# Regional Performance of the SHG-Bank Linkage Programme among Exclusive Women SHGs in India: A Comparative Analysis

Jatin Basumatary

*Ph.D. Research Scholar, Department of Commerce, Vidyasagar University, Midnapore, West Bengal*

*Author Email id: jatinbasumatary1@gmail.com*

## Abstract

*This study examines the regional and bank-wise differences in the performance of the SHG-Bank Linkage Programme among exclusive Women Self-Help Groups in India from 2017–18 to 2023–24. Using secondary data from NABARD's annual reports from 2017-18 to 2023-24, the analysis focuses on six geographic regions and three categories of banks: CBs, RRBs, and CoBs. Descriptive statistics, Pearson correlation, and one-way ANOVA with post-hoc tests are employed to assess trends and test regional and inter-bank differences during the study period. The results reveal significant disparities in SBLP performance across regions, with the Southern region consistently outperforming others in terms of savings mobilization, loan disbursal, and loan outstanding. Bank-wise analysis highlights CBs as the most dominant lenders, while RRBs and CoBs show limited engagement. Strong positive correlations are observed among savings, credit, and outstanding values per SHG. The findings emphasize the need for targeted policy interventions to enhance outreach and women's financial inclusion in underperforming regions and banking channels.*

***Keywords:*** *Women SHGs, Savings, Credit, Loan Outstanding, SBLP.*

## Introduction

The Self-Help Group–Bank Linkage Programme (SBLP) has been a cornerstone of India's financial inclusion strategy, particularly in rural areas. Initiated by NABARD in 1992, the programme seeks to connect informal women-led savings groups with formal banking institutions, enabling poor people, especially women, to access credit without collateral. Over the years, the SBLP has evolved into the world's largest microfinance initiative, playing a pivotal role in promoting financial access, income generation, and social empowerment. Despite its national scope, the performance and outreach of the SBLP have not been uniform across India. Significant regional disparities exist in the number of Self-Help Groups (SHGs) formed, the amount of savings mobilized, and the volume of credit disbursed and outstanding. Similarly, the role of different banking channels, namely, Commercial Banks (CBs), Regional Rural Banks (RRBs), and Cooperative Banks (CoBs) varies widely across regions in terms of their engagement with SHGs. Women SHGs form the vast majority of groups linked under the programme. Their financial behavior, participation level, and loan performance are considered more reliable than male-dominated SHGs, positioning exclusive Women SHGs as a crucial focal point in India's microfinance development. However, there is a pressing need to assess how these women-led groups are performing across India's diverse regions and banking systems. This study

seeks to address this gap by conducting a comparative analysis of the SHG-Bank Linkage Programme's performance among exclusive Women SHGs. It examines regional differences and the role of different types of banks in linking women SHGs with formal finance, using secondary data of NABARD's annual reports, from 2017–18 to 2023–24. The research aims to uncover structural imbalances and highlight areas that require targeted policy attention, particularly in regions where access to formal rural credit remains limited (Basu & Srivastava, 2005; Planning Commission, 2009).

## Significance of the Study

This study is significant as it fills a critical gap in recent literature by providing a region-wise and bank-wise comparative analysis of the SBLP among exclusive Women SHGs in India, using the latest seven-year data from 2017–18 to 2023–24. By examining performance differences across regions and banking institutions, and by analyzing national-level trends and interrelationships among key financial indicators, the study contributes valuable empirical insights. These findings can support policymakers, financial institutions, and development practitioners in designing more targeted and equitable financial inclusion strategies for women across India, in line with the national priorities highlighted in the Economic Survey (Government of India, 2020).

The paper is divided into five main sections. Section I presents the introduction and significance of the study. Section II reviews the existing literature on the SBLP and identifies the research gap. Section III states the objectives, hypotheses, and data and methodology employed in the study. Section IV contains the analysis of data and discussion, focusing on regional and bank-wise differences in the performance of the SBLP, as well as national-level correlation and trend analysis. Section V includes conclusion that provides a summary of key findings, followed by limitations and policy recommendations.

## Literature Review

The SHG-Bank Linkage Programme, launched by NABARD in the early 1990s, has become the largest microfinance initiative in the world. Its primary objective is to integrate informal self-help groups, particularly those led by women, into the formal banking system to promote savings habits and ensure access to collateral-free credit (Sinha, 2006; Harper, 2002).

## SBLP and Women's Empowerment

Several studies have highlighted the SBLP's contribution to women's financial inclusion and empowerment. Sarumathi and Mohan (2011) observed that participation in SHGs led to increased

confidence, group solidarity, and partial economic independence for women. Similarly, Agasara and Olekar (2017) found that SHG-Bank Linkage Programmes significantly contributed to women's empowerment in Hyderabad, Karnataka state, particularly by enhancing their participation in household financial decisions.

However, others, such as Manju and Shanmugam (2013), argued that the impact on income-generation remains limited, as loans are often used for consumption or repayment of existing debts rather than productive purposes. Narayan (2005) emphasized that financial access alone does not automatically results in empowerment unless combined with enabling environments and capacity-building efforts.

## Regional Disparities in the Performance of the SBLP

The geographical outreach of SBLP performance is notably uneven across India. According to Srinivasan (2010), the Southern region has consistently shown higher penetration, with a concentration of both SHG formations and credit linkage, while the Central and North-Eastern regions lag behind. Similarly, the Reserve Bank of India (2011) expressed concern about the programme's skewed distribution, indicating that Southern states such as Tamil Nadu and Andhra Pradesh dominate microfinance activity, whereas poorer states like Bihar, Jharkhand, and Chhattisgarh remain underserved. These regional inequalities were also highlighted in national planning documents, which emphasized the need to promote equitable access to credit through SHGs across backward regions (Planning Commission, 2009). Singh and Mishra (2017) conducted a state-wise analysis that reaffirmed significant regional disparities in SHG-bank linkage metrics. Manohar (2015), in his regional comparative study, found that savings, credit, and outstanding amounts per SHG were significantly higher in the Southern region throughout the study period. His analysis, using one-way ANOVA and correlation methods, confirmed statistically significant differences in SBLP performance across regions.

## Role of Different Banks in the Performance of the SBLP

Commercial Banks, Regional Rural Banks, and Cooperative Banks all play distinct roles in the SHG linkage ecosystem. The Indian SBLP operates through three models (Chauhan & Amit, 2014): Model I involves the formation SHGs by banks and financed by itself, Model II comprises SHGs formed by Non-Government Organizations (NGOs) and other formal organizations but financed by banks, and Model III includes SHGs formed by banks but NGOs and other agencies play as intermediaries. According to Al-Kubati and Selvaratnam (2023), nearly 25 percent of SHGs adopted

the third model in practice. Chary and Savvasi (2013) reported that Commercial Banks had higher volumes of loans outstanding against SHGs compared to RRBs and Cooperative Banks. While RRBs are geographically closer to rural populations, they often suffer from resource and operational limitations (Sharma & Kukreja, 2013). Cooperative Banks, in contrast, are frequently reported to have weaker performance due to limited outreach and institutional inefficiencies (Kumar & Gupta, 2019).

## Relationship Between Savings, Credit, and Outstanding

Research also suggests strong interrelationships among savings mobilization, credit disbursed, and outstanding balances within SHGs. Srinivasan (2009) and Nath (2014) noted that creditworthiness often improves with greater savings discipline among SHG members, although the magnitude of loan amounts is sometimes insufficient for income-generation. Manohar (2015) demonstrated that these indicators are strongly correlated, indicating that savings behavior can predict or influence credit performance and repayment capacity. Swain and Varghese (2009) added that consistent SHG participation contributes to asset creation, further reinforcing the financial ecosystem.

## Research gap

Although numerous studies have assessed the SBLP, most focus on overall SHG performance. There is a lack of recent, region-wise, and bank-type analysis specifically targeting exclusive Women SHGs. Additionally, the latest NABARD data for 2023-24 has not yet been explored in existing literature. Therefore, this study aims to fill this gap by conducting a comparative analysis using the most recent seven-year data, from 2017–18 to 2023–24 to assess regional disparities and the role of different banks in promoting financial inclusion among women through SHGs.

## Objectives of the Study

The key objectives of this study are

1. To analyze the regional difference in the performance of the SHG-Bank Linkage Programme (SBLP) among exclusive Women SHGs in India during the study period.
2. To examine the variation in the performance of the SBLP across different types of banks among exclusive Women SHGs in India.

## Hypotheses of the Study

As per the objectives of the study, the following hypotheses are formulated.

**H01:** There is no significant regional difference in the performance of the SBLP among exclusive Women SHGs in India during the study period.

**H02:** There is no significant difference in the performance of the SBLP across different types of banks among exclusive Women SHGs in India during the study period.

## Data and Methodology

This study adopts a quantitative, comparative, and longitudinal design to analyze the performance of the SHG-Bank Linkage Programme (SBLP) among exclusive Women Self-Help Groups (SHGs) across India over a seven-year period, from 2017–18 to 2023–24, using data as of 31st March of each year. This methodological approach closely follows Manohar (2015), who applied region-wise ANOVA (Analysis of Variance), regression, trend analysis and correlation-based analysis to assess SBLP performance. The analysis is based on secondary data sourced from the National Bank for Agriculture and Rural Development (NABARD) annual reports titled *Status of Microfinance in India*, which provide disaggregated figures on the number of Self-Help Groups (SHGs), savings, loans disbursed, and loans outstanding, categorized by bank type and region. The study covers six major geographic regions: Northern (NR), Southern (SR), Eastern (ER), Western (WR), Central (CR), and North-Eastern (NER). It also includes three categories of banks actively participating in the programme: Commercial Banks (CBs), Regional Rural Banks (RRBs), and Cooperative Banks (CoBs). The focus is exclusively on Women SHGs. To ensure comparability across regions and institutions, average values per SHG are computed using the following formulas:

Average savings per SHG (Rs.) = Total savings amount ÷ Total number of SHGs.
Average loan disbursed per SHG (Rs.) = Total loan disbursed ÷ Total number of SHGs.
Average loan outstanding per SHG (Rs.) = Total loan outstanding ÷ Total number of SHGs.

These average values per SHG are the key indicators of the performance of the SBLP. Statistical tools employed include descriptive statistics, Pearson correlation (r), coefficient of determination ($r^2$), one-way ANOVA, post-hoc Tukey HSD tests, and trend analysis and linear regression equation, executed using both Microsoft Excel and IBM SPSS 27 version software. The study tests the following null hypotheses: $H_{01}$: There is no significant difference in the regional performance of the SBLP among exclusive Women SHGs; and $H_{02}$: There is no significant difference in performance across different types of banks for these SHGs. Statistical significance is determined at a 5 percent level of significance ($\alpha = 0.05$) for all tests.

## Analysis of Data and Discussion

This section presents a detailed analysis of the SBLP performance among exclusive Women SHGs in India, based on data from 2017–18 to 2023–24. It includes regional and bank-wise

comparisons, supported by descriptive statistics, one-way ANOVA with post-hoc test, correlation analysis, and trend evaluation. The discussion interprets key patterns and disparities to derive meaningful insights into the women's financial inclusion landscape across regions and institutions.

## Regional Difference in the Performance of the SBLP Among Exclusive Women SHGs

The SBLP performance is measured through average saving, average loan, and average loan outstanding per SHG. **Table 1** highlights regional variations in the performance of exclusive Women SHGs under the SBLP.

**Table 1: Descriptive Statistics for the SBLP Performance Among Exclusive Women SHGs.**

| Region | Average Saving per SHG (Rs.) | | Average Loan per SHG (Rs.) | | Average Loan Outstanding per SHG (Rs.) | |
|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean | SD |
| NR | 17568.56 | 8245.95 | 152532.73 | 46167.77 | 99291.77 | 30377.35 |
| NER | 12901.83 | 5692.44 | 180028.32 | 73412.27 | 106703.81 | 48074.22 |
| ER | 32506.48 | 12181.18 | 166936.73 | 38939.90 | 133453.89 | 44220.60 |
| CR | 19098.14 | 7493.64 | 117232.67 | 45919.57 | 80728.95 | 28758.57 |
| WR | 19044.62 | 6075.99 | 177698.60 | 70464.20 | 123464.44 | 42564.33 |
| SR | 50854.09 | 15572.93 | 394436.96 | 135831.83 | 317843.51 | 110483.10 |

**Source**: Author's Calculation.

**Note**: SD=Standard Deviation.

The Southern Region shows the highest average savings (*Mean*=Rs.50,854.09, SD=Rs.15,572.93), loan disbursed (*Mean*=Rs.3,94,436.96, SD=Rs.1,35,831.83), and loan outstanding (*Mean*=Rs.3,17,843.51, SD=Rs.1,10,483.10) per SHG, reflecting its strong engagement. In contrast, the North-Eastern and Central Regions report relatively lower values across all indicators. These descriptive statistics suggest uneven regional development and financial inclusion through SHGs. A one-way ANOVA using post-hoc test was conducted to examine regional differences in the performance of the SBLP among exclusive Women SHGs across three indicators: average saving, loan disbursed, and loan outstanding per SHG (Srinivasan, 2010; Manohar, 2015) in **Table 2**.

**Table 2: Results of One-Way ANOVA and Post-Hoc Tukey HSD.**

| **Particulars** | **(I) Regions** | **(J) Regions** | **MD (I-J)** | **Sig. ($p$<0.05)** |
|---|---|---|---|---|
| Average Saving per SHG (Rs.) [F(5, 36)=14.32, $p$<0.05] | NR | SR | -33285.53 | 0.00 |
| | NER | ER | -19604.64 | 0.01 |
| | | SR | -37952.25 | 0.00 |
| | ER | NER | 19604.64 | 0.01 |
| | | SR | -18347.61 | 0.02 |
| | CR | SR | -31755.94 | 0.00 |
| | WR | SR | -31809.47 | 0.00 |
| Average Loan per SHG (Rs.) [F(5, 36) =11.88, $p$<0.05] | NR | SR | -241904.23 | 0.00 |
| | NER | SR | -214408.64 | 0.00 |
| | ER | SR | -227500.23 | 0.00 |
| | CR | SR | -277204.29 | 0.00 |
| | WR | SR | -216738.36 | 0.00 |
| Average Loan Outstanding per SHG (Rs.) [F(5, 36) =15.99, $p$<0.05] | NR | SR | -218551.75 | 0.00 |
| | NER | SR | -211139.71 | 0.00 |
| | ER | SR | -184389.62 | 0.00 |
| | CR | SR | -237114.57 | 0.00 |
| | WR | SR | -194379.07 | 0.00 |

**Source**: Author's Calculation.

**Note**: MD=Mean Difference and Sig.=Significance.

The results showed a statistically significant effect of region on average saving per SHG, $F(5, 36) = 14.32$, $p$<0.05. Post-hoc Tukey HSD tests revealed that the Southern Region had significantly higher average savings compared to all other regions, particularly the Northern, North-Eastern, Central, Western, and Eastern regions. For average loan disbursed per SHG, the ANOVA also

indicated statistically significant regional differences, $F(5, 36) = 11.88$, $p<0.05$. The Southern Region's average loan disbursed per SHG was significantly greater than that of all other regions. Similarly, there was a significant regional effect on average loan outstanding per SHG, $F(5, 36) = 15.99$, $p<0.05$. The Southern Region again outperformed all other regions, with highly significant mean differences (e.g., Rs.2,37,114.57, $p<0.05$) compared to the Central Region. These results collectively confirm strong regional disparities, with the Southern Region demonstrating statistically and economically superior performance across all SBLP indicators. Therefore, Hypothesis $H_{01}$ (no significant regional difference) is rejected (Manohar, 2015; Reserve Bank of India, 2011).

## Difference in the Performance of the SBLP Across Different Banks and Regions

This section examines the performance of different banking institutions—CBs, RRBs, and CoBs—in linking exclusive Women SHGs across six regions of India. It highlights variations in average savings, loan disbursed, and loan outstanding per SHG. The analysis helps in identifying institutional strengths and gaps in women's financial inclusion.

## Difference in Average Saving per SHG (Rs.) Across Different Banks and Regions

**Table 3** presents the average saving per SHG by bank type—CBs, RRBs, and CoBs across six regions. CBs include both private and public banks.

**Table 3: Descriptive Statistics for Average Saving per SHG (Rs.) Across Different Banks and Regions.**

| Region | Average Saving per SHG with CBs (Rs.) | | Average Saving per SHG with RRBs (Rs.) | | Average Saving per SHG with CoBs (Rs.) | |
|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean | SD |
| NR | 24284.14 | 17265.93 | 13367.22 | 2974.46 | 8459.19 | 1707.92 |
| NER | 15606.80 | 6651.96 | 11493.60 | 5248.19 | 10291.15 | 8708.26 |
| ER | 31071.80 | 12584.20 | 34583.36 | 13339.09 | 30709.14 | 7019.23 |
| CR | 23950.98 | 8231.18 | 14237.11 | 6194.27 | 14803.38 | 3240.47 |
| WR | 17388.93 | 3975.37 | 18171.51 | 9668.37 | 24429.30 | 21773.43 |
| SR | 53546.04 | 17040.68 | 58345.03 | 19955.88 | 26005.37 | 8776.80 |

**Source**: Author's Calculation.

**Note:** SD=Standard Deviation

The Southern Region leads across all bank categories, recording the highest savings per SHG with RRBs. The amounts of savings per SHG with different banks are as follows: CBs (*Mean*=Rs.53,546.04, SD=Rs.17,040.68), RRBs (*Mean*=Rs.58,345.03, SD=Rs.19,955.88), and CoBs (*Mean*=Rs.26,005.37, SD=Rs.8,776.80). In contrast, regions like the North and North-Eastern show lower average savings across all banks. These descriptive results suggest performance variation not only across regions but also among bank types, particularly highlighting the dominance of RRBs and CBs in savings mobilization in the Southern Region (Chary & Savvasi, 2013; Kumar & Gupta, 2019). **Table 4** shows comprehensive findings from both one-way ANOVA and post-hoc Tukey HSD tests analyzing bank-wise differences in SBLP performance through average saving across different bank types and regions.

**Table 4: Results of One-Way ANOVA and Post-Hoc Tukey HSD.**

| Particulars | (I) Regions | (J) Regions | MD (I-J) | Sig. ($p$<0.05) |
|---|---|---|---|---|
| Average Saving per SHG with CBs (Rs.) [F(3, 36)=9.20, $p$<0.05] | NR | SR | -29261.90 | 0.00 |
| | NER | SR | -37939.24 | 0.00 |
| | ER | SR | -22474.24 | 0.02 |
| | CR | SR | -29595.06 | 0.00 |
| | WR | SR | -36157.10 | 0.00 |
| Average Saving per SHG with RRBs (Rs.) [F(3, 36)=19.00, $p$<0.05] | NR | ER | -21216.14 | 0.01 |
| | | SR | -44977.81 | 0.00 |
| | NER | ER | -23089.76 | 0.01 |
| | | SR | -46851.43 | 0.00 |
| | ER | CR | 20346.25 | 0.02 |
| | | SR | -23761.67 | 0.00 |
| | CR | SR | -44107.92 | 0.00 |
| | WR | SR | -40173.51 | 0.00 |
| Average Saving per SHG with CoBs (Rs.) [F(3, 36)=5.12, $p$<0.05] | NR | ER | -22249.94 | 0.01 |
| | | SR | -17546.18 | 0.04 |
| | NER | ER | -20417.99 | 0.01 |

**Source**: Author's Calculation.

**Note:** MD=Mean Difference and Sig.=Significance.

The analysis reveals statistically significant regional variations in SHG savings across different banking channels. For CBs, ANOVA results [F(3,36)=9.20, $p$<0.05] indicate substantial differences, with post-hoc tests showing the Southern Region's mean savings significantly exceeding all others - notably Rs.29,261.90 ($p$<0.05) higher than the Northern Region and Rs. Rs.37,939.24 ($p$<0.05) higher than the North-Eastern Region. RRBs demonstrate even stronger disparities [F(3,36)=19.00, $p$<0.05] among the regions, with the average saving per SHG in the Southern Region is statistically significantly higher than in all others, surprisingly, the highest mean difference (Rs.46,851.43, $p$<0.05) is observed compared to the North-Eastern Region. CoBs show relatively smaller but still statistically significant variation [F(3,36)=5.12, $p$<0.05], with the Southern Region maintaining a significant mean difference (Rs.17,546.18, $p$<0.05) advantage over the Northern Region. However, the Eastern Region exhibits the highest mean difference (Rs. 22,249.94, $p$<0.05) when compared to the Northern Region. The Eastern Region shows consistently exhibits a moderate level of performance across all bank types, suggesting a more uniform banking development. These findings reject the null hypothesis ($H_{02}$), affirming that both bank type and geographic region significantly influence SHG savings outcomes, with CBs and the Southern Region demonstrating notably strong performance (Chary & Savvasi, 2013; Srinivasan, 2009).

## Difference in Average Loan per SHG (Rs.) Across Different Banks and Regions

**Table 5** displays the comparative analysis of average loan disbursement per SHG across different banking channels in the six regions.

**Table 5: Descriptive Statistics for Average Laon per SHG (Rs.) Across Different Banks and Regions.**

| Region | Average Loan per SHG with CBs (Rs.) | | Average Loan per SHG with RRBs (Rs.) | | Average Loan per SHG with CoBs (Rs.) | |
|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean | SD |
| NR | 164086.02 | 47615.68 | 131137.76 | 46777.56 | 152570.87 | 24478.66 |
| NER | 152023.12 | 65798.87 | 208551.37 | 88450.16 | 134155.89 | 44823.62 |
| ER | 163088.66 | 59355.18 | 174708.83 | 30658.67 | 158340.22 | 56128.72 |
| CR | 123125.28 | 54439.14 | 112956.55 | 39520.11 | 99077.75 | 20851.75 |
| WR | 200461.01 | 67839.53 | 179075.68 | 36016.72 | 97604.02 | 42186.92 |
| SR | 387747.00 | 129729.81 | 413314.92 | 169807.74 | 414052.08 | 141613.91 |

**Source**: Author's Calculation.

**Note**: SD=Standard Deviation.

It shows CBs disbursed the highest average loans disbursed per SHG in most regions, peaking in the Southern Region (*Mean*=Rs.3,87,747.00, SD=Rs.1,29,729.81). Similarly, RRBs exhibited the greatest variation, with the Southern Region recording the highest average loan disbursement (*Mean*=Rs.4,13,314.92, SD=Rs.1,69,807.74) compared to other regions. CoBs showed extreme fluctuations, with the highest average loan in the Southern Region (*Mean*=Rs.4,14,052.08, SD=Rs.1,41,613.91) but the lowest in the Western Region (*Mean*=Rs.9,7,604.02, SD=Rs.42,186.92). Thus, the Southern Region consistently outperformed others across all bank types, while the Central Region lagged. Large standard deviations, especially for RRBs and CoBs, indicate significant within-region variability. CBs demonstrated more stable geographic performance compared to other banks, suggesting standardized lending practices. These findings highlight the significant role of both bank type and regional shape SHG credit access. **Table 6** shows comprehensive findings from both one-way ANOVA and post-hoc Tukey HSD tests, analyzing bank-wise differences in SBLP performance through average loan disbursement per SHG across different banks and regions.

**Table 6: Results of One-Way ANOVA and Post-Hoc Tukey HSD.**

| Particulars | (I) Regions | (J) Regions | MD (I-J) | Sig. ($p$<0.05) |
|---|---|---|---|---|
| Average loan per SHG with CBs (Rs.) [F(3, 36)=11.22, $p$<0.05] | NR | SR | -223660.98 | 0.00 |
| | NER | SR | -235723.88 | 0.00 |
| | ER | SR | -224658.34 | 0.00 |
| | CR | SR | -264621.72 | 0.00 |
| | WR | SR | -187285.99 | 0.00 |
| Average loan per SHG with RRBs (Rs.) [F(3, 36)=11.60, $p$<0.05] | NR | SR | -282177.17 | 0.00 |
| | NER | SR | -204763.55 | 0.00 |
| | ER | SR | -238606.09 | 0.00 |
| | CR | SR | -300358.37 | 0.00 |
| | WR | SR | -234239.24 | 0.00 |
| Average loan per SHG with CoBs (Rs.) [F(3, 36)=21.38, $p$<0.05] | NR | SR | -261481.21 | 0.00 |
| | NER | SR | -279896.19 | 0.00 |
| | ER | SR | -255711.86 | 0.00 |
| | CR | SR | -314974.33 | 0.00 |
| | WR | SR | -316448.06 | 0.00 |

**Source**: Author's Calculation.

**Note**: MD=Mean Difference, and Sig.=Significance.

The analysis reveals statistically significant regional disparities in average loan disbursement across all bank types [CBs: $F(3,36)=11.22$, $p<0.05$; RRBs: $F(3,36)=11.60$, $p<0.05$; CoBs: $F(3,36)=21.38$, $p<0.05$]. Post-hoc tests show the Southern Region's loan amounts significantly exceed other regions across all banks. The Central Region consistently shows the largest deficits across banking channels. While all regions exhibit variation by bank type, the Southern advantage remains robust regardless of lender type.

## Difference in Average Loan Outstanding per SHG (Rs.) Across Different Banks and Regions

**Table 7** presents descriptive statistics for average loan outstanding per SHG across six regions and three bank types (i.e., CBs, RRBs, and CoBs) reveal substantial regional disparities in SHG credit linkage.

**Table 7: Descriptive Statistics for Average Loan Outstanding per SHG (Rs.) Across Different Banks and Regions.**

| Region | Average Outstanding per SHG with CBs (Rs.) | | Average Outstanding per SHG with RRBs (Rs.) | | Average Outstanding per SHG with CoBs (Rs.) | |
|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean | SD |
| NR | 109170.80 | 31734.26 | 92393.86 | 24839.73 | 75575.88 | 23149.31 |
| NER | 110479.96 | 42329.42 | 108965.87 | 55258.33 | 62705.04 | 23698.14 |
| ER | 139377.21 | 55406.05 | 132501.05 | 31784.49 | 97469.54 | 33033.05 |
| CR | 94529.95 | 30513.32 | 70753.80 | 27637.81 | 56188.15 | 12325.16 |
| WR | 134273.54 | 45005.33 | 104551.26 | 13886.61 | 79177.56 | 30333.68 |
| SR | 340064.94 | 118914.51 | 289340.45 | 149105.58 | 211731.59 | 65612.42 |

**Source**: Author's Calculation.

**Note:** SD=Standard Deviation.

The Southern Region reported the highest loan outstanding per SHG with CBs (*Mean*=Rs.3,40,064.94, SD=Rs.1,18,914.51), RRBs (*Mean*=Rs.2,89,340.45, SD=Rs.1,49,105.58), and CoBs (*Mean*=Rs.2,11,731.59, SD=Rs.65,612.42), indicating strong institutional engagement and

deep credit penetration. In contrast, the Central Region recorded the lowest averages across different banks, suggesting weaker SHG-bank linkage performance. These results demonstrate a consistent trend of superior credit support in the Southern Region across all banks, while other regions, particularly the Central and North-Eastern, continue to underperform in terms of loan sustainability and engagement. **Table 8** includes a comparative analysis in SBLP performance through average loan outstanding per SHG across different types of banks, showing statistically significant regional disparities.

**Table 8: Results of One-Way ANOVA and Post-Hoc Tukey HSD.**

| Particulars | (I) Regions | (J) Regions | MD (I-J) | Sig. ($p$<0.05) |
|---|---|---|---|---|
| Average Outstanding per SHG with CBs (Rs.) [F(3, 36)=15.60, $p$<0.05] | NR | SR | -230894.14 | 0.00 |
| | NER | SR | -229584.98 | 0.00 |
| | ER | SR | -200687.74 | 0.00 |
| | CR | SR | -245534.99 | 0.00 |
| | WR | SR | -205791.41 | 0.00 |
| Average Outstanding per SHG with RRBs (Rs.) [F(3, 36)=9.45, $p$<0.05] | NR | SR | -196946.59 | 0.00 |
| | NER | SR | -180374.58 | 0.00 |
| | ER | SR | -156839.40 | 0.00 |
| | CR | SR | -218586.65 | 0.00 |
| | WR | SR | -184789.19 | 0.00 |
| Average Outstanding per SHG with CoBs (Rs.) [F(3, 36)=18.63, $p$<0.05] | NR | SR | -136155.70 | 0.00 |
| | NER | SR | -149026.55 | 0.00 |
| | ER | SR | -114262.05 | 0.00 |
| | CR | SR | -155543.43 | 0.00 |
| | WR | SR | -132554.03 | 0.00 |

**Source**: Author's Calculation.

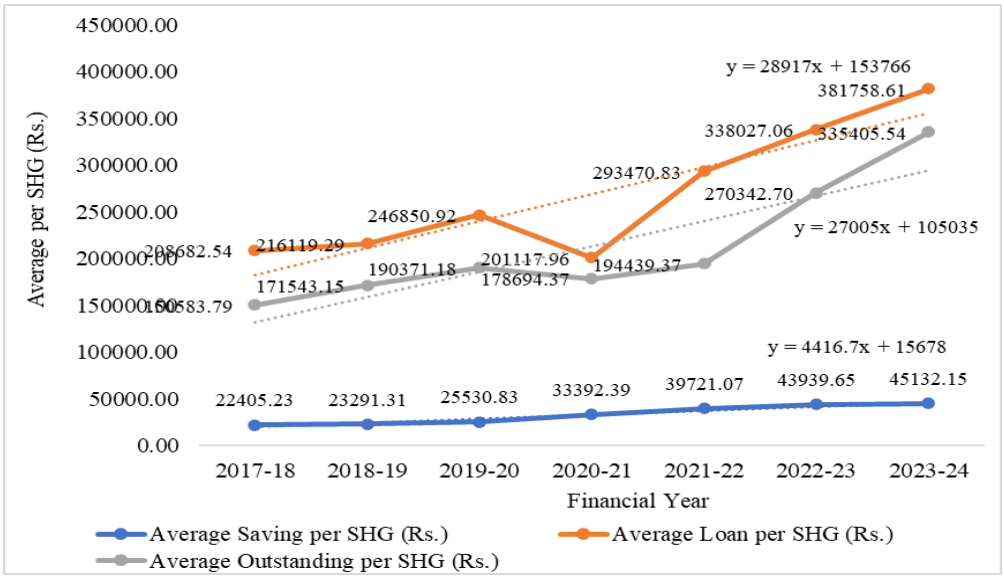
**Note**: MD=Mean Difference and Sig.=Significance.

The results of the one-way ANOVA show that regional differences are statistically significant [CBs ($F(3, 36) = 15.60$, $p<0.05$), RRBs ($F(3, 36) = 9.45$, $p<0.05$), and CoBs ($F(3, 36) = 18.63$, $p<0.05$)]. Post-hoc comparisons indicate that the Southern Region significantly outperforms all other regions in terms of outstanding loan amounts per SHG across each bank category. For instance, its average outstanding loan with CBs is Rs.2,30,894.14 higher compared to that of the Northern Region, with similarly large gaps observed for RRBs and CoBs. These consistent differences suggest stronger financial linkages, repayment capacity, and greater institutional support in the Southern Region, whereas the Central, Northern, and North-Eastern regions continue to lag in effective credit integration for Women SHGs.

## National Level Trend and Correlation of the Key Indicators of the SBLP

**Figure 1** illustrates the national level trends of the key performance indicators of the SBLP, namely average saving, loan disbursed, and loan outstanding per SHG, during the period from 2017–18 to 2023–24, along with their respective linear equations. All three indicators display a positive linear growth pattern, with loan disbursed and outstanding values rising at a steeper rate compared to savings.

**Figure 1: National Level Trend of Average Saving, Average Loan Disbursement, and Average Outstanding per SHG (2017-18 to 2023-24).**




**Source**: Author's Calculation.

The slope coefficients in the linear equations reflect significantly sharper annual increases in average loan disbursal (y=28917x+153766) and average loan outstanding (y=27005x+105035) values

compared to average savings (y=4416.7x+15678), suggesting a credit-led growth pattern. This upward trend confirms enhanced SHG participation in formal credit systems, likely driven by institutional trust and established savings habits. Moreover, these linear trends consistent the strong correlation coefficients observed in the national level analysis. In line with Manohar (2015), all three indicators demonstrated a consistent upward movement, reflecting the progressive strengthening of SHG-bank linkage programme in India (Manohar, 2015; Srinivasan, 2009). **Table 9** demonstrates a national level correlation among the three core indicators of the SBLP: average saving per SHG, average loan disbursed per SHG, and average loan outstanding per SHG.

**Table 9: Results of Correlation Matrix.**

| **Particular** | Average Saving per SHG (Rs.) | Average Loan per SHG (Rs.) | Average Outstanding per SHG (Rs.) |
|---|---|---|---|
| Average Saving per SHG (Rs.) | 1 | | |
| Average Loan per SHG (Rs.) | 0.868 | 1 | |
| Average Outstanding per SHG (Rs.) | 0.832 | 0.942 | 1 |

**Source**: Author's Calculation.

A national level correlation analysis is conducted among the three key performance indicators of the SBLP: average saving per SHG, average loan disbursed per SHG, and average loan outstanding per SHG (**Table 9**). The analysis employed Pearson correlation coefficient (r). The strongest correlation is observed between average loan and average outstanding per SHG (r = 0.942), with an $r^2$ value of 0.887, indicating that approximately 88.7 percent of the variation in loan outstanding can be explained by variations in loan disbursed. The correlation between average saving and loan disbursed is also strong (r = 0.868), yielding $r^2 = 0.753$, which implies that around 75.3 percent of the variation in loan disbursal is associated with savings levels. Similarly, the correlation between savings and outstanding loan is r = 0.832 ($r^2 = 0.692$), suggesting that nearly 69.2 percent of the variation in loan outstanding can be explained by savings. These high positive correlations and their corresponding coefficients of determination ($r^2$) highlight a tightly interconnected financial behavior at the national level, where improved savings mobilization is strongly associated with greater credit disbursement and sustained loan performance. This underscores the importance of nurturing a savings culture within SHGs to enhance credit access and long-term financial viability (Nath, 2014; Swain & Varghese, 2009).

## Conclusion

This study comprehensively analyzed the performance of the SBLP among exclusive Women SHGs in India over the period 2017–18 to 2023–24, using regional, bank-wise, and national-level data sourced from NABARD. The findings reveal substantial regional disparities, with the Southern Region consistently outperforming others in terms of average savings, loan disbursed, and loan outstanding per SHG. These differences were statistically significant, leading to the rejection of the null hypothesis ($H_{01}$) concerning regional uniformity. Bank-wise comparisons across the six regions showed that Commercial Banks and Regional Rural Banks have contributed more significantly to SHG engagement than Cooperative Banks, particularly in high-performing regions like Southern. The second hypothesis ($H_{02}$), which assumed no inter-bank performance difference, was also rejected based on significant variation across bank types.

At the national level, strong positive correlations were observed among savings, loan disbursed, and outstanding amounts per SHG, with coefficients of determination indicating that 69–89 percent of the variance in one financial indicator can be explained by the others. National trend analysis further confirmed consistent year-on-year growth (Manohar, 2015), with credit indicators rising more sharply than savings, highlighting a shift toward increased credit absorption among Women SHGs. Overall, the study underscores the evolving depth and imbalance in SHG financial performance across India. While the programme has expanded impressively in scale, the benefits remain concentrated in specific regions and banking channels. Targeted policy interventions are required to strengthen SHG-bank linkages in underperforming regions, promote the role of Cooperative Banks, and ensure equitable and sustainable financial inclusion for women across the country.

## Limitation of the Study

This study is limited to secondary data from NABARD's annual reports, which may not reflect on-the-ground realities or qualitative aspects of SHG functioning. The analysis is confined to average financial indicators, potentially masking intra-regional disparities and group-level variations. Only bank-linked women SHGs are considered, excluding MFIs and informal models. Furthermore, the study focuses solely on financial performance, without assessing non-financial outcomes such as empowerment, livelihood changes, or social impacts. These limitations suggest the need for complementary primary data and mixed-method approaches in future research.

## Policy Recommendation

To address regional and institutional disparities in SHG performance, targeted interventions are needed, especially to improve rural credit access in underperforming regions such as Central and

North-Eastern India (Basu & Srivastava, 2005). Strengthening Cooperative Banks through capacity building and better governance can improve their SHG outreach. Enhancing financial literacy and savings mobilization among SHG members will boost creditworthiness and sustainability. Additionally, integrating non-financial services such as skill development and market access can amplify the developmental impact of the SBLP.

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