



## **Regional Rural Banks (RRBs) Contribution to Agriculture Finance: A Critical Analysis of the Performance of RRBs in India using DEA and Structure Equation Modeling**

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### **Abstract**

Among the financial inclusion agenda, financial provisions for the agriculture and rural development sector are more important. In this context, Regional Rural Banks (RRBs) were promoted to support agriculture and rural finance in 1975. This paper is an attempt to evaluate the performance of RRBs concerning their financial performance as well as their performance in meeting the objective of supporting agriculture, microenterprise, and weaker sections finance. This paper has adopted two-stage processes of analysis. In the first stage, Data Envelopment Analysis (DEA) analysis was conducted to evaluate the efficiency of RRBs on four different models i.e. Financial performance, priority sector performance, loans to weaker sections, and agriculture finance. In the second stage, Partial Least Square Structural equation modeling (PLS-SEM) was performed to identify the significance of the linkage between the agriculture, microenterprise, weaker sections, and non-performing assets in defining the financial performance of RRBs. The study's findings suggested that financially RRBs have been more efficient compared to the agriculture finance and loans to weaker sections. The results depict a strong positive significant relationship between agriculture and microenterprise finance on the financial performance of the RRBs. However, the results also depict a non-significant relationship between the weaker sections and non-performing assets on financial performance. This study suggests that RRBs were the victims of poor benchmarking as they were compared with the traditional banking system. They need to be given additional support to promote agriculture and rural lending.

**Keywords:** Financial inclusion, Financial performance, RRBs, Agriculture finance, Weaker Sections, Microenterprise, Non-Performing Assets, DEA, PLS-SEM

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## **1. INTRODUCTION**

The Indian policy makers have always focused on achieving the objective of financial inclusion. Until the 1970s, it was realized that the traditional banking system had not been able to serve the need of finance until the 1970s. It was realized that the traditional banking system had not been able to serve the need for agriculture and the rural sector. Hence, RRBs were established with an aim to support agriculture and rural financing activities. Before the establishment of RRBs, largely agriculture and rural lending relied on informal sources of finance or cooperative banks (RBI, 2019). However, the performance of RRBs has remained controversial, and recently the government has decided to go for amalgamation of RRBs. We know that the RRBs have been contributing to the financial needs of different sectors of the rural population. Still, we did not come across any research focusing on the impact of RRBs on different sectors. To bridge the research gap, we drive to the research question that what is the impact of different sectors of the rural contribution of RRBs towards the performance of RRB. This paper aimed at exploring the performance of RRBs and see whether performance of RRB's has been upto the mark or not. Moving ahead, this paper attempted to look at the impact of various factors on the financial performance of RRBs using PLS-SEM technique. The study has highlighted the contribution of RRBs towards agriculture, microenterprise, and weaker sections of the rural population.

## **2. REVIEW OF LITERATURE**

This paper explores various aspects of RRBs through various secondary data and research papers available. The review of literature, is classified in various segments like the evolution of RRBs and their performance.

### **2.1 Establishment and evolution of RRB's**

The history of banking in India goes back to the 17<sup>th</sup> century with an effort to establish a bank. However, this attempt was not successful. Later, in the 18<sup>th</sup> century, several attempts were made to establish the banking system in India. Post-independence, efforts were taken to strengthen the traditional banking system in India, and efforts like nationalization of the bank, lead bank scheme were started. An evaluative study reported that despite the rural branches contributing 36 percent of total bank branches, the contribution of rural areas to total deposit and total advances was only 9 percent and 6 percent, respectively. Looking at this situation, Narsimhan Committee appointed in 1975 recommended the setting up RRBs (Datta, 1978). The first formal initiative of promoting specialized bank for agriculture and the rural bank started with the establishment of RRBs in 1975 (Bharti,2018). In the first phase, only five RRBs were opened. The idea of starting rural banks was first suggested by the Banking Commission (1972) (RBI 2008). Establishment of RRB's contributed to the increased share of institutional credit. AIDIS report suggested that in the year 1951, non-institutional sources were 90 per cent of the outstanding debt of cultivator households, which declined to 37 per cent in 1981 (Government of India 1998). The share of non-institutional credit in 2015 was 28 per cent (NAFIS 2016-17, c.f. RBI 2019). Looking at the poor performance of nationalised banks in agriculture lending, priority sector lending norms were formed. Parallely, enforcement of priority sector targets also contributed in increasing institutional share of credit. PSL norms were formalised in the year 1972 and were enforced in the year 1974. In 1978, banks were given mandatory targets of achieving at least 33.3 percent of lending in priority sectors (RBI 2019). This led to an increase in the share of institutional credit in total agriculture lending. Based on the performance evaluation, 49 RRBs were identified for comprehensive restructuring and were provided a sum of 1500 million for the same. Subsequently, several

rounds of amount allocation were done for the restructuring of RRBs (RBI 2008). This could not succeed in helping RRBs become a profitable entity. In the year 2005, the amalgamation of RRBs was initiated. At present, 45 RRBs were functional, out of which 36 were amalgamated, and 9 were standalone RRBs.

## **2.2 Performance of RRBs**

A study on RRBs reported that we need to focus on strengthening RRBs, and they should be given advantages available to the cooperative sector (Naresh, 1982). Another study in the same year concluded that till 1982 Fifty-six RRBs were established. They have advanced credit to more than 18 000 borrowers. The main beneficiaries are: small farmers (65%) and rural artisans (32%) i.e. more than 95 % of the loan has gone to target beneficiary only (Kumar 1982). Shylendra (1995) questioned the cheap interest rate policy of RRBs and tried to raise an alarm saying that this policy has raised the issue of financial vitality because of increasing operating costs, fluctuating profits, and higher loan delinquencies. In another study Shylendra (1996) also concluded that RRBs failed to serve the poorer people and have served people from a better-off section of society. In another study of a successful RRB in Punjab, Kalra and Singh (2000) concluded that if this bank becomes profitable, other RRBs can also become profitable if we follow a proper strategy.

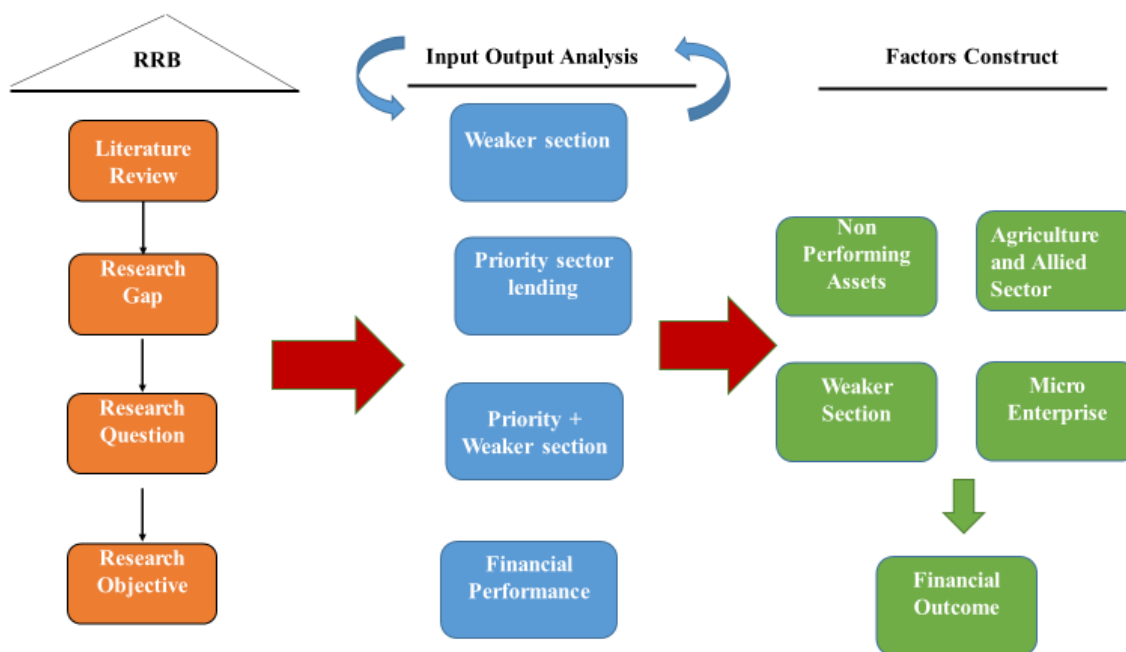
Till 2000, microcredit was a neglected agenda. Dasgupta et.al. (2003) reported that only 22 percent of public sector banks had financed 10 per cent of their net bank credit to weaker section. In another study conducted on the performance of RRBs to understand the factors contributing to the loss of RRBs, neither the state nor sponsor bank was a characteristic feature defining the loss-making nature of RRBs (Misra, 2006). In a study on RRBs across various states reported that there are wide variations in efficiency across the states in each sub-period. On average, there is a remarkable improvement in technical efficiency (TE) over three sub-periods resulting through the gain in both pure efficiency (PE) as well as scale efficiency (SE) and thus providing evidence of the positive impact of mergers & acquisitions in different phases of structural development (Antil et.al. 2020). In some specific cases, RRBs have shown good performance. In a study on RRB's performance and viability through various ratios in Gujarat, it was found that there was a significant improvement and sound position of the credit delivery system of the bank (Gadhavi and Bekariya, 2014). RRBs were accused of low profitability and poor performance. In a study on comparing the performance of RRBs post amalgamation period, it was found that despite number of performances of RRBs improved during the post amalgamation period (Jorum and Mali, 2012) yet the RRBs were criticised for not performing well in the literature, but analysis of their performance using a rigorous methodology is not available.

## **3. OBJECTIVES AND METHODOLOGY**

The performance of RRBs has always been controversial. Some studies concluded that there were issues with the sustainability of RRBs whereas some questioned the objective of formulation of RRBs and argued that they need to be differentiated from traditional banks. In this context this study raises a basic question i.e., whether RRBs are contributing enough to the objective of providing finance to the agriculture sector? In this regard, the objectives of this paper are

- To analyze the performance of regional rural banks with reference to their financial performance as well as performance towards providing credit to the agriculture sector.
- To identify the factors impacting the financial performance of the regional rural banks

Data for this study was collected through several reports of NABARD on RRB’s performance. A total of 45 RRBs were taken under this study. The data is collected as of 31<sup>st</sup> March 2020. It is important to note that there are two categories of RRBs. The one segment is amalgamated (36) whereas, another one is the stand-alone RRBs (9). The Conceptual framework is presented in figure 1.



**Figure 1: Conceptual Framework for the Study**

At first, a data envelopment analysis was conducted on the given set of data. In the third phase, the data was used to perform linkages among different antecedents for the financial performance of RRBs. The objective of this study was to see the performance of RRBs on financial performance and supporting agriculture lending. Different models were used to evaluate the efficiency of RRBs. The efficiency analysis was conducted with following set of variables (Table 1)

**Table 1: Input output variables for various models**

Models	Input	Output
Model 1: Financial performance efficiency (FP)	Total Expenditure Total Staff Owned fund Total borrowings	Total Income Total Loans
Model 2: Priority sector efficiency (PSL)	Same as model 1	Total loans to priority sector
Model 3: Weaker section efficiency (WS)	Same as model 1	Loans to weaker sections
Model 4: Priority sector and weaker section (PSL+ WS)	Same as model 1	Total loans to priority sector and loans to weaker sections

Four different models were evaluated to look at the efficiency of RRBs. In all the models, input variables were kept the same, whereas the output variables differed in all the models. In the first model, the financial performance of the RRBs were kept as the desirable output, whereas,

in the second model, the primary objective of RRBs were kept as the output indicators. It is evident from the review that the primary objective of RRBs was to support agriculture and weaker sections of the society. On the other hand, any bank should be financially sustainable. Further, two different models were evaluated with Priority sector loans and loans to weaker sections as the output variables. Inputs were kept constant to evaluate the performance with the same set of variables for various output combinations. After looking at the performance of RRBs, we tried to identify which factors contribute to the performance of RRBs through structural equation modeling with a different set of variables. Four different constructs were used i.e. NPA, Agriculture, Microenterprise, and loans to weaker sections. For each construct, a set of variables were used. A list of variables used to define various constructs are presented in the table.

### 3.1 Theoretical Framework and Hypothesis Development

The section elaborates on the constructs taken to understand the significant impact on the financial performance of RRBs. Based on the studies on RRB and their financial performance, we derived to a theoretical framework to study the impact of Factors like agriculture and allied loans, non-performing assets, loans provided to micro enterprise, and weaker section.

#### *Stakeholder Theory*

RRB focuses on the financial need for all rural needs. The firm should be viewed as a collection of financial claims by different parties (Barton, 1989, Miles, 2019). Therefore, it is essential to understand the linkages of different stakeholders. We have used stakeholder theory to develop the theoretical framework. The major function of RRB is to assist the rural population for agriculture, microenterprise, and growth of the weaker sections of the society. Literature has suggested reasons that drive us to the Stakeholder theory as a lens for developing a conceptual framework. First, RRBs are dependent upon the need for rural population leading to their sustainable livelihood. This theory provides a rationale for different beneficiaries who contribute towards the financial performance. Second, this theory will help to understand the effects of different sectors separately. Third, the theory will pave the way for recommendations in the antecedents having a low impact.

The stakeholder theory claims that all the stakeholders affect the performance of a firm and cannot be ignored for the success of the firm (Mohammed & Muhammed, 2017). We have used the contribution of different stakeholders to explain the financial performance of RRBs. Researchers have identified business organizations, financial management & monitoring, and motivation as the three main function of financial performance (Widiatmika & Darma, 2018).

**Table 2: Construct and Definition**

<b>Construct</b>	<b>Definition</b>	<b>References</b>
Financial Performance	Financial Performance is the income, cost, and profit earned during a financial year.	Selvakumar, & Abima, 2020; Kanika & Sahni, 2013
Loans in Agriculture and Allied Sectors	Loans in Agriculture and the Allied sector refers to financial assistance provided to the small and marginal farmers for agriculture input, technology, machineries, and other support.	Tigari & Gaganadeepa, 2019; Ibrahim, 2016
Loans in Micro Enterprise	Loans in Micro Enterprise refers to the financial assistance provided for business enterprises.	Desogus & Venturi, 2019; Banerjee, 2014

Loans to the weaker section	Loans to the weaker section refers to the financial assistance provided for improving the standard of life to the priority sections corresponding to the beneficiaries under the 20-point Economic program.	Neelakandan & Maruthi, 2019; Yatendra & Malkhan, 1990
Non Performing Asset	Non-Performing Assets refers to the classification for loans or advances that are in default.	Kiran & Jones, 2016; Jha, 2018

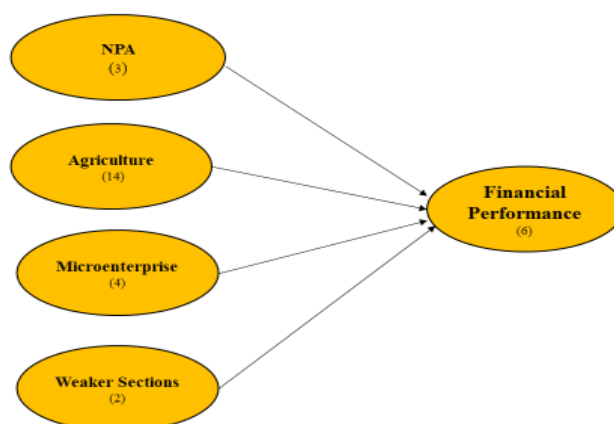
There are ample studies that have focussed on the financial ratios and deriving to a conclusion on the financial performance based on the different financial ratios. There is a scarcity of studies on the contribution of the stakeholders to the financial performance. The priority in the rural sector is to raise the standard of living of all the key stakeholders. We have tried to avoid the redundancy of the studies documenting the financial ratios and have provided a unique contribution to find out the impact of loans provided to different stakeholders on the financial performance of the RRB as a whole in the country. The essence of the problem with financial performance measures is that although studies have undergone financial ratios but there is a silence towards the stakeholders. Table 2 explains the constructs undertaken for the study to understand the financial performance. The performance of RRBs measured as per the following equation.

*Financial Performance*

$$\begin{aligned}
 &= a + \beta_1 \text{ Loans to the Weaker Section} \\
 &+ \beta_2 \text{ Loans to the Microenterprise} \\
 &+ \beta_3 \text{ Loans to Agriculture and Allied Setors} \\
 &- \beta_4 \text{ Non Performing Assets} + E
 \end{aligned}$$

Where  $a$  = intercept,  $\beta$  = Slope and  $E$  = Error

Based on the antecedents and their definition, we have come to a theoretical framework wherein we have tried to study the impact of loans provided to different sectors in the country on financial performance. The indicators selected for the study are the loans provided to the weaker sectors, loans for the agriculture and allied sectors, and loans for microenterprise. The items selected for the constructs have been taken from the literature. Figure 2 shows the theoretical framework depicting the causal effect relationship.



**Figure 2: Theoretical Framework**

### *3.1.1 Linkage between NPA and Financial Performance of RRB*

The assets are classified as performing and non-performing assets. NPA is the credit including principle or interest which has remained due over the past. NPA does not generate income for the banks. The recovery of loans is an indicator of the good financial performance of RRBs (Velayudham & Sankaranarayanan, 1990). The financial performance of RRB is influenced by a low NPAs. The rural sectors are driven by small and marginal farmers where in NPA is a major problem. It not only affects the profitability of the banks but also leads to provisions for recovering the bad debt by replacing the profits (Jha, 2018). Non-Performing Assets has been taken as one of the constructs to measure the impact of the non-performing assets in Agriculture Crop Loan, Agriculture Investment Credit, and Agriculture Crop Loan Allied Activities. The bad debts can be found in the agriculture sector and impacts adversely on the financial performance of the RRBs.

*H1: NPA has a significant negative impact on the financial performance of RRB*

### *3.1.2 Linkage between Agriculture Loans and Financial Performance of RRB*

RRBs have been performing for providing loans to the small and marginal farmers (Burgess & Pande, 2005). The performance is strongly dependent upon the loans towards agriculture and allied sectors. Agriculture has always been a major concern for financial assistance for the RRBs. The impact of the indicators like Gross Loans provided to the Priority Sector like Agriculture and Allied Activities, number of accounts for the agriculture loans, total Gross Loans in the Agriculture sector, total number of accounts for the Gross Loans in agriculture sector, number of accounts for loans provided in other allied activities, amount for the allied activities loans, amount, Gross Loans for the Priority Sector of Agriculture and Allied Activities amount, Loans issued for Agriculture, Number of accounts, Loans issued Agriculture Amount, Of total loans issued, Loans to Small and Marginal Farmers Number of Accounts, Of total loans issued, Loans provided to Small and Marginal Farmers Amount, Loans Issued for the Priority Sector Agriculture Farm Credit Crop Loans Number of accounts, Loans Issued Priority Sector Agriculture Farm Credit Crop Loans Amount, Loans Issued Priority Sector Agriculture Farm Credit Investment Credit Number of accounts, and Loans Issued Priority Sector Agriculture Farm Credit Amount have been studied. The elements for the Agriculture and Allied loans have been taken from the RRB financial performance report. Literature suggests that the agriculture and allied sectors have a significant impact on the profitability of the banks.

*H2: Agriculture has a significant positive impact on the financial performance of RRB*

### *3.1.3 Linkage between Microenterprise and Financial Performance of RRB*

Loans provided to microenterprise have a significant role in the financial performance of the RRBs. The microenterprise adds to the profitability of the RRBs, and the loan recovery is good. The indicators undertaken for the construct are Gross Loans Outstanding Priority Sector Micro Enterprises Number of Accounts, Gross Loans Outstanding Priority Sector Micro Enterprises Amount, Loans Issued Micro Enterprises Number of accounts, and Loans Issued for Micro Enterprises Amount. Microenterprise has a significant impact on the profitability and recovery of the loans. The number of loans offered for the micro enterprise results in better loans recovery and profitability of the banks.

*H3: Microenterprise has a significant positive impact on the financial performance of RRB*

### *3.1.4 Linkage between Weaker Section and Financial Performance of RRB*

RRBs have also been promoting the weaker sections in the rural areas. The objective of the RRBs is to provide facilities to the weaker sections of the society. However, there is a need to contribute more for the weaker sections. The impact of total loans issued, Loans to Weaker

Sections Number of accounts, and total loans issued Loans to Weaker Sections Amount has been studied for the financial performance of the RRBs. RRBs need to provide loans for the weaker sections of the rural population to uplift their living standards. Literature suggests that the loan recovery from the weaker sections can lead to better financial performance. The factors for the weaker sections have been taken from the financial performance RRB report.

*H4: Weaker Section has a significant positive impact on the financial performance of RRB*

### 3.2 Financial Performance

The financial vitality of the bank is measured through the trends in profit and operating costs (Shylendra, 1995). The total operating costs include the cost of mobilization of funds in salaries, funds, and establishment charges. RRBs have a strong hold on agriculture and allied sectors. Agriculture loans are provided to the farmers for buying agriculture equipment, agriculture inputs, and land development. Allied sectors loans are provided for purpose like animals rearing, fisheries, and dairy. The non-farm loans are provided for business, trade, and services (Rao, 2006). RRBs also provide loans to the non-priority sectors for production needs. The weaker sections are also provided assistance to sustain their livelihood. For measuring the financial performance, the indicators taken are Other Operating Income, Non-Operating Income, Total Income, Interest exp. on deposits, Operating Profit (+)/ and Net Profit (+)/. The study proceeds to test the linkages between the antecedents that the loans provided for allied agriculture activities, microenterprise, weaker sections, and non-performing assets have an impact on the financial performance. Various constructs used for analysis are presented in Table 3.

**Table 3: Construct and Items**

Construct	Items	References
Financial Performance (FP)	Other Operating Income	Selvakumar, & Abima, 2020; Kanika & Sahni, 2013; Shylendra, 1995
	Non-Operating Income	
	Total Income	
	Interest exp. on deposits	
	Operating Profit	
	Net Profit	
Loans in Agriculture and Allied Sectors	Gross Loans Outstanding Priority Sector Agriculture Allied Activities number of accounts and amount	Tigari & Gaganadeepa, 2019; Ibrahim, 2016; Reddy, 2006; Dantwala, 1978
	Other Agri. Loan number of accounts and amount	
	Loans issued to Agriculture number of accounts and amount	
	Of total loans issued, Loans to Small and Marginal Farmers, number of accounts, and amount	
	Loans Issued Priority Sector Agriculture Farm Credit Crop Loans number of accounts and amount	
	Loans Issued Priority Sector Agriculture Farm Credit Investment Credit number of accounts and amount	
Loans in Micro Enterprise	Gross Loans Outstanding Priority Sector Micro Enterprises number of accounts	Desogus & Venturi, 2019; Banerjee, 2014



	Gross Loans Outstanding Priority Sector Micro Enterprises Amount	
	Loans Issued0Micro Enterprises number of accounts	
	Loans Issued0Micro Enterprises Amount	
Loans to the weaker section	Of total loans issued, Loans to Weaker Sections number of accounts of total loans issued	Neelakandan & Maruthi, 2019; Yatendra & Malkhan, 1990
	Loans to Weaker Sections Amount	
Non-Performing Asset	Agriculture NPA Crop Loan	Velayudham & Sankaranarayanan, 1990
	Agriculture NPA Investment Credit	
	Agriculture NPA Crop Loan Allied Activities	

#### 4 FINDINGS

The findings of DEA analysis reflected that 19 out of 45 i.e. 42 percent of the units, were efficient in financial performance efficiency. On the priority sector targets, only 12 i.e. 26 percent of the units were efficient. The mean efficiency of the units was also high in financial efficiency i.e. 0.943, whereas PSL efficiency was only 0.767. The mean efficiency of the units demonstrated that the units were largely efficient. The data also revealed that some of the units were efficient in all the categories. The summary of all the analysis is discussed in table 4. The findings revealed that the maximum number of efficient units were there in financial efficiency, followed by the efficiency in which priority as well as outputs of weaker sections were clubbed. If we take PSL and weaker section output separately, the efficiency of the RRBs decreased. Only PSL was the least efficient units.

**Table 4: Summary of Findings**

Particulars	FP	PSL	WS	PSL+ WS
Number of efficient units	19	10	8	12
Minimum	0.667	0.28	0.166	0.206
Mean	0.943	0.598	0.725	0.767

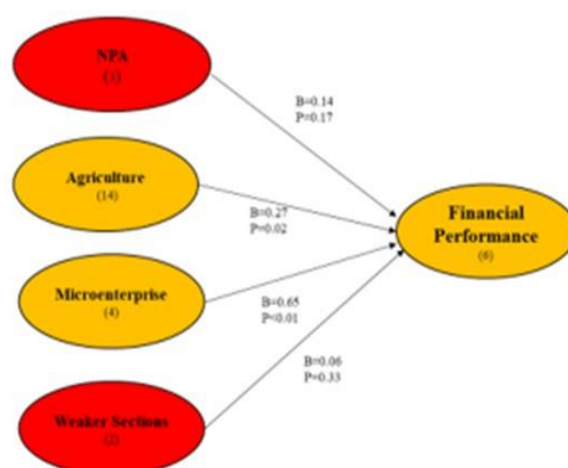
It was observed that RRBs present in North east were largely standalone. It was interesting to note that in terms of financial efficiency, out of 9 stand-alone units, three were fully efficient, and three were close to frontier showing efficiency between 0.96-0.99. However, when it came to other forms of efficiency, they could not do well. Later, we tried to incorporate an analysis of the sponsor banks. The data very clearly revealed that State bank of India promoted RRBs were most efficient followed by Bank of India. The details of Sponsor bank wise analysis are presented in the table 5.

**Table 5: Sponsor bank and status wise Efficiency of RRBs**

Particulars	FP		PSL+ WS		PSL efficiency		WS	
	Amalg amated	Stand alone	Amal gama ted	Stand alone	Stand alone	Amal gamat ed	Amalg amated	Sta nd alon e
Bank of India	1		2		1	0	2	0
Bank of Maharashtra	1		0	0	0	0	0	0
Canara Bank	1		1		1		1	0

Central Bank of India	1		1		1		1	0
Indian Bank	1	1	1	1	1	1	1	0
Punjab National Bank	2		1		1		0	0
State Bank of India	6	1	2		2		2	0
UCO Bank	1		1		1		0	0
United Bank of India	2	1	2		1		2	0
	<b>16</b>	<b>3</b>	<b>11</b>	<b>1</b>	<b>9</b>	<b>1</b>	<b>9</b>	<b>0</b>

The findings of PLS-SEM reflected that out of four antecedents taken for the cause and effect analysis (Figure 3), only two were accepted. Before undergoing data analysis from the reports of RRBs, data has been checked for reliability and validity. The data included the items explained in table 3 were taken for different states of the country.



**Figure 3: Validation of the Theoretical Framework**

The composite reliability and Average Variance Error has been checked. The Composite reliability is found greater than 0.7, and the Average Variance Error is greater than 0.5, for all the constructs which shows that the antecedents taken have shown the convergent validity (Fornell & Larcker, 1981). The antecedents have also been checked for discriminant validity. The secondary data for states for the items defined by the literature are taken to explain the loans of agriculture, weaker sections, NPA, financial performance, and loan for micro enterprise. The figure 3 above shows the linkage between the different constructs. It is observed that out of the four constructs, only two constructs, loans in the agriculture sector and microenterprise, have a significant positive relationship with the financial performance of the RRBs. The result demonstrates that out of four hypotheses, only two hypotheses has been accepted. The alternate hypothesis accepted are  
*Loans in Agriculture and Allied sector has a strong positive influence on the financial performance of RRB*

*Loans to Microenterprise has a strong positive influence on the financial performance of RRB*

The table 6 presents the path coefficients and significance of the relationship between the constructs.

**Table 6: Path Coefficients and Hypothesis Results**

Linkage		Path Coefficient	Significance Value	Hypothesis Results
Loans in Agriculture and Allied Sectors	Financial Performance	0.27	P=0.02	Accepted
Loans in Micro Enterprise	Financial Performance	0.65	P<0.01	Accepted
Non-Performing Assets	Financial Performance	B=0.14	P=0.17	Rejected
Weaker Sections	Financial Performance	B=0.06	P=0.33	Rejected

Table 7 shows the effect size of the relationship. An effect size greater than 0.14 indicates a large effect. The effect size of the relationship shows a large effect.

$$\begin{aligned}
 & \text{Financial Performance of RRBs} \\
 & = a + 0.27 \text{ Loans in Agriculture and Allied Sectors} \\
 & \quad + 0.65 \text{ Loans in Micro enterprise} + \text{Error}
 \end{aligned}$$

**Table 7: Effect Size of the relationship**

Construct	Effect Size
Loans in Agriculture and Allied Sectors	0.27
Loans in Micro Enterprise	0.64

## 5 DISCUSSION

The findings of the efficiency analysis of RRBs showed that RRBs were financially efficient when output factors of weaker section and priority sector was not included in the analysis. As soon as their desired output variables included lending to weaker section and priority sector, their efficiency decreased. This reflects that accusing RRBs of poor financial performance was not correct. These RRBs were meant to serve a specific section of society where the transaction cost is high because of the loans' low value and high volume. The result demonstrated that loans provided to agriculture and allied sectors plays an important role in the financial performance of RRBs. The RRBs have been providing financial assistance to the small and marginal farmers. Therefore, the loan provided to the small and marginal farmers positively influences the financial performance of the RRBs.

RRBs provides financial assistance to the microenterprise for supporting business. The loan provided for the microenterprise has a positive significance on the financial performance of RRBs. The loan provided to weaker sections and non-performing assets does not have a significant relation with the financial performance of RRBs. This may be due to the major problems faced by RRBs like lack of planning and problem of expanding loans (Wadhwa, 1980). The loans provided to microenterprises have a significant positive relation with the financial performance of RRBs. RRBs have been uplifting the small marginal farmers and poor rural population by granting them a loan for agriculture and microenterprises. The result also shows that there is a need to work on the non-performing assets of the RRBs across the country. The result shows that there is a need to focus on the issues of the RRBs. The scope of RRBs is

very limited as it is prone towards the rural population. The major occupation of the rural population is farming and business. Therefore, credit facilities are provided to the farmers, weaker sections, and micro enterprisers. The bank does not attract the richer section of the country as they are catering to meet the needs of the poor people (Jha, 2018). The poor population sometimes are not able to recover their loans and add to the NPA of the banks. The NPA affects the profitability of the RRBs and there is a shift of profits towards recovering the bad debts. The financial recovery of the RRBs is also low. A few of the RRBs are facing financial inadequacy and are dependent upon NABARD. The reasons for the poor performance of the RRBs may be the rise in NPA and lack of coordination among different banks. The rise in NPA has led to the huge losses of a few RRBs. Consistent efforts are required to be made by the RRBs to control the bad debt. There is also a need to think about providing financial assistance to the weaker sections without raising the bad debts. RRBs cannot be compared to other banks as the target population of RRBs is different. Therefore, RRBs need support from other banks in terms of balance in bank facilities, maintaining the NPA, and coordination.

## **6 IMPLICATIONS OF THE STUDY**

The study has a pioneer implication for academicians, stakeholders, and policymakers. First, the study adds to the knowledge of the financial performance of the RRBs and different sectors influencing the performance. The contribution of RRBs towards agriculture, microenterprise, and weaker sections are discussed in detail. Second, the study elaborates on the different parameters for financial efficiency concerning different states. The non-performing assets and the weaker sections are the antecedents that need more attention for RRBs. Finally, the study is a contribution that opens ways for policy recommendations for weaker sections and non performing assets. It is hereby to be noted that RRBs are different from other banks as the main objective is to provide financial assistance to the rural population. The RRBs need special attention for sustaining their financial performance targeting the rural weaker sections of the society.

## **7 CONCLUSION**

The findings of the study concluded that RRBs were efficient in their financial efficiency RRBs were mostly efficient. However, they need to increase the focus on weaker section and priority sector parameters to improve that efficiency. The findings also reflected that stand-alone RRBs were largely efficient as compared to amalgamated RRBs. Chinna (2013) concluded in his study that RRB's performance has improved over a period of time. Several researchers criticized the amalgamation policy and said it will be a death blow to the poor who already lack access to credit. He also demanded immediate action on the amalgamation of RRBs in the interest of the vast majority of the rural poor (Kumar, 2008). In terms of sponsor banks, the RRBs, State bank of India had the highest efficient RRBs, followed by the Bank of India. The RRBs across the states need to work on providing financial assistance to the weaker sections. The study also concludes that the RRBs have been providing loans to agriculture allied sectors and micro enterprise, which have a significant impact on the financial performance. Even among these sectors, microenterprise has a better impact on the financial efficiency of RRBs. Loans to weaker sections and NPA could not affect the financial performance of RRBs. This clearly shows that loans to weaker sections are so small and low in value that even if it becomes NPA, it did not affect the financial performance of RRBs. This finding does not support the amalgamation of RRBs and suggest that government should support the opening up of RRBs, and they should not be compared with traditional and commercial banks for their performance. However, it needs to be noted that this analysis is based on only one year of data. The same analysis can be repeated with multiple years to get more reliable findings in this regard.

The study has made a significant contribution towards the financial efficacy and involvement of different stakeholders. However, the study is limited to the secondary data available from RRB report from different states of the country. The study paves a way for further research to find out the contribution of RRBs towards the weaker sections in the rural areas of different states. The study presents the financial performance of the RRBs of the country as a whole. We feel that a comparative study may be made to determine RRB's financial performance state wise contribution. The study can be beneficial for the decision makers to develop a roadmap for increasing the financial assistance for the weaker sections.

## REFERENCES

- Antil, S., Kumar, M. and Swain, N., 2020. Evaluating the efficiency of regional rural banks across the Indian states during different phases of structural development. *Applied Economics*, 52(41), pp.4457-4473.  
<https://doi.org/10.1080/00036846.2020.1735622>
- Banerjee, M.M., 1998. Micro-enterprise development: A response to poverty. *Journal of Community Practice*, 5(1-2), pp.63-83.  
[https://doi.org/10.1300/J125v05n01\\_05](https://doi.org/10.1300/J125v05n01_05)
- Barton, S.L., Hill, N.C. and Sundaram, S., 1989. An empirical test of stakeholder theory predictions of capital structure. *Financial Management*, pp.36-44.  
<https://doi.org/10.2307/3665696>
- Burgess, R. and Pande, R., 2005. Do rural banks matter? Evidence from the Indian social banking experiment. *American Economic Review*, 95(3), pp.780-795.  
<https://doi.org/10.1257/0002828054201242>
- Chinna, J. , 2013. "Performance evaluation of regional rural banks (rrbs) in India", *Indian Journal of Finance*, 7, (7), pp. 32 - 42.
- Dantwala, M.L., 1978. Regional rural banks. A clarification. *Econ and Polit Wkly*, 13(42), pp.21.
- Datta, B., 1978. Regional Rural Banks. *Economic and Political Weekly*, pp.1553-1556.
- Desogus, M. and Venturi, B., 2019. Bank crashes and micro enterprise loans. *International Journal of Business and Social Science*, 10(12), pp.35-53.  
<https://doi.org/10.30845/ijbss.v10n12a4>
- Fornell, C. and Larcker, D.F., 1981. Structural equation models with unobservable variables and measurement error: Algebra and statistics. 18(3), pp. 382-388.  
<https://doi.org/10.1177/002224378101800313>
- Gadhavi, B.K. and Vekariya, S.B., 2014. Financial Performance of RRBs in Saurashtra Region of Gujarat. *Journal of Rural Development*, 33(1), pp.33-49.

Government of India (1998). "Debt and investment survey NSS 48th Round, Household Assets and liabilities. 30.6.1991, Report Number 419, Ministry of statistics, Government of India (1998). [http://mospi.nic.in/sites/default/files/publication\\_reports/419\\_final.pdf](http://mospi.nic.in/sites/default/files/publication_reports/419_final.pdf).

Jha, V.K., A review of Non Performing Assets and various problems in RRB's.

Jorum, T.M. and Mali, S.S., 2012. Performance of Regional Rural Banks after Amalgamation in India: Progress and Prospects. *Artha Journal of Social Sciences*, 11(3), pp.1-14.  
<https://doi.org/10.12724/ajss.22.1>

Kalra, S. and Sing, K., 2000. Economic Viability and Equity Issues in Financial Institutional Reforms: A Study of Regional Rural Banks in Punjab. *Indian Journal of Agricultural Economics*, 55(4), pp.627-643.

Kanika, N. and Sahni, N., 2013. Financial performance evaluation of RRB's in India. *International Journal of Management & Information Technology*, 4(2), pp.81-92.  
<https://doi.org/10.24297/ijmit.v4i2.4592>

Kiran, K.P. and Jones, T.M., 2016. Effect of Non Performing Assets on the profitability of banks-A selective study. *International Journal of Business and General Management*, 5(2), pp.53-60.

Kumar, S., 1986. *Regional Rural Banks: An Evaluation of Performance. Trends and Progress of Banking in India*, New Delhi: Deep and Deep Publication, pp.184-188.

Kumar, V.A., 2008. Case for De-amalgamation of regional rural Banks. *Economic and Political Weekly*, pp.60-68.

Miles, S., 2019. Stakeholder theory and accounting. *The Cambridge Handbook of Stakeholder Theory*, Cambridge University Press, Cambridge, pp.173-210.  
<https://doi.org/10.1017/9781108123495.011>

Misra, B.S., 2006. The Performance of Regional rural banks (RRBs) in India: Has past Anything to Suggest for future. *Reserve bank of India occasional papers*, 27(1), pp.89-118.

Mohammed, S.A. and Muhammed, J., 2017. The relationship between agency theory, stakeholder theory and Shariah supervisory board in Islamic banking: An attempt towards discussion. *Humanomics*.

Naresh, K. 1982. Impact of commercial banks on the development of rural industries India, *Cooperator*, 19(16), pp. 509-511.

Neelakandan, M. and Maruthi, I., 2019. Aanalysis of performance of Commercial banks on financial inclusion in kerala state with special reference to credits and loans,. *Int. J. of Social Science and Economic Research*, 4(2), pp.901-929.

Rao, D., 2006. Human Resource Issues at Regional Rural Banks. *Economic and Political Weekly*, pp.955-959.

Reddy, A.A., 2006. Productivity growth in regional rural banks. *Economic and Political Weekly*, pp.1079-1086.

<https://doi.org/10.2139/ssrn.1537538>

Reserve Bank of India (2006). "Task Force on Empowering RRB Boards for Operational Efficiency", Reserve Bank of India, Mumbai.

Reserve Bank Of India (2008). *Evolution of Banking in India.*,  
<https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/86727.pdf>.

Reserve Bank of India (2019). "Report of the Internal Working Group to Review Agricultural Credit" <https://rbidocs.rbi.org.in/rdocs/ /PublicationReport/Pdfs /WGREPORT101A17FBDC144237BD114BF2D01FF9C9.PDF>.

Selvakumar, S. and Abima, D., 2020. Appraisal of Financial Performance of Regional Rural Banks with Special Reference to Assam Gramin Vikash Bank, Maharashtra Gramin Vikash Bank and Karnataka Gramin Vikash Bank. *International Journal of Research in Engineering, Science and Management*, 3(12), pp.191-196.

<https://doi.org/10.47607/ijresm.2020.435>

Selvaraj, P. and Ragesh, T.V., 2018. Innovative approach of a regional rural bank in adopting technology banking and improving service quality leading to better digital banking. *Vinimaya*, 39(1), pp.22-32.

Shylendra, H.S., 1995. Lender Vitality and Lender Behaviour-A Case Study of a Regional Rural Bank in South India. *Savings and development*, pp.231-242.

Shylendra, H.S., 1996. Institutional Reform and Rural Poor: A Study on the Distributional Performance of a Regional Rural Bank. *Indian Journal of Agricultural Economics*, 51(3), pp.301-314.

Tigari, H. and Gaganadeepa, M.G., 2019. Regional Rural Banks and Rural Development: A Case of Pragathi Krishna Gramin Bank. *Shanlax International Journal of Economics*, 7(2), pp.68-74.

<https://doi.org/10.34293/economics.v7i2.315>

Velayudham, T.K. and Sankaranarayanan, V., 1990. Regional rural banks and rural credit: Some issues. *Economic and Political weekly*, pp.2157-2164.

Wadhva, C.D., 1980. *Rural Banks for Rural Development: An Analysis of the Working of Regional Rural Banks in India with Two Cases Studies.*

Widiatmika, P.H. and Darma, G.S., 2018. Good Corporate Governance, Job Motivation, Organization Culture Which Impact Company Financial Performance. *Jurnal Manajemen Bisnis*, 15(3), pp.82-99.

Yatendra, S. and Malkhan, S., 1990. Role of regional rural bank in upliftment of weaker section-a study in Agra District of UP. *Agricultural Situation in India*, 45(5), pp.345-349.