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Financial Inclusion and Amalgamation of Regional Rural Banks in India: A Comprehensive Review Study

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Abstract

The dual goals of financial inclusion and institutional consolidation have significantly influenced the path of Regional Rural Banks (RRBs) in India since they were founded in 1975. Designed to promote financial democracy in rural areas, RRBs have experienced major structural changes through three phases of mergers (2005–2019), shrinking from 196 banks to just 43, all while increasing their branch networks and business activities. This review paper takes a close look at how financial inclusion outcomes relate to the restructuring of RRBs driven by these mergers, using empirical data from research published between 2000 and 2020. It outlines the development of financial inclusion policies in India from the era of social banking and priority sector initiatives to the modern JAM (Jan Dhan-Aadhaar-Mobile) framework and assesses the crucial role RRBs play in this process. Additionally, it examines the performance of RRBs before and after mergers across various aspects: branch growth, deposit collection, credit-deposit ratios, lending to priority sectors, profitability, and management of non-performing assets. The review also evaluates how effective key government programs like the Pradhan Mantri Jan Dhan Yojana (PMJDY), Kisan Credit Card (KCC), Self-Help Group Bank Linkage Programme (SHG-BLP), and Direct Benefit Transfer (DBT) have been in utilizing RRBs as channels for delivering these services. The findings indicate that while mergers have led to improvements in capital strength, operational efficiency, and returns on equity, challenges still persist in areas like credit distribution, technology use, and the quality of financial interactions with rural customers. The paper wraps up with a research-based policy agenda aimed at transforming RRBs into impactful, tech-savvy institutions that can enhance financial inclusion in rural India.

Keywords: Financial Inclusion, Regional Rural Banks, Amalgamation, PMJDY, Kisan Credit Card, SHG-BLP, Priority Sector Lending, Rural Banking, JAM Trinity, India

1. Introduction

Financial inclusion-making sure everyone has access to suitable, affordable, and dependable financial services-has become a key goal for policymakers in developing countries around the globe. In India, where many rural households have historically depended on informal and often exploitative lending practices, creating a more inclusive formal financial system is not just an economic necessity but also a social responsibility. Regional Rural Banks (RRBs), which were established by a central ordinance on October 2, 1975, and supported by the Regional Rural Banks Act of 1976, were designed to be the main

institutions driving rural financial inclusion.

The idea for RRBs originated from the Narasimham Committee Report of 1975, which highlighted the need for a new type of banking institution that would blend the local insight and cost-effectiveness of cooperative banks with the professional management and resources of commercial banks. The committee imagined RRBs as entities focused solely on rural areas, catering to small and marginal farmers, agricultural workers, rural artisans, and small traders-exactly the groups that commercial banks often overlook due to perceived economic unviability.

Over the past 45 years, Regional Rural Banks (RRBs) have

gone through several stages of policy changes. The first stage, which lasted from 1975 to 1990, was marked by a rapid increase in the number of RRBs, skyrocketing from just 6 to 196 and reaching out to countless rural areas that had never seen banking services before. Then came a challenging period from 1990 to 2005, where financial difficulties and concerns about sustainability led to significant losses. This prompted a need for recapitalization and the Vyas Committee's suggestions for restructuring. The following phase, from 2005 to 2019, reshaped the banking scene with three major rounds of mergers, cutting the number of RRBs down to 43 and resulting in larger, more financially stable institutions.

At the same time, India's approach to financial inclusion became increasingly ambitious. Initiatives like the no-frills account (2005), the business correspondent model (2006), the Jan Dhan Yojana (2014), and the JAM (Jan Dhan-Aadhaar-Mobile) framework have positioned RRBs as key players in delivering these services. This paper takes a deep dive into the evidence surrounding how effectively RRBs have managed to balance their roles in promoting financial inclusion while ensuring their own viability, and it explores valuable lessons for their future growth.

2. Objectives of the Study

The present review paper pursues the following specific objectives:

1. To examine the historical evolution of RRBs within the broader context of India's financial inclusion policy framework.
2. To critically assess the three phases of RRB amalgamation (2005–2019) and their empirical impact on institutional performance.
3. To evaluate the effectiveness of RRBs as delivery channels for flagship financial inclusion schemes-PMJDY, KCC, SHG-BLP, and DBT.
4. To analyse the determinants of financial inclusion outcomes at the branch and district levels in rural India.
5. To assess the role of technology-CBS, mobile banking, and the BC model-in enhancing RRBs' financial inclusion capacity.
6. To identify research gaps and formulate a forward-looking policy and research agenda for RRBs.

3. Research Methodology

This paper takes a deep dive into the literature by using a systematic review methodology. It pulls together insights from a variety of sources, including peer-reviewed journal articles, working papers, government committee reports, and official statistical publications from the last two decades (2000–2020). The main databases explored are JSTOR, EBSCO, Google Scholar, ResearchGate, along with the repositories of the Reserve Bank of India (RBI) and the National Bank for Agriculture and Rural Development (NABARD). The search terms used were 'Regional Rural Banks', 'RRB financial inclusion', 'RRB amalgamation', 'rural banking India', 'PMJDY RRB', 'Kisan Credit Card performance', and 'SHG bank linkage'. Studies were chosen based on their relevance, methodological soundness, and the freshness of the data they presented.

Instead of following a chronological order, the review is organized thematically, which allows for a more systematic

comparison across different research areas. Quantitative data from the RBI and NABARD Annual Reports help to provide context and validate the findings from individual studies. In cases where studies show conflicting results, the paper highlights these differences and suggests possible explanations.

4. Financial Inclusion in India: Policy Evolution and RRBs' Role

4.1 Pre-PMJDY Phase: Social Banking to Business Correspondents

India's path to achieving universal financial inclusion has gone through several key policy phases. In the years right after independence, social banking became the cornerstone of rural financial access, thanks to bank nationalization in 1969 and 1980, directives for branch expansion, and mandates for priority sector lending. This led to the establishment of Regional Rural Banks (RRBs), which were created to provide formal credit to those who were left out of the commercial banking system.

Angadi (2003) ^[2] pointed out that a robust financial infrastructure is essential for economic growth, and he argued that the geographic presence of RRBs in rural India played a crucial role in building this financial inclusion framework. However, the credit-deposit ratio in rural areas consistently lagged behind the national average, highlighting a persistent gap between how much money was being saved and how much was being lent out in these regions.

Nathan and Swami (2002) ^[21] looked into how financial liberalization affected rural lending and discovered a noticeable drop in priority sector credit as banks shifted their focus to more lucrative urban lending opportunities. This retreat from rural lending emphasized the ongoing significance of RRBs as dedicated financial institutions for rural communities.

The introduction of the Business Correspondent (BC) model by the Reserve Bank of India in 2006 marked a significant turning point, allowing RRBs to extend their services beyond traditional branch networks. BCs-local individuals or organizations equipped with biometric verification and mobile technology-were able to provide services like account openings, cash transactions, and loan repayments in villages that were too far away to support a full bank branch.

4.2 PMJDY and the JAM Trinity: RRBs as Frontline Institutions

The launch of the Pradhan Mantri Jan Dhan Yojana (PMJDY) on August 28, 2014, was a ground breaking step towards financial inclusion in India. The initiative aimed to ensure that every household had at least one bank account, along with a RuPay debit card, an overdraft facility, and access to micro-insurance. Regional Rural Banks (RRBs) played a crucial role as implementation partners, thanks to their extensive rural branch networks and understanding of local customer needs.

According to Paramasivan and Kamaraj (2015) ^[22], during the first year of PMJDY (from September 2014 to March 2015), public sector banks, including RRBs, led the way in account opening initiatives. By July 2015, RRBs had successfully opened 2.57 crore accounts under PMJDY in

rural areas, which accounted for over 25 percent of the total 10.21 crore rural accounts created.

Anand and Ramesh (2016) ^[1] looked into the outcomes of PMJDY in its first year and found that while the scheme had indeed opened a significant number of accounts in both rural and urban settings, around 43.12 percent of these accounts had zero balances. This pointed to a lack of deeper financial engagement beyond just opening an account. Gupta (2015) ^[10] echoed this concern, noting that 71 percent of PMJDY accounts linked to public sector banks started with zero balances, highlighting the challenge of turning account ownership into active saving habits.

Sinha and Azad (2018) ^[29] assessed PMJDY's effectiveness in achieving genuine financial inclusion by using various indicators-such as the number of bank accounts, average deposits, overdraft usage, pension coverage, insurance penetration, credit-deposit ratios, and access to credit. Their findings revealed that while PMJDY had made significant strides in increasing account access, it still fell short of delivering comprehensive financial inclusion across all aspects, especially in terms of credit access and insurance utilization.

The JAM trinity-connecting Jan Dhan accounts, Aadhaar biometric identification, and mobile connectivity-has built a cohesive digital financial framework that has steadily improved the efficiency and accessibility of financial inclusion. With Direct Benefit Transfer (DBT) through JAM-enabled RRB accounts, we've tackled the issue of leakages in government welfare payments, bringing rural beneficiaries who were once left out into the fold of regular formal financial participation.

5. Flagship Schemes and RRBs: Kisan Credit Card, SHG-BLP, and GCC

5.1 Kisan Credit Card Scheme: The Kisan Credit Card (KCC) scheme, which kicked off in 1998 and has gradually expanded through regional rural banks (RRBs), cooperative banks, and commercial banks, stands out as one of the most significant tools for promoting financial inclusion in India's agricultural sector. The KCC offers farmers a revolving credit facility that they can use for everything from crop inputs to maintenance costs and even personal expenses, which means they don't have to go through the hassle of applying for loans every single agricultural season.

Research on how KCC performs through RRBs shows some notable regional differences. The central and southern parts of India boast the highest coverage, with each region having 26 percent of active KCC accounts, while the northeastern and eastern regions are falling behind. Interestingly, RRBs tend to provide lower amounts of credit per card compared to commercial banks, which likely reflects the smaller farm sizes and lesser credit needs of their usual customers.

A study by Nandini, Bosu, and Patijoshi (2019) ^[18] highlighted that the KCC has made it much easier for small farmers served by RRBs to access credit, cutting down on transaction costs and eliminating the delays that often come with renewing loans each year. The scheme's connection with PMJDY RuPay cards has also boosted its usefulness by allowing for cash withdrawals at ATMs. However, the study pointed out a concerning trend: larger farm borrowers tend to have better access to KCC credit because they can offer collateral and are viewed more favorably by lenders. This

creates a structural bias that puts marginal farmers, who are the primary focus of RRBs, at a disadvantage.

5.2 Self-Help Group Bank Linkage Programme

The SHG-Bank Linkage Programme (SHG-BLP), which was launched by NABARD back in 1992, has grown to be the largest microfinance initiative in the world, connecting self-help groups of rural women with formal banking credit. Regional Rural Banks (RRBs) have played a significant role in this program, thanks to their presence in rural areas and their commitment to supporting underprivileged communities.

Research consistently highlights the positive impact of SHG-BLP when delivered through RRBs. Various studies show that access to SHG credit boosts household income, enhances consumption, improves asset ownership, and empowers women economically. Additionally, the program has noticeably helped reduce reliance on informal moneylenders in rural regions served by RRBs.

However, NABARD's data indicates that non-performing assets (NPAs) in SHG loan portfolios have become a growing issue, especially during tough agricultural seasons and in states where SHG institutions are not well-established. RRBs face the challenge of promoting financial inclusion through ongoing SHG lending while also managing the risk of accumulating NPAs in their portfolios-a balancing act that calls for tailored risk management strategies.

5.3 General Credit Card and MSME Finance

The General Credit Card (GCC) was launched as a helpful addition to the KCC, specifically aimed at non-farm rural borrowers. It offers revolving credit to rural entrepreneurs, artisans, and small traders. With the GCC, Regional Rural Banks (RRBs) provide unsecured credit to meet the working capital needs of rural non-farm businesses, which in turn supports the diversification of rural livelihoods and the growth of micro, small, and medium enterprises (MSMEs). Chavan (2020) ^[6] pointed out that while financial inclusion initiatives have focused heavily on attracting small retail deposits, there's been less emphasis on providing small loans. This trend shows a certain risk aversion among RRBs when it comes to lending to rural MSME borrowers. Unfortunately, this imbalance means that RRBs are missing out on a valuable chance to enhance their impact on financial inclusion beyond just the deposit side of things.

6. Amalgamation of RRBs: Three Phases of Structural Consolidation

6.1 Background and Rationale for Amalgamation

By the early 2000s, people were really starting to worry about the financial health of Regional Rural Banks (RRBs). Out of the 196 RRBs that were up and running in 2003-04, 163 managed to turn a profit of Rs. 953 crore, while 33 faced losses totalling Rs. 184 crore. By March 2004, 90 of these banks were showing accumulated losses on their balance sheets. To tackle these issues, the Vyas Committee (in 2001 and 2004) ^[31, 32] and the Sardesai Committee (in 2005) ^[27] took a close look at the underlying reasons for the financial struggles of RRBs. They suggested that merging RRBs sponsored by the same bank within a state could be a key solution.

The idea behind this merger was to tap into several potential

benefits: achieving economies of scale in administration and technology, bringing together a skilled workforce, increasing credit exposure limits, sharing marketing efforts, cutting down on transaction costs, and creating stronger entities that could better handle financial shocks. The hope was that these amalgamated RRBs would also be able to provide a wider range of banking products and improved infrastructure for rural customers.

6.2 Phase I (2005–2006): Sponsor Bank-Level Consolidation

The first phase of the amalgamation kicked off on September 12, 2005, bringing together Regional Rural Banks (RRBs) that were sponsored by the same public sector bank within a state. By the time we reached 2009-10, this phase had successfully cut down the number of RRBs from 196 to just 82. A great example of this is what happened in West Bengal: five RRBs backed by the United Bank of India came together to create the Bangiya Gramin Vikash Bank, while three RRBs sponsored by UCO Bank merged to form the Paschim Banga Gramin Bank in 2007. Ibrahim (2010) [12] took a closer look at how things fared after Phase I and discovered that even though the number of RRBs had shrunk, their branch network actually grew. More districts were served by RRBs, total capital funds saw a significant boost, and deposit mobilization improved as well. His study used a paired t-test to compare performance before and after the mergers, concluding that the financial health of RRBs had notably improved in the post-merger period. Similarly, Soni and Kapre (2012) [30] assessed the outcomes of Phase I from 2006-07 to 2010-11 and found a generally positive trend in deposits, loans, and investment growth, although there was quite a bit of variation between states in how much improvement was seen. States that had stronger support from their sponsor banks experienced more

significant gains after the mergers.

6.3 Phase II (2012–2015) and Phase III (2018–2020): Further Consolidation:

Phase II mergers significantly cut down the number of Regional Rural Banks (RRBs) from 82 to 56, following the same logic of sponsor bank-level mergers and expanding it to form larger state-level entities. Then came Phase III, which kicked off in 2018–19 with the motto 'One State – One RRB' for the smaller states, aiming for a more comprehensive consolidation. On January 1, 2019, new merged RRBs in Bihar and Punjab were established. In Uttar Pradesh, three RRBs-Baroda UP Gramin Bank, Kashi Gomti Samyut Gramin Bank, and Purvanchal Bank-joined forces to create Baroda U.P. Bank, sponsored by Bank of Baroda, effective April 1, 2020. This brought the total number of RRBs down to 43.

A study focusing on the Jharkhand Rajya Gramin Bank (JRGB), which was formed by merging Jharkhand Gramin Bank and Vananchal Gramin Bank on April 1, 2019, used descriptive and analytical methods, drawing on secondary data from the RBI, NABARD, and JRGB's annual reports from 2014–15 to 2022–23. The findings revealed that the merger resulted in a cohesive entity capable of serving all 24 districts of Jharkhand, enhancing both operational reach and capital efficiency. Research into Bihar's RRBs looked at how mergers affected profitability over a twelve-year span (2000–01 to 2011–12), comparing six years of performance before and after the mergers. The results indicated that profitability improved post-merger, aligning with the theory that mergers create value. However, it also highlighted that the main reason for the mergers in Bihar's RRBs was to stop the rising accumulated losses, rather than to pursue aggressive growth-an important distinction that could impact service quality after the mergers.

6.4 Empirical Evidence on Amalgamation Outcomes

Table 1: Key Performance Indicators – Pre-Merger vs Post-Merger (All-India RRBs)

Parameter	2003-04 (Pre)	2009-10 (Post Ph.I)	2014-15 (Post Ph.II)	2019-20 (Post Ph.III)
No. of RRBs	196	82	56	43
No. of Branches	14,446	15,475	19,082	21,000+
Districts Covered	518	594	640+	700+
Profitable RRBs (%)	83%	~90%	~93%	~95%
Total Deposits (Rs. Cr.)	~75,000	1,43,000+	3,30,000+	5,00,000+
Return on Equity (ROE)	Negative/Low	Improving	Positive	Significantly +ve

Source: RBI, NABARD Annual Reports (various years); compiled by authors.

The idea that mergers can boost performance is widely backed by research. Studies by Misra (2006) [15], Khankhoje and Sathye (2008) [13], and Ibrahim (2010) [12] all showed that mergers tend to enhance branch performance. Meanwhile, Bose (2005) [5] and Featherstone (1996) [9] laid down the theoretical groundwork for the benefits of scale in rural banking mergers, which the evidence from India largely supports. However, pointed out a crucial exception, noting that structural changes didn't significantly affect overall productivity or customer satisfaction. They attributed this to the disruptive nature of frequent policy shifts, which can hinder smooth operations at the branch level.

7. Technology Adoption and Digital Financial Inclusion

7.1 Core Banking Solutions

The widespread adoption of Core Banking Solutions (CBS) by all Regional Rural Banks (RRBs), thanks to NABARD's support in the early 2010s, marked a significant turning point in their retail banking journey. CBS allows for real-time transaction processing, access to accounts from multiple branches, and smooth integration with national payment systems like NEFT, RTGS, IMPS, and UPI. For customers in rural areas, this means they can access their accounts from any RRB branch, not just the one where they opened it-making banking much more convenient. Kumar and Devi (2019) [14] pointed out that combining CBS with

mobile banking could greatly improve service delivery and boost customer satisfaction. Their research showed that RRBs that implemented mobile banking apps experienced noticeable increases in transaction volumes, customer satisfaction ratings, and operational efficiency, especially in regions with strong mobile network coverage.

7.2 Business Correspondent Model and Last-Mile Delivery

The Business Correspondent (BC) model has really broadened the reach of RRBs in terms of digital financial inclusion, especially in villages that don't have a physical branch nearby. These BCs come equipped with handy tools like micro-ATMs, biometric authentication devices, and mobile connectivity, allowing them to offer essential banking services. This includes everything from opening accounts using Aadhaar-based eKYC to handling cash deposits and withdrawals, fund transfers, loan repayments, and even collecting insurance premiums. By utilizing BCs, RRBs can effectively meet the banking needs of smaller or more spread-out communities that wouldn't support a full branch.

In a study by Antil 2019 *et al.*,^[3] they looked into what drives rural customers to adopt digital banking and discovered that trust, ease of use, and network availability were the main hurdles for mobile and internet banking. On top of that, low financial literacy made things even tougher, as many rural customers weren't familiar with how digital transactions work and were worried about the risk of electronic fraud. The study suggested that investing in community-level digital literacy programs and expanding agent banking could serve as a reliable bridge to digital access for these communities.

7.3 UPI and Real-Time Payment Infrastructure

The Unified Payments Interface (UPI), which was introduced by NPCI back in 2016, has steadily gained traction among Regional Rural Banks (RRBs) as a go-to payment method for their rural clientele. With UPI-enabled RRB accounts, rural customers can effortlessly send and receive instant payments using just their mobile numbers or QR codes. This feature is a game-changer for rural commerce, helping with everything from buying agricultural supplies to receiving government benefits. Additionally, RuPay debit cards linked to PMJDY RRB accounts have seen a remarkable rise in popularity, jumping from a mere 0.6 percent market share in 2013 to over 50 percent by 2018. These cards have opened the door to digital payment systems for many rural customers who were previously left out of the card payment scene.

8. Consolidated Review of Key Literature

8.1 Studies on Financial Inclusion Outcomes

Angadi (2003)^[2] pointed out that having a solid financial infrastructure is crucial for economic growth, and the geographic reach of Regional Rural Banks (RRBs) serves as an invaluable asset for rural financial inclusion. Bapat (2010)^[4] discovered important links between demographic factors-like income, occupation, and asset ownership-and the likelihood of having a bank account, laying the groundwork for targeted outreach efforts in financial inclusion through RRBs. Paramasivan and Kamaraj (2015)

^[22] highlighted the key role RRBs played in implementing the Pradhan Mantri Jan Dhan Yojana (PMJDY) during its inaugural year, with public sector banks, including RRBs, leading the way in account openings in rural regions. Gupta (2015)^[10] observed that while the swift account openings under PMJDY were impressive-71% of accounts linked to public sector banks started with a zero balance-this actually indicated successful onboarding of previously unbanked individuals rather than a shortcoming in the inclusion strategy. Anand and Ramesh (2016)^[1] noted that PMJDY had effectively opened accounts in both rural and urban settings, yet 43.12% of these accounts remained inactive, underscoring the urgent need for financial literacy initiatives to engage these dormant accounts. Sinha and Azad (2018)^[29] used a variety of indicators to assess the impact of PMJDY on financial inclusion and found that, although access to accounts had significantly improved, access to credit and insurance remained well below desired levels. According to CRISIL (2018)^[8], their detailed financial inclusion index revealed that while RRBs and the Self-Help Group (SHG) Linkage Programme had enhanced rural outreach, there were still notable disparities in financial inclusion across different states, with the northeastern and central regions of India lagging behind.

Chavan (2020)^[6] pointed out that financial inclusion strategies have focused more on encouraging small deposits rather than providing small loans. This has led to a structural imbalance, which ultimately restricts the positive impact that access to formal banking can have on rural households.

8.2 Studies on Amalgamation and Restructuring

The Vyas Committee (2001, 2004)^[31, 32] suggested that consolidating Regional Rural Banks (RRBs) was the best way to tackle the issues of accumulated losses and concerns about structural viability, laying the groundwork for three phases of mergers that followed. The Sardesai Committee (2005)^[27] backed this idea and detailed how the Phase I mergers should operate, emphasizing that the same sponsor bank within a state should be the key criterion for merging. In 2005, Bose provided a theoretical basis for the benefits of scale in rural bank mergers, arguing that larger entities formed after mergers would have lower administrative costs per unit and greater lending capabilities. Khankhoje and Sathye (2008)^[13] looked into the technical efficiency of Indian RRBs before the mergers and discovered that smaller RRBs tended to be more efficient on a per-branch basis than their larger counterparts, warning against the assumption that bigger always means better efficiency. Ibrahim (2010)^[12] was the first to empirically assess the outcomes of Phase I amalgamations and found notable improvements in key performance indicators-like the number of branches, districts served, capital funds, deposits, loans, and investments-after the mergers took place. Soni and Kapre (2012)^[30] confirmed these performance enhancements for Phase I by analyzing key performance indicators from 2006-07 to 2010-11, although they pointed out that smaller RRBs frequently outperformed the larger merged entities in terms of efficiency. Gupta and Verma (2008)^[11] examined how the Indian banking system expanded through mergers and found that while consolidation generally boosted financial health metrics, the challenges of integration sometimes delayed the expected efficiency improvements.

Misra (2006) ^[15] noted that the enhancements in branch performance following mergers were supported by economies of scale in technology adoption and reductions in administrative costs, providing empirical backing for the amalgamation policy.

Ahmed Nasir (2020) ^[20] carried out a thorough evaluation of RRB performance up to 2020, revealing that both deposits and advances saw significant growth during the post-Phase III amalgamation period. Additionally, key financial performance indicators demonstrated notable improvement.

9. Synthesis of Empirical Findings

The research we've looked at brings together some key findings:

1. The merger of RRBs from 196 to just 43 entities has led to some encouraging results in terms of financial health: after the merger, gross NPAs dropped to 5.4%, the Provision Coverage Ratio (PCR) increased to 65.1%, and the Capital to Risk-Weighted Assets Ratio (CRAR) improved to 14.4% by the end of Phase III.
2. Even with the consolidation of entities, branch networks have actually grown—from 14,446 branches in 518 districts in 2004 to over 21,000 branches in more than 700 districts by 2020—showing that the mergers didn't lead to a reduction in services.
3. The Pradhan Mantri Jan Dhan Yojana (PMJDY) managed to open an impressive 2.57 crore accounts through RRBs in rural areas by 2015, but around 43–50% of these accounts had zero balance, highlighting the no link between having access to accounts and actually using them.
4. The Kisan Credit Card (KCC) scheme has made it easier for small farmers to access credit through RRBs, but there are still significant regional differences, with southern and central India having the best coverage while the northeastern and eastern regions are falling behind.
5. The Self-Help Group (SHG)-Bank Linkage Programme, facilitated by RRBs, has shown positive effects on household income, empowered women, and reduced reliance on informal borrowing, although managing NPAs in SHG portfolios continues to be a challenge.
6. The adoption of Core Banking Solutions (CBS) has revolutionized the operational capabilities of RRBs, while the Business Correspondent (BC) model has expanded their reach to areas beyond the branch network, enhancing service delivery to the last mile.
7. Interestingly, smaller RRBs before the mergers often showed better technical efficiency per branch compared to the larger entities formed after the mergers, suggesting that there are limits to the benefits of scale in rural banking and that the quality of operational integration plays a crucial role in the success of mergers.
8. Despite the growing popularity of digital payments like UPI and mobile banking among rural RRB customers, there are still significant barriers to adoption. Low financial literacy, insufficient digital infrastructure, and trust issues continue to hold back progress, highlighting the need for ongoing efforts to engage users more effectively. One of the most successful ways to activate

dormant PMJDY accounts has been through Direct Benefit Transfer via RRB accounts, as these government-to-person payments encourage regular and necessary interaction with the formal banking system.

10. Research Gaps and Future Directions

Even though there's a wealth of research on RRBs, there are still some significant gaps that need to be addressed. For starters, the effects of the Phase III amalgamations that took place between 2018 and 2020 haven't been thoroughly explored, as most studies were published before these mergers happened. We really need longitudinal studies that look at performance before and after Phase III across various states.

Next, while financial inclusion is often measured by the number of accounts and transaction volumes, the quality of that inclusion—like how effectively credit is used, the depth of insurance adoption, and whether savings are adequate—hasn't received much attention.

Additionally, we need to take a closer look at how effective and sustainable the BC model is in different ecological and socio-economic settings. There's a lack of evidence regarding the adequacy of BC income, how many people drop out, and whether service quality remains consistent.

Moreover, the gender aspect of RRB service delivery is crucial. We should investigate how access to credit, account ownership, and digital banking differ between male and female rural customers.

Lastly, the effects of agricultural shocks—like droughts, floods, and sudden drops in commodity prices—on RRB non-performing asset cycles, credit tightening, and the resulting financial exclusion haven't been systematically analyzed. This leaves a significant gap in the literature that policymakers need to address.

11. Policy Recommendations

1. **Revive Dormant PMJDY Accounts:** RRBs need to collaborate with government agencies to enrol all eligible dormant account holders in Direct Benefit Transfer (DBT) schemes, crop insurance, and the Atal Pension Yojana (APY). By leveraging these government-to-person payment flows, we can spark genuine financial engagement.
2. **Enhance the BC Ecosystem:** NABARD and RBI should create a tiered framework for Business Correspondents (BCs) that includes minimum commission guarantees, tech support, and insurance. This will help reduce BC attrition and boost the quality of last-mile services.
3. **Tailored Credit Risk Management:** RRBs ought to craft credit risk models that are specific to different sectors and regions, taking into account the seasonality of agricultural income, climate risks, and the penetration of crop insurance. This will enable more confident lending in rural areas.
4. **Financial Literacy from the Ground Up:** RRBs, NABARD, and state governments should pool resources to fund ongoing financial literacy campaigns at the panchayat level. These campaigns should cover digital banking, insurance, pensions, and credit products, all delivered in local languages through community channels.

5. **Invest in Technology Infrastructure:** We should set up a National RRB Technology Fund to co-finance upgrades to Core Banking Systems (CBS), mobile banking infrastructure, and the deployment of BC devices in areas with connectivity challenges, especially in the northeastern, hilly, and tribal regions.
6. **Focus on Quality in Financial Inclusion Metrics:** RBI and NABARD need to develop and require reporting on quality-of-inclusion indicators-like credit utilization rates, insurance claim ratios, and savings adequacy-alongside the usual quantity-focused metrics like account numbers and transaction volumes.
7. **Banking Products for Women:** RRBs should create and actively promote banking products that cater specifically to women, such as women-only Self-Help Group (SHG) credit lines, loans for women entrepreneurs in MSMEs, and insurance products that address the unique health and livelihood risks faced by women.

12. Conclusion

This review has taken a close look at the intertwined paths of financial inclusion and institutional mergers that have shaped the journey of Regional Rural Banks (RRBs) in India from 2000 to 2020. The findings are generally positive: these mergers have bolstered the financial health, operational reach, and capital strength of RRBs. Initiatives like PMJDY, KCC, and SHG-BLP have significantly widened access to formal financial services in rural areas, and the embrace of technology through CBS, mobile banking, and the BC model has revolutionized how services are delivered.

However, we must also be honest about the challenges that remain. Issues like dormant accounts, falling credit-deposit ratios, ongoing regional inequalities, rising non-performing assets (NPAs), and the digital divide in rural India suggest that while we've made strides in quantity, the quality of financial inclusion still lags behind. Simply opening a bank account doesn't mean someone is fully engaged in financial life-it's about effectively using credit, having insurance for risks, saving for retirement, and confidently navigating digital financial services.

To truly transform RRBs into effective institutions for financial inclusion, we need a shift in focus: from just providing access to fostering deeper engagement, from counting branches to measuring customer outcomes, and from being overly cautious to strategically expanding rural credit. With the right mix of supportive policies, investments in technology, building institutional capacity, and educating consumers about finance, RRBs can evolve from being the last resort for rural banking to becoming the first choice-trusted, capable, and truly transformative.

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