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CONTRIBUTION OF BANKING SECTOR IN FINANCIAL INCLUSION IN INDIA: AN EMPIRICAL STUDY

Dr. Suman Monga

Assistant Professor, Department of Commerce, Maharana Partap College for women, Mandi Dabwali

ABSTRACT

Financial development drives economic growth rather than just being a byproduct of it. The process of increasing the number, quality, and effectiveness of financial intermediary services is known as financial inclusion (FI), which is a component of financial development. Since financial inclusion is theoretically considered to have a favorable impact on economic growth, policies on financial inclusion have garnered significant attention from academics, policymakers, and regulators. But there doesn't seem to be much factual support, particularly for emerging economies. The goal of this study is to provide a thorough understanding of the relationship between financial inclusion and economic growth in India by utilizing several banking sector indicators of financial inclusion, such as the number of bank branches, ATMs, and credit-deposit ratio. Multiple regression was used to analyze secondary data from various sources from 2013–2014 to 2022–2023. The finding of the study indicates that the number of bank branches has a positive and significant impact on GDP, whereas the credit deposit ratio has a positive but insignificant impact. An insignificant impact has been observed in the case of ATM growth on Indian GDP.

KEYWORDS: Banking, Economic growth, Financial Inclusion, Gross Domestic Product, Social Strata.

I. INTRODUCTION

For the overall development of an economy, an inclusive economic structure is required that can contribute to the elevation of underprivileged sections of society (Sharma and Changkakati 2022). In addition, Pandey et al. (2022) have highlighted the close connection between social and financial exclusion and economic progress. Financial inclusion is a complex and vigorous system that can be broadly described as the access and availability of the formal financial system to all segments of society. It covers those from less fortunate socioeconomic groups and social strata (Rastogi and Ragabiruntha 2018). It is regarded as an assessment of the development and prosperity of a society. Economic growth, particularly in emerging nations, is seriously threatened by the weaker and uneducated masses' inability to access banking services. The banking industry developed several technologies, like automated teller machines (ATM), credit and debit cards, internet banking, etc., to get over these obstacles. The moot issue, however, is that only a small portion of society has access to such technology. Numerous studies and research papers make it abundantly evident that a sizable portion of the world's population, not only in India, lacks access to fundamental banking and financial services. This is known as "financial exclusion". These individuals, particularly, those with low income are unable to access common financial services and goods such as bank accounts, which are used for receiving payments and storing money, remittances, accessible credit, insurance, and other financial services, etc. According to Afolabi (2020), providing the underserved with appropriate and inexpensive financial services including savings, credit, and payment chances might boost company prospects, expand investments, and greatly contribute to economic growth. The importance of financial inclusion in fostering economic growth is acknowledged both conceptually and empirically. In this background, this paper attempts to find out the contribution of the Indian Banking system to financial inclusion and economic Growth.

II. REVIEW OF LITERATURE

- **Beck *et al.* (2000)** attempted to scientifically evaluate the relationship between the increase of financial intermediaries and economic expansion. They found that the emergence of financial intermediaries has a positive impact on productivity growth, which results in the establishment of institutional agencies for economic development.
- **Sarma, M. and Paise, J. (2008)** found that financial inclusion is a key factor in human development. So it is possible to argue that policies that promote financial inclusion may lower poverty and raise living standards. It is further demonstrated that a high level of financial inclusion can result from a high income.
- **Mehrotra *et al.* (2009)** created a financial Inclusion Index (FII) to gauge the degree of financial inclusion and then try to determine the relation between financial inclusion and economic growth. They contend that it is advantageous for customers to keep their money

with formal financial institutions when they have access to banking services. This contributes to inclusive growth by having multiplier effects that lead to high growth.

- **Khan (2011)** asserts that financial inclusion, particularly when considered in the context of total economic inclusion, has the potential to raise the financial situation and level of living of the underprivileged and vulnerable segment of society. He continued by saying that giving rural families access to fundamental financial services will promote economic activity and job prospects. He pointed out that this would have a multiplier impact on the economy by increasing rural people's disposable income, which would then encourage increased savings and a strong deposit base for banks and other financial institutions
- **Hariharan and Marktanner (2012)** revealed that financial inclusion might promote economic growth and development. They discovered a significant positive association between total factor productivity (TFP) and financial inclusion in a nation, suggesting that financial inclusion can generate capital. The study concluded that FI can raise entrepreneurial activity, improve intermediation efficiency, and expand the financial sector's savings portfolio, all of which contribute to economic growth.
- **Roy (2012)** conducted a study on the overview of financial inclusion in India. The investigation concluded that banks have established their branches in remote areas of the nation. Regulations and rules have been streamlined for better financial inclusion by the government of India. According to the report, the banking sector has experienced phenomenal volume growth over the past few decades.
- **Bharadwaj (2013)** concluded that the introduction of numerous programs has increased people's interaction with banks, and no-frill accounts are growing more popular. To increase people's knowledge regarding financial inclusion, several institutions should offer financial literacy programs and have a positive impact on the area under study.
- **Dangi and Kumar (2013)** studied the initiatives and legislative actions made by the RBI and the Government of India. This research also concentrated on India's financial inclusion's present state and future potential. Financial inclusion is showing positive and significant changes but the business model has to include enough safeguards to ensure that the poor are not turned off by banking.
- **Purvi Shah and Medha Dubhashi (2015)** attempted to examine the function of financial inclusion as a strategy for inclusive growth. They discovered that just 41% of adults had a formal account, with only 37% of women having one compared to 46% of males. The

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gender disparity is further widened by the various levels of wealth inequality seen in developing nations.

- **Sethy (2016)** found that India is characterized as having high financial inclusion in terms of demand-side aspects but poor financial inclusion in terms of supply-side dimensions.
- **Iqbal and Sami (2017)** discovered that the increase in ATMs had a negligible influence on the GDP of India, however, the number of bank branches and the credit deposit ratio had positive and substantial effects.
- **Dahiya, S., and Kumar, M. (2020)** sought to correlate financial inclusion metrics including the credit deposit ratio, ATM growth rate, and bank branch count with the GDP of India. According to the statistics, there is a strong and positive correlation between the use of financial services and rising GDP per person.
- **Raichoudhury, A. (2020**) found that the net state domestic product (NSDP), road length, and the presence of factories have a significant influence on financial inclusion in India.
- **Kapoor and Mohandas (2023)** concluded that the union territories and southern states of India demonstrated stronger financial inclusion. Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh, traditionally backward BIMARU states, as well as other of India's North Eastern provinces, underperformed. Based on its novel method for index building, the research also offered a more comprehensive and elaborative definition of financial inclusion.

III. OBJECTIVES OF THE STUDY

A. To examine the trends of financial inclusion in India in the banking sector.

B. To study the impact of financial inclusion indicators on the Gross Domestic Product of India.

IV. RESEARCH METHODOLOGY

The Present empirical study is based upon secondary data, which is collected from the reports of the RBI, the Ministry of Finance, the Government of India, reports on the trend and development of banking in India, newspapers, research articles, research journals, electronic journals, books, and magazines. The data is collected also from the various websites related to The RBI, the Ministry of Finance, and the Government of India. The time for the study is ten-year ranges from 2013–2014 to 2022–2023. To demonstrate an empirical link between financial inclusion and

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national growth, multiple regression analysis was utilized. GDP is the dependent variable in the current study, while the independent variables are the number of bank branches, ATMs, and Credit deposit ratio. SPSS software has been used for the analysis of variables.

$$Y = b0 + b1X1 + b2X2 + b3X3 + e$$

Where,

Y = Gross Domestic Product (GDP)

X1 = Number of Bank Branches

X2 = ATMs growth rate

X3 = Credit deposit ratio

e = Error Term

V. DATA ANALYSIS AND INTERPRETATIONS

A. Number of Bank Branches

The trend in the number of Scheduled Commercial Banks (SCBs) branches that are open and active nationally is shown in Table 1. It clearly shows that the RBI's aggressive efforts in the field of financial inclusion have led to a rise in bank branches during the past 10 years. From 2013-14 to 2022-23 the number of bank branches increased from 146766 to 162906. In terms of growth rate, the years 2014–15 and 2021–22 witnessed the largest increases (12.70%) and the lowest growth (0.38%) in the number of bank branches across the country.

Table 1: Values of GDP, No. of Commercial Bank Branches, ATMs and Credit Deposit Ratio of Banks

Years	GDP	No. of Commercial Bank Branches	ATM	Credit Deposit Ratio
2013-14	10,472,807	117,200	160055	77.6%
2014-15	10527674	132087	181398	76.4%
2015-16	11369493	141085	199099	77.4%
2016-17	12308193	146766	208354	72.9%
2017-18	13144582	148872	207052	75.5%
2018-19	13992914	152406	202196	77.7%

2019-20	14534641	156525	210760	76.4%
2020-21	13687118	158337	213575	72.4%
2021-22	14925840	158939	215061	72.2%
2022-23	16006425	162906	219506	75.8%

Source: Publications of RBI

B. Number of ATMs

In addition to bank branches, automated teller machines (ATM) are essential to India's growth of financial services. Instead of spending hours in line at a branch, many would rather take money from an ATM. Increased branch and ATM penetration (Kumar, 2013; Bhat and Bhat, 2013) is a reflection of more people having access to financial services (Beck et al., 2007). Information on the number of ATMs in India is provided in the table above. According to the table, there were 160055 ATMs in operation in 2013–14, and 181398 in 2014–15. There were 207052 ATMs in India in 2017–18. In 2018–19 202196 lakh ATMs were there, followed by 210760 in 2019–20, and 213575 in 2020–21. India has over 219506 ATMs as of March 2023, indicating a significant rise in the number of ATMs over a period of ten years. From the financial year 2013–14 to the financial year 2022–23, the number of ATMs has been steadily rising. In 2014–15, growth reached its maximum pace of 13.33%. In 2017–18, growth was at its lowest. Numerous causes that contribute to increases the ATM growth in India were the spread of banking services to rural regions, the Indian economy's growth, and government measures to promote financial inclusion, such as PradhanMantri Jan DhanYojana, etc.

C. Credit Deposit Ratio

CD ratio is a proportion of bank deposits stated as bank credit. Bank credit, or loans and advances, are their assets as opposed to bank deposits, which are liabilities for banks. The credit and deposit amounts affect the CD ratio. A variety of variables affect the demand for credit, which may be unique to a region or industry, and the supply of credit, which may be influenced by regulations governing the use of resources, the flow of credit, and the growth of the banking industry in a certain area. These elements fluctuate throughout time. Table 1 shows the credit deposit ratio throughout the course of ten financial years, starting in 2013–14 and ending in 2022–23. For the years under review, the data on the credit deposit ratio had varying tendencies. The year 2022–2023 saw the most notable increase, at 4.29%, followed by the years 2017–18 and 2018–19, which saw growth rates of 3.57 and 2.91, respectively. And the highest reduction, 5.81%, was seen in 2016–17. In the years 2021–2022, the credit deposit ratio is marginally declining.

D. Relationship between GDP and Financial Inclusion Indicators i.e. Bank Branches, ATMs and Credit-Deposit Ratio

Researchers frequently utilize the GDP as a key economic measure to assess a nation's development (Chithra&Selvam, 2013). According to Sahay et al. (2015), raising financial inclusion to the 75th percentile would result in an average improvement in GDP growth of 2-3 percentage points for a nation with low levels of financial inclusion (25th percentile). According to Loukoianova et al. (2018), for low-income developing nations, a one percent rise in their financial inclusion index (equal to moving from the fourth to the third quartile) is linked to a cumulative gain in per capita income growth of 0.2 percent over five years.

Tables 2 and 3 show the findings of regression analysis for the GDP and financial inclusion variables, including the expansion of ATMs in the nation, the number of bank branches, and the credit deposit ratio. It is revealed from the table 2 that the value of Corelation co-efficient is 0.951 which depicts a high correlation between dependant variable and dependant variables. The values of R-square and Adjusted R-square are 0.905 and 0.857 respectively. The value of p is 0.002 which shows the model of regression is statistically significant model for the analysis of the variables used in the present study. As a general rule, a Durbin-Watson test score of less than one or more than three is unacceptable and indicates an autocorrelation issue. The Durbin-Watson statistic, which has a value of 1.877 and is unaffected by autocorrelation, is shown in the model summary.

Multiple regression analysis demonstrates that the number of bank branches has a 254.640 beta value, which indicates a positive influence on GDP. There is a statistically significant influence on GDP since the p-value is 014, which is less than 05 at the 5% threshold of significance. Further analysis finds that the beta value of ATM growth is -102.899 and the p-value is 142, both of which indicate a negative and insignificant influence on GDP. Additionally, the Credit Deposit Ratio displays a beta value of 41909.515, indicating a favorable effect on the dependent variable. The credit deposit ratio's p-value is 0.769 greater than 05, which points to an insignificant effect on GDP.

The resulting regression equation is as follows:

$$\mathbf{Y = -.6871000 + 254.64X1 - 102.899X2 + 41909.515X3 + \varepsilon}$$

It is revealed from the analysis that Indicators of financial inclusion are strongly correlated with economic development in India. These results are in line with Julie's (2013) findings, which showed that the financial sector is essential to economic growth.

Table 2: Relationship between GDP and Financial Inclusion Indicators i.e. Bank Branches, ATMs and Credit-Deposit Ratio (summary of Multiple Regression Analysis)

R	R Square	Adjusted R Square	F	Sign	Durbin Watson
.951	.905	.857	18.973	.002	1.877

Source: Compiled by Author

Table 3: Regression Coefficient

Model	Un standardized Coefficients	Standardized Coefficients	t	Sig.
	Beta	Beta		
(Constant)	-6.871E6		-.551	.602
Branches	254.640	1.901	3.401	.014
ATM	-102.899	-.985	-1.690	.142
Credit	41909.515	.048	.308	.769

Source: Compiled by Author

VI. CONCLUSION

To design a solid strategy for attaining sustainable growth, financial inclusion has become a significant phenomenon for policymakers throughout the world. It has been contended from a theoretical standpoint that financial inclusion is a factor for economic progress. This study investigates whether or not financial inclusion may aid in fostering economic growth. In this study, multiple regression was used to analyze the factors that affected economic development from 2013–2014 to 2022–2023, including the number of ATMs, bank branches, and credit deposit ratio. While financial inclusion has gained popularity recently, there is currently no empirical data connecting it to the benefits of financial inclusion on financial development.

The empirical findings based on a multiple regression method indicate that the number of bank branches, one measure of financial inclusion, has a considerable positive influence on GDP. The GDP is not significantly impacted by the credit deposit ratio or the number of ATMs. The results demonstrate that the various variables react to financial inclusion in different ways. The study found a link between financial inclusion and the growth and development of the economy. Our research supports the conclusion that governments need to better understand financial inclusion since doing so may influence financially excluded persons to acquire bank accounts. The results of the empirical portion show that there is still more work to be done in the area of financial inclusion. There might be other factors that may be added to the analysis, but this must be left for further study.

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