All the loan applications should be disposed of within ten working days maximum.

- Excise duties will be waived for the credit/debit amount up to BDT 100,000.00 against 10-taka account.

- For the fastest disposal of loan, CIB report or CIB enquiry will not be required for the maximum loan of BDT 250,000.00.

- 'Area Approach' method will be practiced for the realistic distribution of rural financing.

- One of the objective of this program is to give priority to the share-croppers, farmers in the marginal level. Relatively remote and underprivileged areas should be taken into consideration in rural financing.

- For ensuring the transparency, in the Union level, agricultural credit will be distributed in the open forum.

- It must be ensured that actual farmer should get the credit facility and they should not be harassed by anyway.

- Relatively small, marginal and share-croppers will be allocated credit facility under individual or group basis.

- In order to ensure the proper value of the crops manufactured by the farmer, loan can be sanctioned for warehousing and marketing purposes.

- Adequate amount of loan should be disbursed to the successful farmers so that other farmers could be motivated from them.

- If a farmer does not become a loan default, loan can be provided at 4% interest rate if he wants to produce pulse, seed-oil, corn, and spices.

- Loan can be disbursed for the purchase of agro-machineries and irrigation-machineries.

- Loan can be provided for solar home system.

- Individual or group-based credit facilities can be provided for the activities related to self-employment and revenue generation projects to promote the rural development.

- Since foreign banks some private commercial banks are distributing credit facilities through MFI, it is strongly recommended to monitor the progress of those facilities in quarterly basis.

- Women will get priority in agricultural and rural credit facility.

- 'Agri Financing Performance' of the banks will be incorporated in the CAMELS rating in the "M" (Management) component.

- District wise 'Agricultural Credit Committee' chaired by Deputy Commissioner will be more effective.

- In this committee, the representatives of private commercial banks and foreign banks will be incorporated.

- Outsourcing method could be used for agro and rural credit program.

- Information technology and mobile financial service will be included in the disbursement and recovery of agro and rural credit.

- In case of 'Contract Firming', required corporate guarantee is must in providing the credit facility.

- Special priority will be given to the high-value crops.

- The time frame for loan disbursement and recover can be adjusted due to the climate change.

- Loans will be provided under easy terms and conditions to the farmers producing salt in sea-side region.

- Respective banks will undertake awareness building programs to the farmers for agricultural and rural credit facility.

- Separate 'Recovery Cell' can be established by the respective banks for proper utilization of funds and avoiding any kinds of liquidity crisis.

- Loan can be provided for the firming of Turkey.

- Farming under floating system and integrated agro-projects can be financed.

7. Findings and Analysis

Based on the data collected from 'Schedule Banks Statistics' published by BB, we segmented the analysis two broad headings. In first part, we attempted to show the trend of rural and urban financing in terms of outstanding amount, divisions wise, and bank wise disbursement considering ten years data from 2009 to 2018. In the second part, we conducted an Econometric analysis to identify the impacts of banks based urban and rural financing in the economic growth of Bangladesh. Here, we measure the economic growth based on urban and rural financing's contribution to the GDP of the country where 37 years of data were studied.

7.1 Trend Analysis

7.1.1 Outstanding Amount of Loan in Rural and Urban Financing-The Aggregate

From the Figure-1, it is clearly shown that the loan amount in rural financing is gradually increasing during 2009 to 2017. The possible reasons for this growth could be the rapid growth of CMSME, and lower rate of NPL. From different previous research and date, it was observed that there is a very low tendency exists among the rural borrower to become default. Another possible reason could be the establishment of innovative agro based industry which is not only adding value to the GDP of the country but also making impact in our export revenues.

Figure 1: Outstanding Amount of Rural Financing

**Outstanding (Rural Financ) as on December during CY2009 to CY2018
(Taka in Crore)**

94050
83982
67999
57126
51925
45062
42074
27106
23207

2009 2010 2011 2012 2013 2014 2015 2016 2017
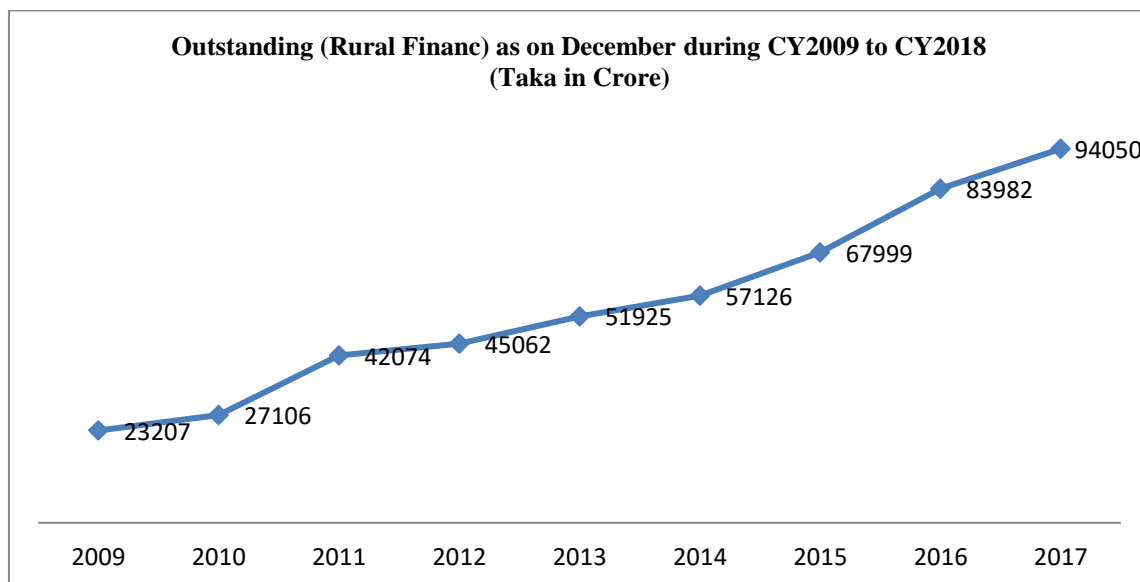
Source: *Scheduled Bank Statistics*, Bangladesh Bank

Figure 2: Outstanding Amount of Urban Financing

**Outstanding (Urban Financ) as on December during CY2009 to CY2018
(Taka in Crore)**

808727
708695
600657
522733
458700
398782
368551
323416
272674
215034

2009 2010 2011 2012 2013 2014 2015 2016 2017 2018
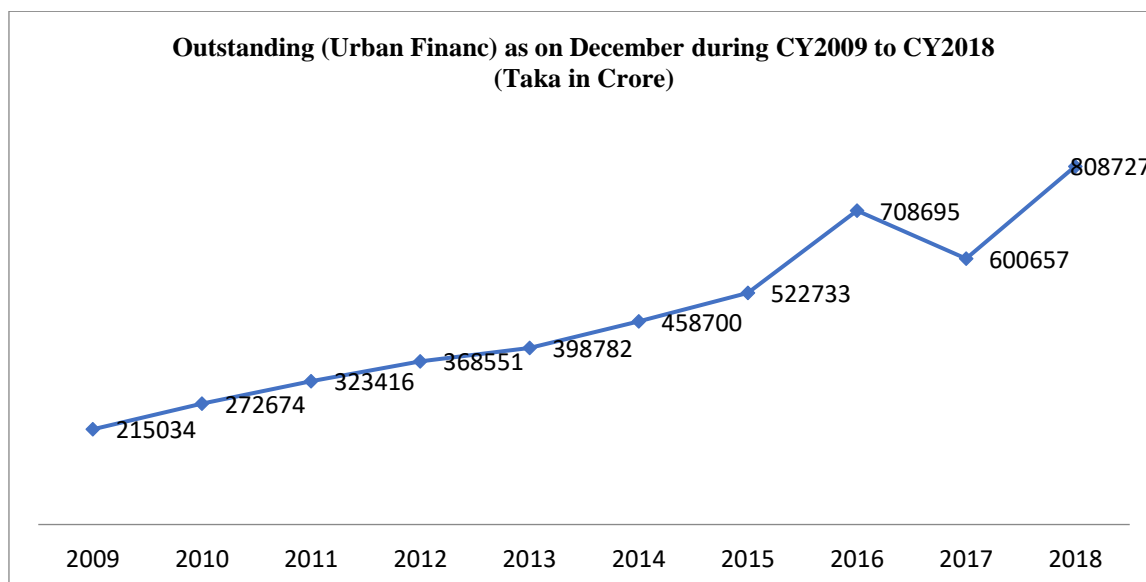
Source: *Scheduled Bank Statistics*, Bangladesh Bank

On the other hand, Figure-2 is presenting the urban financing by the banks during 2009 to 2018 which is also showing a growing trend from 2009 to 2016. In 2017, although the loan amount declines but it turned back to its previous trend in 2018. With reference to "Agricultural and Credit Policy" of BB, it was observed that BB always took necessary initiatives to promote the rural sector by fixing up higher loan target in the upcoming year as compared to previous fiscal year. In 2017, the banks failed to achieve the target but

nicely they came bank in the following year. The growth rate of GDP of Bangladesh is gradually increasing over time. This growing trend of rural and urban financing is ultimately reflecting the higher growth rate of GDP.

7.1.2 Outstanding Amount of Loan in Rural and Urban Financing – Division Wise

Figure 3 to Figure-10 are showing the division wise allocation of rural and urban financing. In Chattogram (Figure-3) and Dhaka Division (Figure-4), the growth of urban financing is increasing over time except the time period 2012 to 2014. The possible reason could be the political instability created by opposition political party where it affects the overall investment opportunities in the country. Similarly the same trend was observed in case of rural financing. Demographically, the rural part of Bangladesh is much higher than urban part. But the loan disbursed in rural area is significantly lower than the urban area.

Figure 3: Urban & Rural Finance (Chattogram Division)

Outstanding (Urban & Rural Financ) as on December during CY2009 to CY2018
Chattogram Division
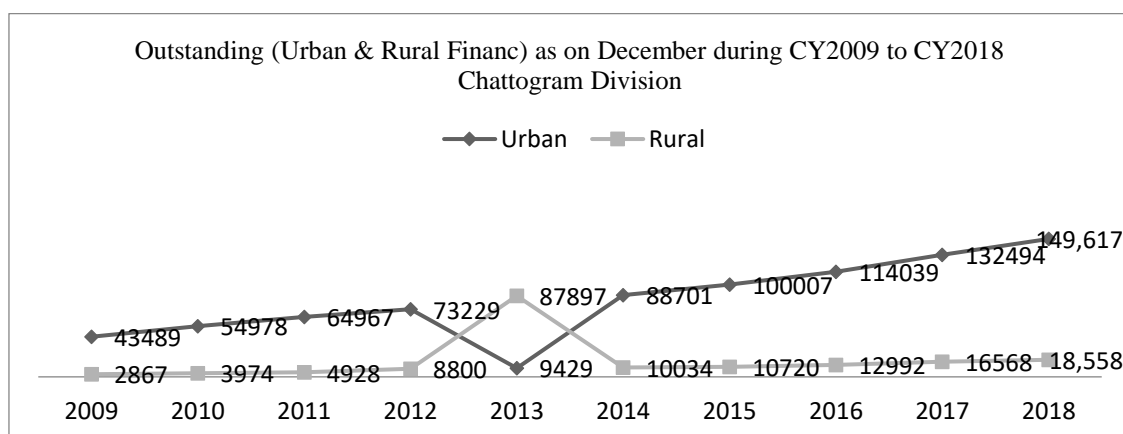
Source: *Scheduled Bank Statistics*, Bangladesh Bank

Figure 4: Urban & Rural Finance (Dhaka Division)

Outstanding (Urban & Rural Financ) as on December during CY2009 to CY2018
Dhaka Division
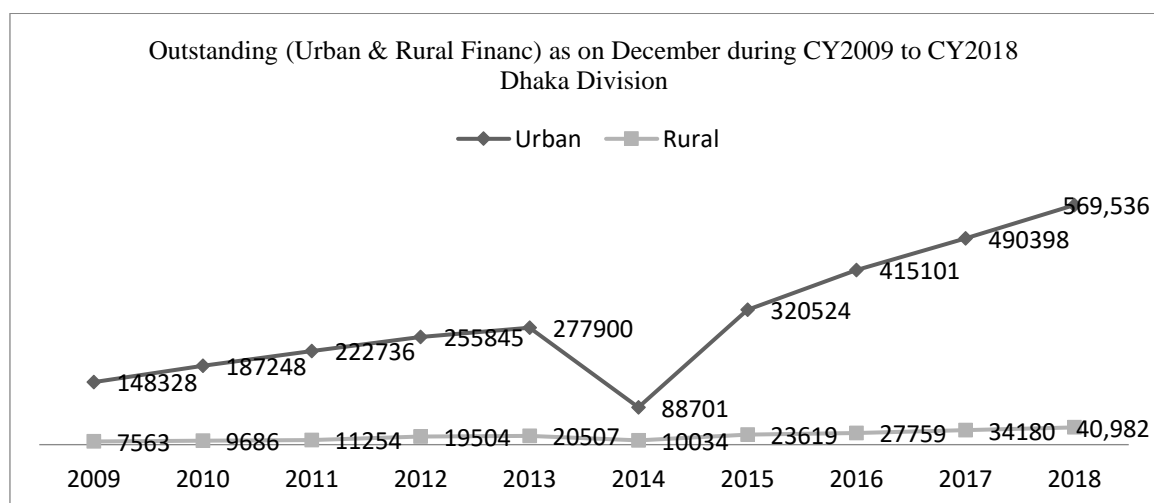
Source: *Scheduled Bank Statistics*, Bangladesh Bank

In Khulna Division (Figure-5) and Rajshahi Division (Figure-6), a growing trend had been observed during 2009 to 2018. Although the growth rate urban financing is significantly increased but the amount of increased rural financing is not that significant.

Figure 5: Urban & Rural Finance (Khulna Division)

Outstanding (Urban & Rural Financ) as on December during CY2009 to CY2018
Khulna Division

Urban ◆ Rural ■

8990, 12200, 13323, 14001, 14043, 16258, 18338, 21064, 24453, 26,807
1862, 2327, 2728, 4201, 4595, 5322, 6028, 6941, 8038, 8,866

2009 2010 2011 2012 2013 2014 2015 2016 2017 2018
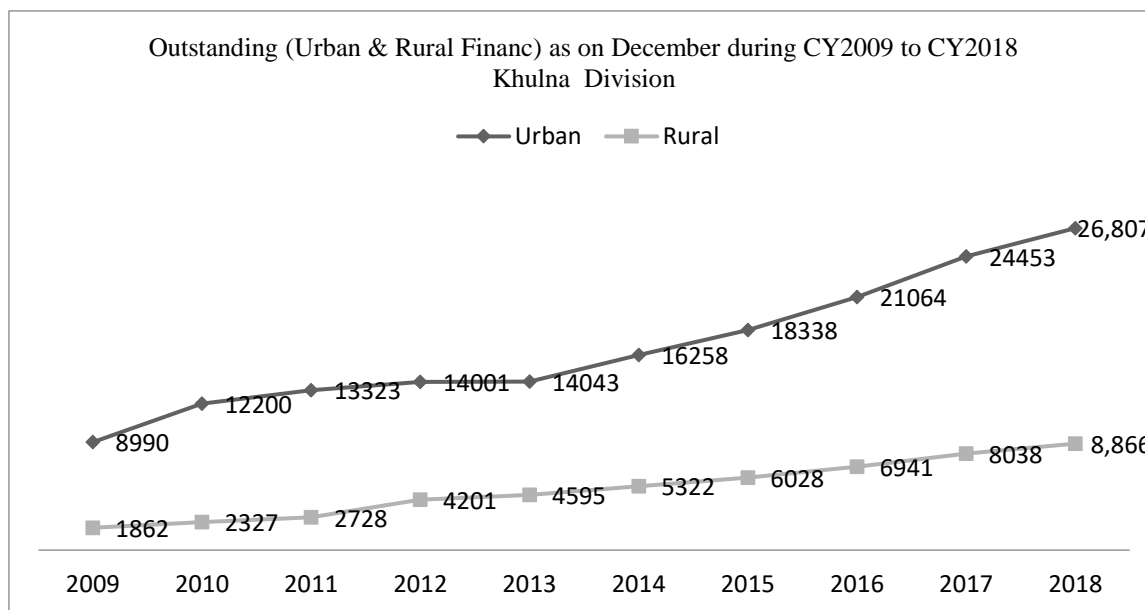
Source: Scheduled Bank Statistics, Bangladesh Bank

Figure 6: Urban & Rural Finance (Rajshahi Division)

Outstanding (Urban & Rural Financ) as on December during CY2009 to CY2018
Rajshahi Division

Urban ◆ Rural ■

9616, 8827, 10649, 12287, 13529, 15939, 18040, 21416, 25266, 27,038
3936, 2193, 2548, 3198, 3554, 4147, 4719, 5560, 6648, 7,185

2009 2010 2011 2012 2013 2014 2015 2016 2017 2018
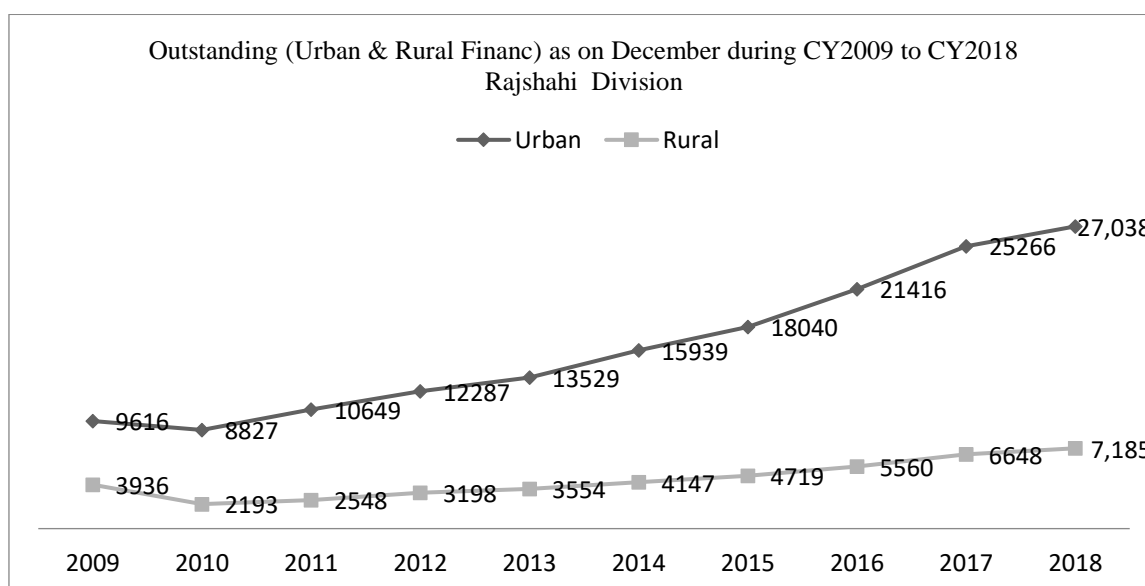
Source: *Scheduled Bank Statistics*, Bangladesh Bank

In Barishal (Figure-7) and Sylhet Division (Figure-8), almost the same increasing trend has been observed in both rural and urban financing. But the amount of loan disbursed in both the areas is relatively lower compare to the previous four divisions.

Figure 7: Urban & Rural Finance (Barishal Division)

Outstanding (Urban & Rural Financ) as on December during CY2009 to CY2018
Barishal Division

Urban — Rural

Year	Urban	Rural
2009	1407	1025
2010	1806	1209
2011	2376	1374
2012	2584	1679
2013	2928	1934
2014	3353	2587
2015	3865	2601
2016	4668	2985
2017	6648	3388
2018	5,970	3,623
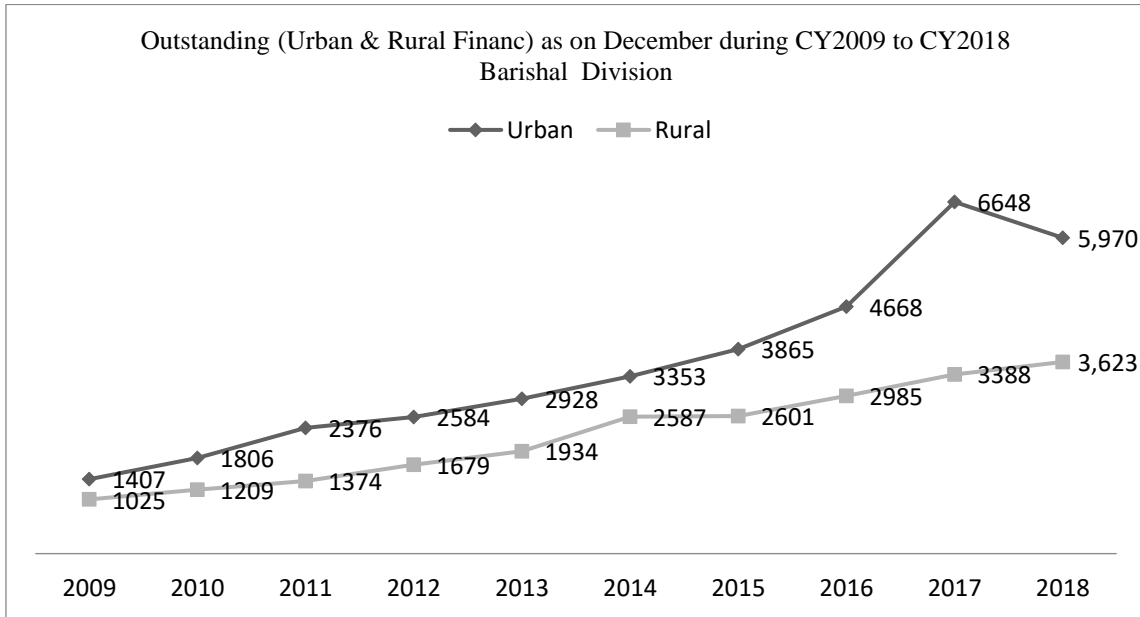
Source: *Scheduled Bank Statistics*, Bangladesh Bank

Figure 8: Urban & Rural Finance (Sylhet Division)

Outstanding (Urban & Rural Financ) as on December during CY2009 to CY2018
Sylhet Division

Urban — Rural

Year	Urban	Rural
2009	3204	1186
2010	3597	1348
2011	4225	1499
2012	4491	1712
2013	4826	1905
2014	5188	2513
2015	5761	2205
2016	6497	2581
2017	8004	4628
2018	7,592	3,154
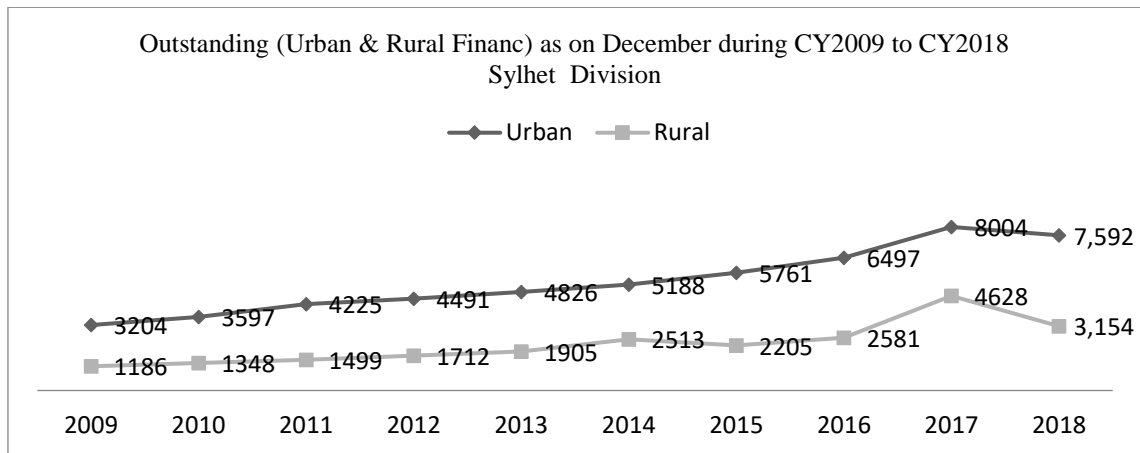
Source: *Scheduled Bank Statistics*, Bangladesh Bank

Since Mymensingh Division (Figure-9) was emerged in 2015, that's why four years data were absorbed which is also showing a growing tendency of rural and urban financing. Whereas, the loans provided in Rangpur Division (Figure-10) is relatively higher than Barishal and Sylhet Divisions.

Figure 9: Urban & Rural Finance (Mymensingh Division)

Outstanding (Urban & Rural Financ) as on December during CY2015 o CY2018
Mymnesingh Division

◆ Urban   ■ Rural

Urban: 4767, 5992, 8110, 7,559
Rural: 3658, 4189, 4757, 5,195

2015   2016   2017   2018
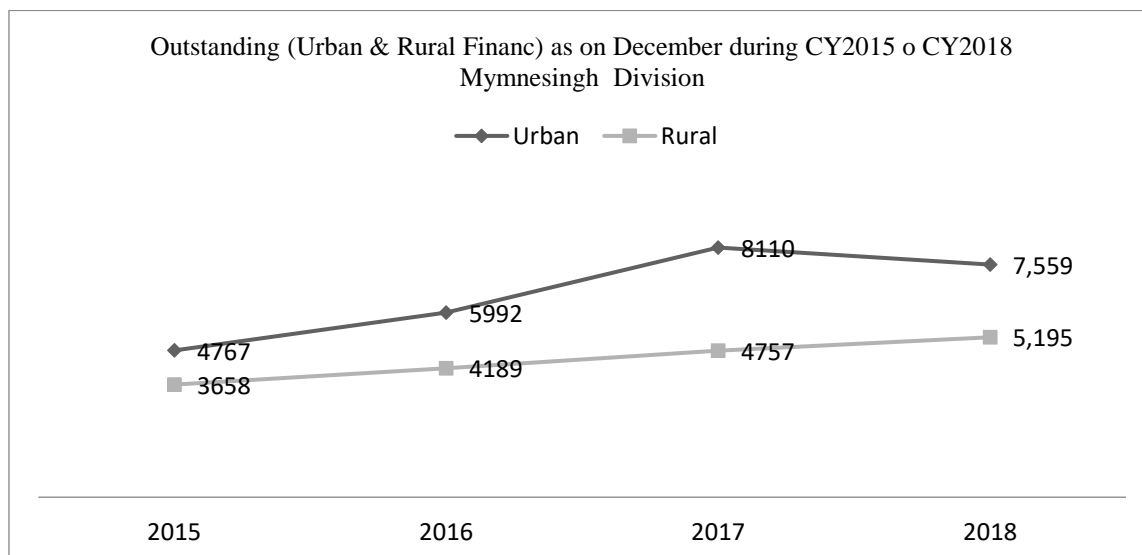
Source: *Scheduled Bank Statistics*, Bangladesh Bank

Figure 10: Urban & Rural Finance (Rangpur Division)

Outstanding (Urban & Rural Financ) as on December during CY2010 to CY2018
Rangpur Division

◆ Urban   ■ Rural

Urban: 4017, 5141, 6115, 7088, 8736, 9637, 11881, 13323, 14,605
Rural: 2471, 2776, 2981, 3138, 3704, 4237, 4993, 5775, 6,484

2010   2011   2012   2013   2014   2015   2016   2017   2018
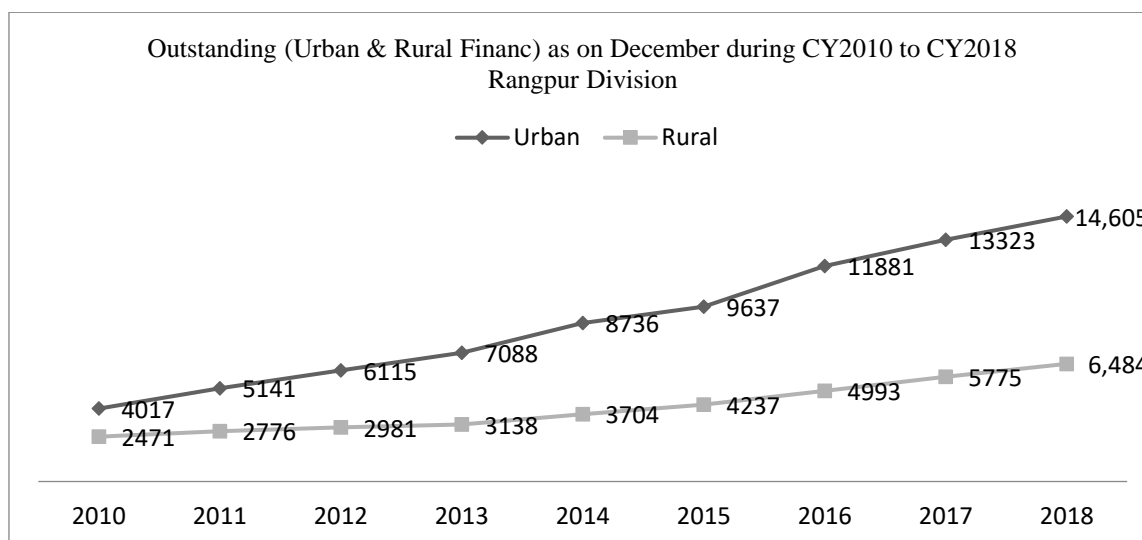
Source: *Scheduled Bank Statistics*, Bangladesh Bank

7.1.3 Outstanding Amount of Loan in Rural and Urban Financing-Bank Wise

In urban financing, the private commercial banks are much ahead compare to state-owned-commercial banks, specialized banks and foreign commercial banks. PCBs are holding 79% market share in this region whereas the lowest belongs to Specialized Commercial Banks (SB). The reason is quite simple. Since most of the PCBs businesses are urban centric and we have very few SBs in number, the dominance by the PCBs are very much rationale. On the other hand, there is hardly any involvement of FCBs in rural financing although the same "Agricultural & Rural Credit Policy" of BB is applicable for FCBs.

In rural financing, PCBs are also holding the major market share (43%) whereas the SOCBs are in the second position (39%) although the difference is very close. One of the reasons for no involvement of FCBs in rural financing since they have hardly any operations in the rural area.

Figure 11: Bank Wise Distribution of Urban and Rural Finance in Percentage as on December, 2018

Bank Wise Distribution of Urban Finance in CY18 in Percentage

SOCBs 16%
SBs 1%
FCBs 4%
PCBs 79%

Bank Wise Distribution of Rural Finance in CY18 in Percentage

SOCBs 39%
PCBs 43%
SBs 18%
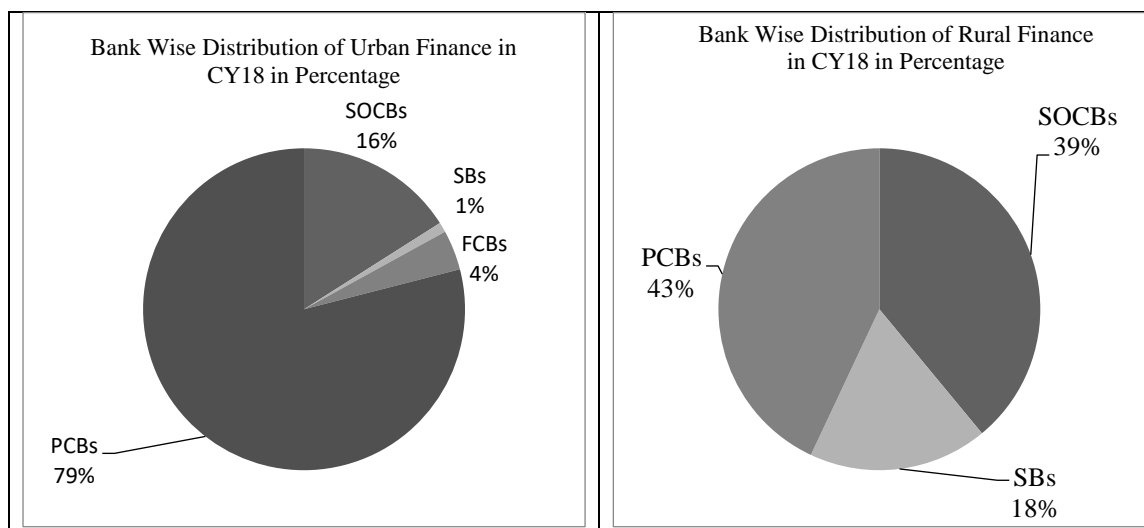
Source: Scheduled Bank Statistics, Bangladesh Bank

7.1.4 Sectoral Growth in GDP

Growth decomposition shows that the industry sector appeared to attain the highest growth followed by services and agriculture sector. The growth in agriculture sector as shown in Table-1 increased to 4.2 percent in FY18 from 3.0 percent in FY17. This growth in agriculture sector mainly aided by favorable weather, higher crop prices, and timely supply of inputs and finance. Besides, almost all sub-sectors of agriculture have achieved higher growth in FY18, compared to the previous fiscal year. The industry sector, constituting around one-third of Gross Value-added (GVA) in the economy, grew by around 12.1 percent in FY18, up from 10.2 percent in FY17, led mainly by manufacturing and construction activities. The growth in all sub-sectors of industry sector has increased except mining and quarrying and small-scale manufacturing sub-sector in FY18 compared to FY17. Despite some moderation, the service sector, comprising more than half of GVA, registered a modest growth of 6.4 percent in FY18. Within the sector, larger growth impulse primarily came from the wholesale and retail trade, transport, and financial intermediation.

Table 1: Sectoral Growth of Real GDP

(Base Year: FY 2006)

Sectors	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Agriculture	4.4	3.3	2.8	3.0	4.2
Industry	8.2	9.7	11.1	10.2	12.1
Service	5.6	5.8	6.3	6.7	6.4
Total GVA at constant basic price	6.2	6.5	7.2	7.2	7.9
GDP (at constant market price)	6.1	6.6	7.1	7.3	7.9

Source: Bangladesh Bureau of Statistics

Sectoral share of GDP shows that the service sector appeared to be the largest share followed by industry and agriculture sector. With the gradual upward trends of GDP, the sectoral composition of GDP has also been changing over the time. Contribution of agriculture sector has been declining and has shifted towards industry sector during the last several years which indicates that industrialization has increased in the country. However, the contribution of the industry sector in GDP increased to 33.7 percent in FY18 (Table-2). The increasing share was mainly supported by the manufacturing and large & medium scale industries sub-sector whose share in GDP increased by 5.1 percentage points to 22.9 percent and 5.9 percentage points to 19.1 percent respectively in FY18. The services sectors' share in GDP declined slightly to 52.1 percent in FY18 as compared to 52.9 percent of the preceding fiscal year. However, the shares of transport, storage and communication; real estate, renting and business activities; health and social work; and community, social and personal services subsectors went down while those of wholesale and retail trade; hotel and restaurants; financial intermediations; public administration and defense; and education remained unchanged.

Table 2: Sectoral Share of GDP

(Base Year: FY 2006)

Sectors	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Agriculture	16.5	16.0	15.4	14.7	14.2
Industry	29.6	30.4	31.5	32.4	33.7
Service	54.0	53.6	53.1	52.9	52.1
Total GVA at constant basic price	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Bangladesh Bureau of Statistics

7.2 Econometric Analysis

In this section, econometric analysis has been conducted to assess the impact of urban and rural credit growth on rural and urban GDP growth of Bangladesh. In this regard, two equations have been developed to understand whether the rural and urban credit growth affects the rural and urban GDP growth. Following are the two equations:

$$\textbf{\textit{Rural GDP Growth}}_t = c + \beta_1 \text{ Rural Credit } Growth_t + \epsilon_t$$

$$\textbf{\textit{Urban GDP Growth}}_t = c + \beta_1 \text{ Urban Credit } Growth_t + \epsilon_t$$

The first part of this section tests whether the distribution of the independent variables i.e. Urban Credit Growth and Rural Credit Growth follows normal distribution. The subsequent part then tests the stationarity of the variables. Based on the stationarity test, the following parts will use different econometric models. If all the data series are found to be stationary at level, i.e. if they are found to be I (0), then OLS Regression analysis would be conducted. However, If the data series are found to stationary at the same level of order, i.e. if all the variables are I (1) or I (2) or I(n), then Cointegration Test will be conducted which will be followed by Vector Auto Regression (VAR) Analysis and Vector Error Correction Model (VECM) depending on the result of the Cointegration test. If the variables are found to be mixed order of integration, then Autoregressive Distributed Lag (ARDL) approach should be used.

7.2.1 Normality Test of Independent Variables

In statistics, normality tests are used to determine if a data set is well-modelled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed.

In this study, Jarque-Bera test statistics is used for testing whether the data series is normally distributed. For the Jarque-Bera test statistics, the hypotheses taken are shown below:

H_0: The Data Series is Normally Distributed.

H_1: The Data Series is not Normally Distributed.

Below shown is the distribution series of the independent variables: Urban Credit Growth (URBAN_FIN_GRWTH) and Rural Credit Growth (RURAL_FIN_GRWTH). Apart from that the summary statistics has also been shown. This will help us to understand the normality of the data series. The Shapes of all the distribution series for the variables in the figures below show that both of the variables follow normal distribution. It goes in line with the conclusion got from the Jarque-Bera Statistics as well. All of the probability value estimated in the table is above .05 which indicates the failure to reject null hypothesis that the data series is normally distributed under 5% significance level. So, it can be concluded that the data series for the independent variables are normally distributed.

Figure 12: Distribution Series of the Independent Variables
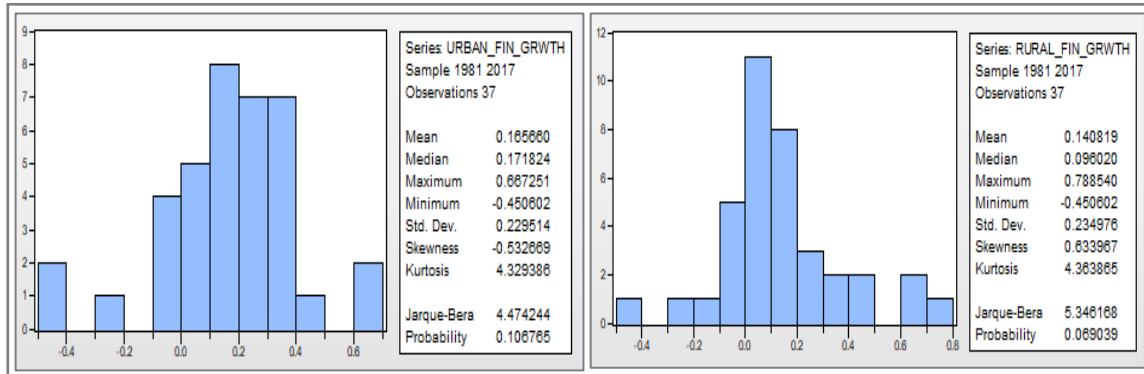
Source: Authors Own Calculation

7.2.2 Stationarity Test: Unit Root Test (ADF) & Correlogram for the Level Data Series

The Unit Root Test (ADF) of the variables along with their Correlogram is shown below for the level data.

Table 3: Unit Root Test & Correlogram Function for Level Data Series

Source: Authors Own Calculation

From the data presented above, it is seen that all of the variables are stationary at their level. As the P-Value of ADF Test for all of the variables are less than 0.10, it indicates all the variables are stationary at 1%, 5% and 10% level of significance.

The Correlogram Function also shows that the data are stationary as all of the Correlogram bars of Autocorrelation are less than the minimum threshold level and the bars of Partial Autocorrelation is less than the threshold level in the first lag. So, it can be concluded all of the variables are I(0).

The notion that all the variables are stationary at level can also be understood by the graph of the level data. In the following graph (Table-3), it is seen that, when in level, all the variables have a stable trend which means the variables do not show any up-trending or down-trending movement. The variables have a constant mean around which the data fluctuates when they are at level. So, the graphical analysis of the variables also strengthens the conclusion that the variables are I(0).

Figure 13: Graphical Presentation of the Variables
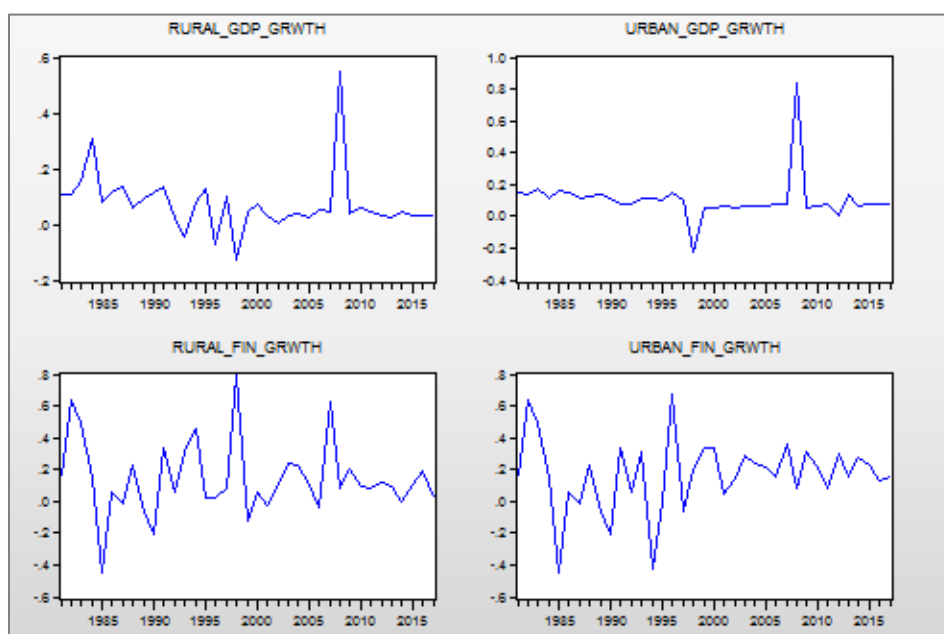
Source: Authors Own Calculation

As the variables are I(0), there is no Cointegration among the variables. So, OLS Method can be applied on the level data. Level data is the original data which better report the result given that all other issues of serial correlation; non normality and heteroscedasticity are taken care off.

7.2.3 OLS Method for Regression Analysis

In this sub-section, OLS method has been used to conduct the regression analysis for the following two equations:

$$Rural\ GDP\ Growth_t = c + \beta_1 Rural\ Credit\ Growth_t + \epsilon_t$$

$$Urban\ GDP\ Growth_t = c + \beta_2 Urban\ Credit\ Growth_t + \epsilon_t$$

In the subsequent discussion the result of the regression analysis for the above equations has been shown along with their residual statistics analysis to show whether there is any heteroscedasticity and serial autocorrelation.

7.2.3.1 Analysing the Impact of Rural Credit Growth on Rural GDP Growth

Below is the output of the regression analysis for the first equation, using OLS method, to show the impact of rural credit growth on rural GDP growth.

Table 4: OLS Regression Analysis of Rural Credit Growth on Rural GDP Growth

Dependent Variable: RURAL_GDP_GRWTH
Method: Least Squares
Date: 07/17/19   Time: 23:52
Sample: 1981 2017
Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.082287	0.020670	3.981058	0.0003
RURAL_FIN_GRWTH	0.064167	0.036215	0.841921	0.0455

R-squared	0.709850	Mean dependent var		0.073251
Adjusted R-squared	0.678154	S.D. dependent var		0.107016
S.E. of regression	0.107452	Akaike info criterion		-1.571014
Sum squared resid	0.404105	Schwarz criterion		-1.483937
Log likelihood	31.06375	Hannan-Quinn criter.		-1.540315
F-statistic	0.708832	Durbin-Watson stat		1.849004
Prob(F-statistic)	0.045548			

Source: Authors Own Calculation

From the above table it is evident that the constant for the equation is 0.0823 and the coefficient for Rural Credit Growth (β_1) is 0.064167. So, the equation can be rewritten in the following manner:

$$Rural\ GDP\ Growth_t = 0.0823 + 0.064167\ Rural\ Credit\ Growth_t$$

So, from the equation it can be deduced that the Rural GDP growth rate maintain a constant value of 8.23% irrespective of the rural credit growth or rural financing growth. However, every 1% increase in the rural credit growth results in an increase of 6.42% in the rural GDP growth. The P value for this constant and coefficient is 0.0003 and 0.0455 which indicates that both the constant and coefficient are significant at 5% level of significance. The adjusted R-square is 0.6782 or 67.82% which indicates the explanatory power of the model. In other words, it can be said that Rural Financing Growth can explain 67.82% fluctuation in the Rural GDP Growth. The rest of the fluctuation is dependent on other variables that have not been included in the model. In brief, it can be concluded that rural financing has quite a huge impact on Rural GDP growth i.e., rural development which is almost 6 times of the financing made in the rural area. Therefore, the study suggests strong

relationship between rural financing and rural development. The multiplier effect might be reasoned to some other factors where the velocity of money plays a pivotal role. Following is the graphical analysis of the residual statistics.

Figure 14: Graphical Analysis of the Residual Statistics
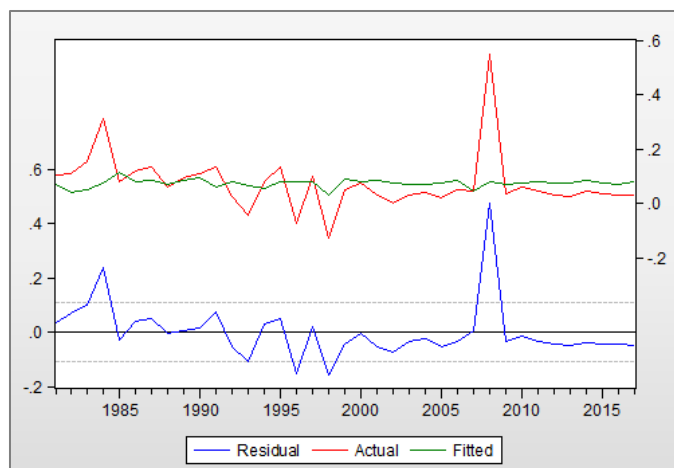
Comparing the Fitted line against the actual line, it is very much evident that in the long run there is a stable trend having almost a constant mean. The residual statistics suggests neither Serial Autocorrelation nor Heteroscedasticity as the residual line moves around zero line within a set and limited range. Thus, the model does not suffer any problem relating to normality, heteroscedasticity or serial autocorrelation.

7.2.3.2 Analysing the Impact of Urban Credit Growth on Urban GDP Growth

Below is the output of the regression analysis for the second equation, using OLS method, to show the impact of urban credit growth on urban GDP growth.

Table 5: OLS Regression Analysis of Urban Credit Growth on Urban GDP Growth

```
Dependent Variable: URBAN_GDP_GRWTH
Method: Least Squares
Date: 07/17/19   Time: 23:56
Sample: 1981 2017
Included observations: 37
```

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.096546	0.028464	4.094546	0.0002
URBAN_FIN_GRWTH	0.073906	0.031465	0.629831	0.0329

|				
R-squared	0.711207	Mean dependent var		0.105959
Adjusted R-squared	0.677044	S.D. dependent var		0.138550
S.E. of regression	0.139725	Akaike info criterion		-1.045739
Sum squared resid	0.683310	Schwarz criterion		-0.958662
Log likelihood	21.34617	Hannan-Quinn criter.		-1.015040
F-statistic	0.396687	Durbin-Watson stat		1.985688
Prob(F-statistic)	0.032896			

From the above table it is evident that the constant for the equation is 0.0965 and the coefficient for Urban Credit Growth (β_2) is 0.07390. So, the equation can be rewritten in the following manner:

$$\boldsymbol{Urban\ GDP\ Growth}_t = 0.0965 + 0.07390\ \text{Urban Credit}\ Growth_t$$

So, from the equation it can be deduced that the Urban GDP growth rate maintain a constant value of 9.65% irrespective of the urban credit growth or urban financing growth. However, every 1% increase in the urban credit growth results in an increase of 7.39% in the urban GDP growth. The P value for this constant and coefficient is 0.0002 and 0.0329 which indicates that both the constant and coefficient are significant at 5% level of significance. The adjusted R-square is 0.6770 or 67.70% which indicates the explanatory power of the model. In other words, it can be said that Urban Financing Growth can explain 67.82% fluctuation in the Urban GDP Growth. The rest of the fluctuation is dependent on other variables that have not been included in the model. In brief, it can be concluded that urban financing has quite a huge impact on urban GDP growth i.e. urban development which is almost 7.5 times of the financing made in the urban area. Therefore, the study suggests strong relationship between urban financing and urban development. The multiplier effect might be reasoned to some other factors where the velocity of money plays a pivotal role. Apart from that, financing in the urban area usually channels to large and medium industries which actually creates more value per unit of money invested. As this study considers only the bank-based financing, excluding the equity financing, financing leverage effect will also cause to create more money than invest through debt instruments or bank-based financing.

Following is the graphical analysis of the residual statistics. Comparing the Fitted line against the actual line, it is very much evident that in the long run there is a stable trend having almost a constant mean. In effect, apart from some shocks or spike, the actual line almost resembles the fitted line which indicates the strong forecasting power of the model. The residual statistics suggests neither Serial Autocorrelation nor Heteroscedasticity as the residual line moves around zero line within a set and limited range. Thus, the model does not suffer any problem relating to normality, heteroscedasticity or serial autocorrelation.

Figure 15: Graphical Analysis of the Residual Statistics
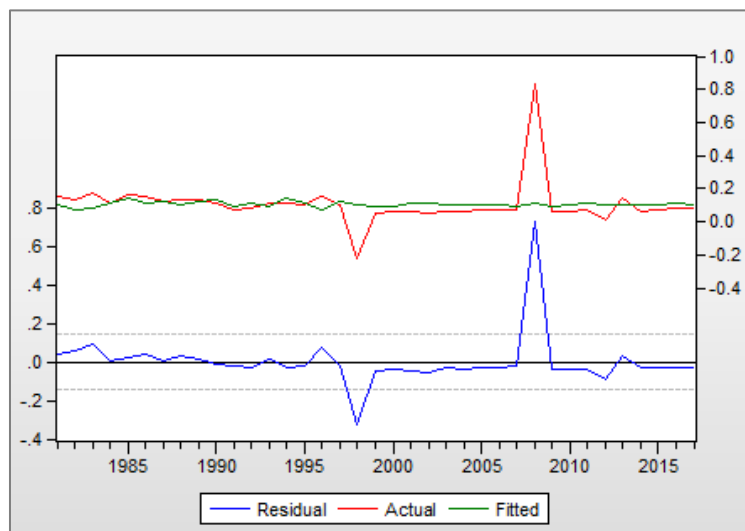
7.2.4 Summary of the Econometric Analysis

In brief, the study suggests that urban economic growth strongly related with urban financing; whereas rural economic growth is also strongly related with rural financing. One of the primary reasons behind this strong relationship might be the fact that the economy in Bangladesh is predominantly financing by bank-based financing, which implies that there should be a strong influence of the bank-based financing over the economic development. Furthermore, as the economy mostly depends on bank-based financing, rather than on equity-based financing, there must be a financial leverage effect as well. Apart from that, the velocity of money also works for having multiplier effect on the economic development of the bank financing. However, the relationship is stronger in case of urban financing. One of the causes behind this phenomenon might relate to the nature and size of the industry to which the credit is being disbursed. As in urban area the credit disbursed is mainly channels towards large and medium industry, it generates greater profit and more employment than the credit disbursed in the rural area resulting in greater influence on the urban development.

8. Recommendations

Based on trend and econometric analysis, it is found that there is a positive impact of bank based rural and urban financing on economic growth of Bangladesh. When we studied the cases of other countries while conducting literature review, we found that there is no impact of bank based rural and urban financing on the economic growth of those countries. From this point of view, obviously it is a matter of great satisfaction that for Bangladesh scenario, we get an optimistic picture. With a view to achieve Sustainable Development Goal (SDG), Vision 2041, and Bangladesh Delta Plan 2100; we do not have any other option but to

promote the economic growth by bolstering up both the rural and urban entrepreneurial activities. This will be possible only when banks, NBFIS, MFIs, and NGOs will channel more loanable funds for the purpose of productive utilization by those entrepreneurs who have that capacities for development and will also ensure the successful recovery of those loans. The 'Agricultural and Rural Credit Policy 2018-2019' of Bangladesh Bank (discussed in section 6.1) is very comprehensive, up-to-date and goal oriented. Only thing is to ensure the proper implementation of that policy. Bangladesh Bank may increase its monitoring activities towards banks and NBFIs to investigate whether they are seriously following the policy or not.

Banks and NBFIs may come out from the culture of providing loans to the conventional borrowers (the followers) who are involved in producing traditional products or services. It is the high time to encourage the innovative entrepreneurs in both rural and urban areas. For the last few years, our entrepreneurs had already involved in the business of producing and exporting non-conventional items. They are involved in the farming of Crocodile, Crab, Turtles, Worms, Ostrich, Frog legs, Venom of Snakes etc. The list of innovative products is quite large. Since these are very much innovative areas, the banks and other financial institutions are quite reluctant to finance in these projects due to higher credit risk. But through strict and regular monitoring of these projects after loan disbursement, this credit risk can be minimized. Already mentioned earlier, the rate of NPL is significantly lower in rural area than urban area. So why we will not give more concentration in rural financing by allocating more loanable funds in the doorstep of the rural borrower?

9. Policy Implications & Conclusions

Bank lending is key to economic growth. Schumpeter (1971) identified banks' role in facilitating technological innovation through their intermediary role. He argued that the role of bank of channelizing resources from surplus sector to deficient sector plays crucial role in promoting growth. Several others such as Kinnon (1973), Shaw (1973), Adekanye (1986), Fry (1988), King and Levine (1993), and Adeniyi (2006) have focused on the significance of bank lending to economic growth. The main objective of this study is to analyze the impact of bank based rural and urban financing and its impact on economic growth of Bangladesh. Though there are several studies that have been carried out on this topic in other countries but in case of Bangladesh there are not enough studies on this topic especially based on recent panel data and method. Thus, this study has fulfilled such gap in Bangladesh. The study has used 37 observations from the year 1981 to 2017. It has conducted Correlogram, regression analysis under E-Views 9 to get the results.

Hence the demand following relationship between finance and growth is true here in Bangladesh during the specified period that the rural and urban sectors are being developed

with response to GDP growth. But the previous works with Bangladesh, covering the same period, especially by Hossain et al. (2015) showed the relationship was supply – leading, which is opposite to the result of this study. In the previous study, indicators of financial sector development were individually considered with GDP growth or interaction effects of them did not take into account whereas this study (current) takes the interaction effects into account using regression analysis. Since the results of regression analysis prove the existence of these interaction effects and that is also justified by experiences of Bangladesh economy during that period, so this (current) study and its results are reasonably accepted. So, Economist John Robinson is seemed to be right for Bangladesh that finance (though "Depth/Stability" factor only) follows growth. In summary, on average, financial sector of Bangladesh is being unstably deepened with response to the demand of economic growth since 1988. Policy makers of Bangladesh should make policy so that financial sector is being stably (e.g., limiting non-performing loan) deepened and accelerate economic growth too.

Since the financial system of Bangladesh is bank based, the rural sector has no option but to purely rely on commercial banks, MFIs, and NGOs for financing purpose. As an agro-based economy, banks should play a pivot role in facilitating more funds in the rural sectors by creating new agro-based entrepreneur, building awareness among the rural people about the agricultural and rural credit facilities, providing more incentives to rural borrower and thus boost up the agro sector to contribute more in the economic growth. One think the supplier of fund should keep in their mind that most of the non-performing loan is originated from urban financing than rural financing. Since the probability of loan default in rural sector is very limited, banks can channel more loanable funds in the rural sector. The goal of this financing will not be urbanization of the rural area rather ensuring the urban facility in the doorstep of rural people.

The study concludes that bank lending has positive impact on economic growth but degree of explanation was quite low. This finding is consistent with the finding of Timsina (2014). The study implies that the policy makers should focus their attention more on the development of formal sector financing, adequate development of modern banking sector, development of efficient financial market and infrastructures and establishment of interest sensitive investment environment to increase the bank lending which is instrumental to promote economic growth in Bangladesh.

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