

Study on Regional Rural Banks and their Impact on Poverty Reduction in India

RAHUL SINGH GAUTAM¹, VENKATA MRUDULA BHIMAVARAPU², AASHI RAWAL³

^{1, 2, 3} PhD Scholar, Symbiosis institute of business management, Pune; Symbiosis International (Deemed) University, Pune, India.

Abstract- The purpose of this research is to investigate the influence of regional rural banks on poverty reduction and rural development in India. We use secondary data from 29 Indian states and two union territories for three financial years, from 2018 to 2020. Panel data analysis (PDA) is used in this study to evaluate the hypothesis. Regional rural banks, as a result, have a favorable influence on poverty alleviation and rural development. According to the findings of this study, regional rural banks and the government should focus more on developing infrastructure and financial literacy. It is a critical component of regional rural banks and financial inclusion. These are both critical for poverty alleviation and rural development. It boasts remarkable economic growth and alleviates poverty by investing in infrastructure that enhances banking services.

Index Terms- Regional Rural Banks, Poverty, Financial Inclusion, Rural development, Banking.

I. INTRODUCTION

The aim of this research explores the impact of regional rural banks on rural development and poverty reduction in India. Regional Rural Banks (RRBs) were established in 1975 by an ordinance issued in 1975 and in accordance with the provisions of the Regional Rural Banks Act 1976, its objective is to link the rural economy with agriculture, trade, commerce, industry and other production activities [1]-[10]. To develop, by providing loans and other facilities, especially to small and marginal farmers, agricultural labourers, artists and small entrepreneurs by supporting them in their activities [2]-[4]. Regional rural banks are critical to India's rural development and efforts towards financial inclusion and poverty reduction [3]-[7]. RRB was established to provide banking services to rural households in need of quick and cheap credit. These are groups that work to make dreams come true [5]-[11]. Regional rural banks (RRBs) have significantly reduced regional differences in banking facilities in India [6]. RRB performance in some regions is good,

but it is not satisfactory in some [8]-[12]. Regional rural banks play an important role in India's agricultural and rural development. Through its extensive network, the RRBS has expanded its reach into India's rural areas [9]-[13]-[17].

Regional rural banks (RRBs) and their products and services, has an option for poverty reduction and rural development [14]-[26]-[34]. Regional rural banks (RRBs) and their products and services, has an option for poverty reduction and rural development. regional rural banks and their financial literacy is most important for rural people to use and regional rural banks financial services is the most important social welfare microfinance and suitable development and its positive impact on rural development and poverty reduction [16]-[48]-[43]. regional rural banks (RRBs) have helped in reducing substantially the regional disparities in respect of banking facilities in India. RRB's efforts in branch growth, deposit mobilisation, rural development, and credit deployment in underserved rural regions are commendable [15]-[32]-[28]. Regional Rural Banks serve a significant role as an important instrument of credit distribution in rural regions, with the goal of disseminating credit to small, marginal farmers and socioeconomically disadvantaged sections of the population for the growth of agriculture, commerce, and industry. RRBs are major rural financing institutions in charge of providing the credit demands of various forms of agriculture loans in rural regions [37]-[27]-[36]. The expansion growth of RRBs has significantly reduced regional differences in banking facilities in India.

The main aim of emplacement Regional Rural Banks (RRBs) in India is to credit rural people who are not financially strong enough, tiny and marginal farmers, artisans, agricultural laborers, and small enterprises [38]-[35]-[33]. Banks and other financial institutions

are seen to play an essential role in the growth of India's rural economy. The RBI has made constant efforts, and the government has announced a number of initiatives aimed at increasing financial inclusion. Some of the government's measures to alleviate poverty and economic exclusion include bank expansion into rural regions, ATMs, agro-based loans, KCCs, GCCs, and PMJDY [29]-[31]. Rural credit's performance in India is heavily reliant on their financial health. RRB successfully achieves its objectives such as bringing banking to the doorsteps of rural households, particularly in banking-deprived rural areas, providing easy and cheaper credit to the poorer rural section who rely on private lenders, encouraging rural savings for productive activities, creating jobs in rural areas, and lowering the cost of giving credit in agriculture areas [30]-[40]-[39]. The primary goal of this public policy is to guarantee that all citizens have equal access to banking and payment services.

In India, no research has been conducted to investigate the influence of regional rural banks (RRBs) on rural development and poverty reduction. The products and services offered by regional rural banks (RRBs) are critical for rural development and poverty reduction [47]. Regional rural banks are required for financial inclusion in India's agriculture, and they play an essential role in poverty reduction and economic growth. The current research focuses on regional rural banks and their influence on India's poverty alleviation and economic development. Our topic lacks research, and the critical need for scenario study is the motivating factor for this research; we choose to use panel data analysis to assess the influence of regional rural banks on poverty reduction and rural development in India.

The panel data analysis (PDA) reflects the practical features of financial knowledge and its consequences for regional rural banks (RRBs), rural development (RD), and poverty reduction (PR) in India more effectively than normative economics or regression research. As a result, panel data analysis was chosen as an intrinsic component of the model [10]. The purpose of this article is to investigate the influence of regional rural banks (RRBs) on rural development (RD) and poverty reduction (PR). It seeks to scientifically identify rural regions in India with particular criteria connected with the amount of regional rural banks in doing so. We are utilising

secondary data from 29 states and two union territories for fiscal years 2018 to 2020, and we are using different variables from past research.

The main reason for this study is the critical need for a situation study assessment, as well as the lack of research in this field. We made a conscious decision to investigate the influence of regional rural banks on rural development and poverty reduction in India. Expansion of regional rural banks and financial literacy can reduce poverty and help rural development in India. Most uses of regional rural banks are helping economic growth and poverty reduction; regional rural banks and their products and services are important to Indian farmers.

This paper's first section is the introduction and the second section is the literature review. The third section is data and methodology, the fourth section is results, and the fifth and sixth section is the discussion and conclusion of the study.

II. LITERATURE REVIEW OF THE STUDY

The literature on the operation and performance of RRBs in India is quite scarce. This section quickly reviews the literature gathered by investigators in regional rural banks and their influence on poverty reduction, rural development, financial inclusion, and publications by researchers and comments by economic analysts. The literature divided in to two parts first is regional rural banks (RRBs) and second is

A. Regional Rural Banks

In rural India, the burden of indebtedness is severe. Despite considerable structural changes in credit institutions and types of rural credit in the post-Independence period, exploitation of the rural masses in the name of credit is one of the most ubiquitous and enduring aspects of rural India [18]. Because the RRB is designed to be a bank for the poor, its presence in all country areas, particularly in impoverished states, can help. The government should establish RRB branches at the grassroots level to provide genuinely needy rural people with such banking services [25]. The introduction of RRBs has significantly reduced regional disparities in banking facilities in India. RRB's efforts in branch growth, deposit mobilization, rural development, and credit deployment in underserved rural regions are commendable [23]. Rural banks must eliminate the lack of transparency in their operations, resulting in an unequal connection

between bankers and consumers. Banking employees should engage with their consumers more frequently to address this issue [22]. Banking employees should engage with their consumers more frequently to address this issue. Banks should build branches where clients do not have access to financial services. In this era of digitization, RRBs must focus on providing timely, high-quality, and secure banking services to maintain existing customers and charm new ones [19].

The RRB is designed to be a bank for the poor; its presence in all of the country's states can help. The government should establish RRB branches at the grassroots [24]. Rural banks' lending is primarily directed at their local market, particularly local farmers. Furthermore, far from being excessively cautious, bank assistance for agriculture, one of the leading businesses in their service areas, may risk bank stability [21]. RRBs have effectively attained their banking objectives of generating employment, encouraging rural savings for productive activities, and providing accessible and affordable credit to rural families, particularly in banking-deprived rural regions, to the vulnerable rural portion relying on private lenders [20].

Thousands of commercial and cooperative bank branches operated in rural India prior to the establishment of the RRB. Despite such a massive network of bank branches, rural India's credit needs remained woefully inadequate [47]. The general position of RRBs in India is not promising. Poor credit-deposit ratios continue to stymie RRBs' ability to perform as intended. Because the RRB is a bank for the poor, its presence is felt across the country, particularly in the poorer states and union territories [44]. The government should expand RRB branches to the grassroots level in order to give banking and credit services to the needy people in rural India. There is a need to close the gap between commercial banks' C-D ratios and regional rural banks' C-D ratios, and rural India has a propensity to reap the advantages of lending policy in rural regions [46].

The function of RRBs in Economic Development and indicated that RRBs have played an important role in rural development. Furthermore, when compared to commercial banks, RRBs were more efficient in disbursing loans to rural borrowers [45]. Support from

state governments, local engagement, adequate loan supervision, and the creation of urban branches were some of the initiatives advised to make RRBs more efficient [6]. Rural banking in general has decreased, as has priority sector credit and preferential lending to the poor in particular [9].

B. Regional Rural Banks and Financial Inclusion

Financial inclusion is the key to solving the rural development challenge, and it has the potential to enhance the lives of impoverished farmers, small businesses, and other vulnerable groups [11]. Financial inclusion is essentially a financial service that is easily accessible and inexpensive to all economy segments. The principal motivation behind the notion of Financial Inclusion is that non-accessible groups, such as impoverished farmers in certain backward rural areas, can use financial services for their advancement because the growth of each individual can help the nation progress quicker [12]. Financial inclusion is a tool for a country's inclusive progress. Regional Rural Banks play an essential role in India's rural development and financial inclusion. RRBs were established to provide banking services to the doorsteps of rural people in need of quick and affordable loans [16]. These are organizations that work to make dreams a reality. The goal of the RRBs is to reinforce the backbone of the Indian economy, which is found in rural. The goal of economic planning will never be met until we improve India's rural economy and people. Regional Rural Banks have made financial inclusion a reality in a big way [3].

Financial inclusion is a process of ensuring access to suitable financial products and services needed by susceptible groups such as weaker sections and low-income groups at an affordable cost in a fair and transparent manner by mainstream financial institutional players [1]. In our country, Reserve Bank of India (RBI) has formulated the policy of financial inclusion with a view to provide banking services at an affordable cost to the disadvantaged and low-income groups. Since 1975 Regional Rural banks (RRBs) are being regarded as a significant Rural Financial institution for promoting sustainable economic growth. RRBs have the potential to play a greater role in financial inclusion primarily because of their strategic geographical location in remote places in the

country [5]. In certain parts of the country, e.g., in the states of UP, Bihar and North Eastern regions, the banking system mainly exists in the form of RRBs. Government has introduced Prime Minister Jan Dhan Yojana through which financial inclusion got a boom with the help of RRBs and emphasized the role of financial inclusion for the growth and development of country through RRBs [31].

Financial inclusion is the process of mainstream economic, institutional actors enabling access to sound financial goods and execution needed by vulnerable groups such as weaker and low-income groups at an affordable cost fairly and transparently [29]. In our nation, the Reserve Bank of India (RBI) has developed a financial inclusion strategy to provide banking services at a cheap cost to the disadvantaged and low-income groups. Regional Rural Banks (RRBs) have been recognized as important Rural Financial institutions for encouraging long-term economic growth since 1975 [42]. RRBs have the potential to play a more significant role in financial inclusion, owing to their advantageous geographical position in rural areas of the country. In some parts of the nation, such as UP, Bihar, and the North-Eastern region, the banking system is mainly comprised of RRBs [44]. The government created Prime Minister Jan Dhan Yojana (PMJDY), which boosted financial inclusion with the support of RRBs. It underlined the importance of financial inclusion for its growth and development through RRBs [14].

The scarcity of distinct literature extends beyond notions. This technique also necessitates a novel approach not before seen in the literature. Based on the literature research, the following hypothesis is given in this study:

H1: Regional rural banks (RRBs) are significantly impacting Poverty reduction and rural development in India.

III. DATA AND METHODOLOGY

A. Data

The data of 29 states and two union territories of India for the total time of 3 fiscal years (2018- 2020) has been used in this study. The data of RRB branches and RRB (CDR) has been retrieved from the official website of RBI, and the data of poverty score is obtained from NITI Aayog website. Total two models

have been developed to study the problem, as we have only one dependent and two independent variables to be analyzed. Table 1 discusses the variables used in the study.

Table 1. List of Variables

S	Variable Name	Type	Code	Definition	Citations
1	Indian Poverty score	DV	IND_PS	Asper NITI Aayog, India's poverty index in 2021 was 0.118.	NITI Aayog (2021)
2	Regional rural bank branches	IV	RRB_bran	The total number of RRB currently operating in India is 43.	Ministry of Finance (Department of financial services)
3	Regional rural bank credit/debt ratio	IV	RRB_C_D_r	Banks consider this ratio with other factors while deciding how much credit to offer.	Bankrate (Glossary)

Note: DV and IV represent the dependent variable and independent variable, respectively.

B. Methodology

The panel data model (PDM) is mainly used to analyze the data in the current study. The panel data model contains features of the other famous analysis models, cross-sectional and time-series [12][34]. Therefore, it has been observed that PDM can provide comparatively more information than a single time series or cross-section analysis.

The model specifications are given as follows:

$$IND_PS_{it} = \beta_0 + \beta_1 RRB_bran + u_{it} \tag{Eq. 1}$$

$$IND_PS_{it} = \beta_0 + \beta_1 RRB_C_D_r + u_{it} \tag{Eq. 2}$$

Where **LR** is the dependent variable, **i** represents cross-section, and **t** represents time series. β_0 is the constant term, and β_1 is the coefficient of the independent variable and **RRB_bran**, and

RRB_C_D_r are the independent variables used in the study. In contrast, uit in the model is considered the error term.

IV. RESULTS

A. Descriptive statistics and correlation

Table 2. Descriptive Statistics

Variables	Mean	SD	Min	Max
IND_PS	58.6677	10.5578	28	76
RRB_bran	711.032	865.969	0	4342
RRB_C_D_r	52.9193	30.2484	0	128.3

Note: Mean, SD, Min, Max is mean value, standard deviation, minimum and maximum respectively.

Table 3. Correlation Matrix

VAR	RDEXP	1_articlex	1_popu
IND_PS	1		
RRB_bran	-0.2797*	2	
RRB_R_D_c	0.1367	0.3239*	1

Note: * represents a significant correlation coefficient at 0.05.

The Description of statistics (IND_PS, RRB_bran, RRB_C_D_r) used in the study have been shown in table 2 and table 3, respectively. The mean value of poverty score in Indian states and union territories is calculated to be 58.66774, indicating a substantially higher level of poverty score. In contrast, the standard deviation is 10.55789, which means the score does not deviate much from the mean value. The minimum and maximum values are 28 and 76, respectively. The average value of the RRB_bran variable is 711.0323, which means that a vast no. of branches has been established in different parts of India. The standard deviation is calculated to be 865.962, which indicates that a substantial amount of deviation is present from the variable's value. The minimum and maximum values are 0 and 4342, respectively, showing an enormous difference among each other. The last variable included in this study, RRB_C_D_r, shows the mean value of 52.91935, which means that there is no significant amount of ratio is present on average. On the other hand, the deviation from the mean value

is calculated to be 30.24848. The minimum and maximum values are 0 and 128.3, respectively.

B. Result of model I

Table 4. Result of Regression Analysis (Model 1)

Dependent Variable: IND_PS			
Standard Errors (Normal)			
Variable Name	Coefficient	SE	p-value
Constant	61.11275	1.20927	0.000
RRB_bran	-0.003438	.001082	0.002
R-square	0.4570		
SE of Regression	8.9931401*		
F-test Fixed Effect	13.94*(.0000)		
Breush-Pagan Test	63.37*(.0000)		
Hausman Test	0.9659(.0000)		
No of observations (n)	93		
Degree of freedom	89		
Wald test for Heteroscedasticity	4.51*(.2114)		
Wooldridge Autocorrelation	0.003(.9634)		

Note: Wald test of heteroscedasticity has the null of no heteroscedasticity. Wooldridge test of autocorrelation in panel has the null of no autocorrelation (with 1 lag). Robust estimates are estimated due to significant Heteroscedasticity and Autocorrelation. DV is IND_PS (Indian poverty score). RRB_bran is the log of regional rural bank branches. * sig at 5%.

In model one, we have examined the relationship between the dependent variable (poverty score) and independent variable (RRB branches). The output of model one is depicted in table 4. As per the description of various outputs from the table, the R- square shows only 0.4570 percent variability in LR, which can be explained by the independent variable, RRB_bran. The SE is also calculated to be of significant value, 8.9931401. The Hausman test indicates the random effects in the model. Breush- Pagan test is also proved

to be significant, with the value of 63.37, showing the presence of heteroscedasticity. Wald test also show significant value, rejecting the null hypothesis. The independent variable, RRB_bran, has a negative coefficient (-.003438) and p- value (0.002) is lesser than 0.05, which means that RRB branches positively impacts the poverty score, and the association is significant. Therefore, with the help of our analysis, we accept hypothesis H₁.

C. Result of model II

Table 5. Result of Regression Analysis (Model 2)

Dependent Variable: IND_PS						
Variable Name	Standard Errors (Normal)			Robust Standard Errors		
	Coefficient	SE	p-value	Coef	SE	p-value
Constant	55.9263	1.96372	0.000	55.94136	3.284475	0.000
RRB_C_D_r	.051803	.032264	0.112	.0515195	.0110781	0.000
R-Square	0.4381					
SE of Regression	9.3545465*					
F-test Fixed Effect	13.00*(.0000)					
Breush-Pagan Test	55.88*(.0000)					
Hausman Test	0.004(.08515)					
No of observations (n)	93					

Degree of freedom	89
Wald test for Heteroscedasticity ¹	8.73*(.0331)
Wooldridge	0.008(.9838)
Autocorrelation	

Note: Wald test of heteroscedasticity has the null of no heteroscedasticity. Wooldridge test of autocorrelation in panel has the null of no autocorrelation (with 1 lag). Robust estimates are estimated due to significant Heteroscedasticity and Autocorrelation. DV is IND_PS (Indian poverty score). RRB_C_D_r is the log of regional rural bank credit- debt ratio. * sig at 5%.

In model two, we investigated the relationship between the dependent variable (poverty score) and the independent variable (credit to debt ratio of RRB). The description of all the values required to interpret the result of model two is depicted in table 5. As per the description from the table, the R- square shows only 0.4381 percent variability in LR, which can be explained by the independent variable, RRB_C_D_r. The SE is calculated to be of value 9.3545465, showing its significant nature in this model. The Hausman test indicates the random effects in the model. Breush- Pagan test is also proved to be significant, with a value of 55.88, showing the presence of heteroscedasticity. Wald test also show significant value, rejecting the null hypothesis. The independent variable, RRB_C_D_r, has a positive coefficient (.051595) and p- value (0.000) is lesser than 0.05, which means that RRB_C_D_r positively impacts the LR, and the association is of significant nature. Therefore, with the help of the above interpretation, we accept hypothesis H₁.

V. DISCUSSION

After a review of related literature, the current study concentrated on regional rural bank (RRBs) on rural development (RD), and poverty reduction (PR) in India. Hypothesis of this study is based on literature, and we test the hypothesis (H1) with the appropriate model (Table 4, Table 5) is a concern with the

developed methodology (Eq.1, Eq.2). the first model in variable regional rural banks_branch is positively significant with Indian poverty score, and second model rural bank_branch_C_D_r is positively significant with Indian poverty score. The first and second model state the all-variable high reliability and stability (Table 4, Table 5). The literature supports the hypothesis of the study, and that regional rural bank significantly affects the poverty reduction and rural development. This research is focused on regional rural banks and financial inclusion, poverty reduction, and rural development of farmers in India. This study is based on secondary data from 29 Indian states and two union territories from the fiscal years 2018 to 2020, and we are using other factors from earlier studies. Our results state that the regional rural banks should enhance their branches and focus on financial literacy programs in rural areas. Rural people need to provide financial education to their customers, and financial literacy can reduce poverty and help economic development in India. Government and RBI should make policies to ease the use of banking services, and the government should connect rural areas with WIFI networks so that it can enhance digital literacy [12]-[11].

VI. CONCLUSION

This research looks at the effects of regional rural banks on poverty reduction and rural development in India. The results show that regional rural banks significantly impact India's poverty reduction and economic development. Digital and financial literacy of regional rural banks can help to reduce poverty and economic development. Regional rural banks can provide knowledge to rural people about their products and services and also give training to rural people on how to use their digital banking [3]-[38].

India is a growing country with an absence of digital infrastructure and financial literacy and a need to study in this field for rural development. This study may be carried out through primary data analysis for future research, and they can also enhance the number of states, union territories, and years of data.

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