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# EVALUATING NON-PERFORMING ASSETS IN SELF-HELP GROUP-BANK LINKAGE PROGRAMME: ECONOMIC INSIGHTS FROM CENTRAL AND NORTHERN REGIONS OF INDIA

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## ABSTRACT

*The Self-Help Group Bank Linkage Programme (SHG-BLP) plays a crucial role in providing affordable and timely credit to India's impoverished and vulnerable populations, who are often excluded from formal credit delivery systems. However, the high incidence of Non-Performing Assets (NPAs) within this sector poses a significant barrier to the continued availability of formal loans, as elevated NPAs disrupt the credit cycle and undermine efforts to alleviate poverty. Historically, the central and northern states of India have recorded NPAs above the national average within the SHG-BLP framework. In this study, we employ multiple linear regression analysis to identify the factors contributing to high NPAs in these regions. Our findings reveal a positive correlation between larger loans and higher NPAs, emphasizing the need for thorough risk assessment and ongoing monitoring when extending substantial credit to SHG members. Additionally, the regression analysis underscores the importance of considering gender dynamics within SHGs. Although women-led SHGs generally perform well, there are inherent credit risks, particularly as both loan size and group size increase. Targeted interventions to support women-led SHGs could enhance repayment rates and reduce NPAs, given that the majority of SHG loans in these regions are managed by female-led groups.*

**KEY WORDS:** *Non-Performing Asset, Self-Help Group, Bank-Linkage Programme, Loan, Financial Inclusion, Multiple Linear Regression.*
***JEL Classification: G210, G280, G510***

## 1. INTRODUCTION

Credit serves as a crucial tool for the poor and vulnerable populations across many South Asian countries. In India, credit is essential for different entrepreneurial activity and covering daily expenses, such as food consumption, education, litigation, social festivities and medical needs. Often, these credit needs are so minimal that formal financial institutions may be reluctant to provide. Additionally, individuals in poverty often lack adequate collateral to qualify as credible borrowers for formal financial entities. Self-Help Group-Bank Linkage Program (SHG-BLP) has emerged as an innovative financial instrument in this regard (Ramesh, 2023). SHG-BLP has experienced substantial expansion in India since 1992. The primary objective of SHG-BLP is to foster financial inclusion by building connections between formal financial institutions and informal groups. These groups possess the capacity to address the challenges faced by economically disadvantaged individuals in accessing financial services from formal banking systems (Devi, Kumar, and Rede, 2018). According to (Kom et al., 2024), the SHG-BLP plays a significant role in providing timely and affordable credit to the economically disadvantaged. (Srinivas and Banothu, 2024) have demonstrated that the SHG-BLP functions as an essential financial mechanism for alleviating rural poverty.

The SHG-BLP plays an essential role in facilitating savings accumulation and providing subsidized loans to self-help groups for a range of productive activities. (Status of Microfinance Report, NABARD, 2023-24) indicates a substantial increase in both savings accumulation and loan disbursement in India following the COVID-19 pandemic. However, significant regional disparities exist in savings accumulation during the post-COVID period (Mondal and Bhattacharjee, 2024). The paper further emphasizes the growth of women-centered SHGs in the post-pandemic context, particularly in loan disbursement. Among formal financial institutions, public sector banks play a key role in extending credit to women-exclusive SHGs.

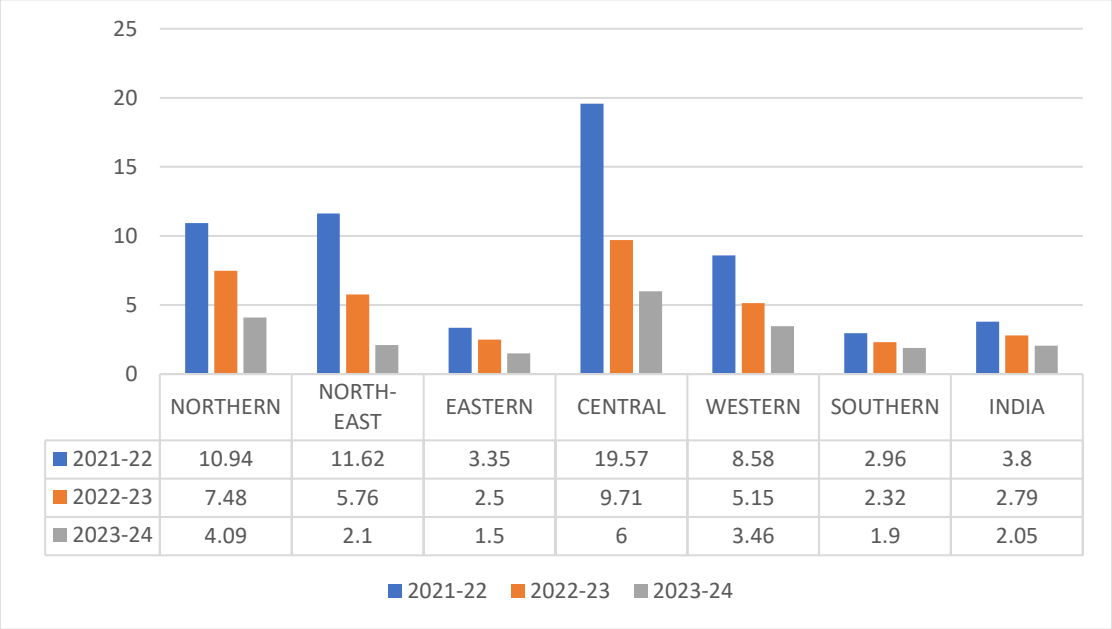
However, high NPAs in this segment can lead to reduced trust from financial institutions, making them hesitant to lend to SHGs, which would disproportionately impact women and marginalized groups who form the majority of SHG members (Patel and Jalota, 2023). The SHG-BLP model supports micro-entrepreneurship, agriculture, and small businesses, which contribute to local economic activity and job creation (Hashimy, 2023). High NPAs can disrupt credit cycle by reducing available funding, stalling growth, and hindering poverty alleviation efforts (Muduli and Sharma, 2022). This paper further highlights high NPAs reduce the profitability of banks and microfinance institutions (MFIs) participating in

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SHG-BLP by affecting their income from interest and increasing their provisioning costs for potential losses. Thus, managing NPAs in SHG-BLP is vital for ensuring the sustainable flow of credit to vulnerable populations, maintaining the financial health of lending institutions, supporting local economic growth, and fostering long-term poverty alleviation.

The Status of Microfinance Report by NABARD indicates a region-wise and overall decline in non-performing assets (NPA) within the Self-Help Group-Bank Linkage Programme (SHG-BLP) in India for the fiscal year 2023-24, compared to 2021-22 (refer to Figure 1). However, certain regions, namely the Central, Northern, and Western parts of the country, reported NPAs exceeding the national average.

**Figure 1: Region-wise Percentage (%) of NPA to loan-outstanding**

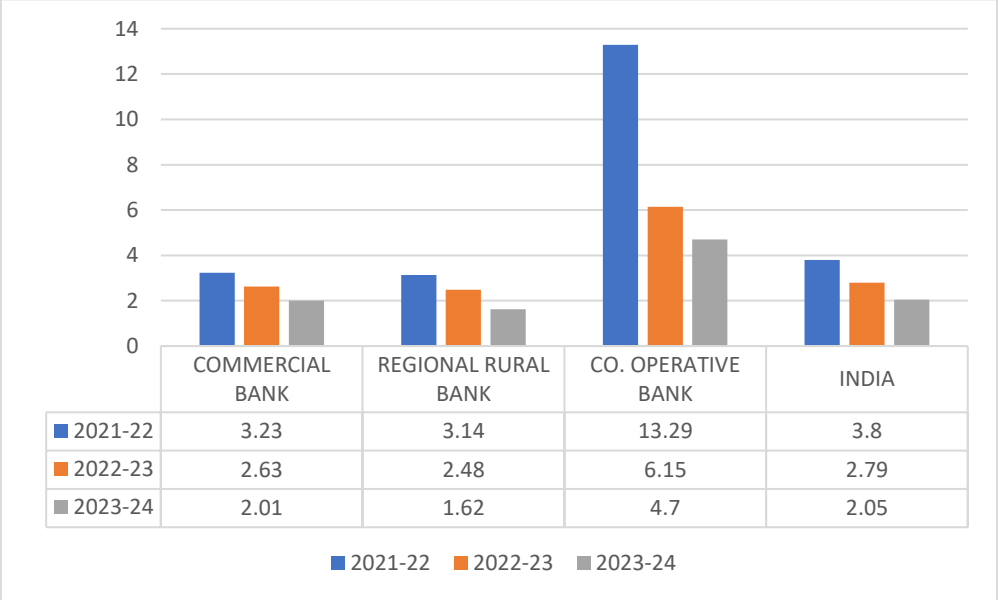



| | NORTHERN | NORTH-EAST | EASTERN | CENTRAL | WESTERN | SOUTHERN | INDIA |
|---|---|---|---|---|---|---|---|
| 2021-22 | 10.94 | 11.62 | 3.35 | 19.57 | 8.58 | 2.96 | 3.8 |
| 2022-23 | 7.48 | 5.76 | 2.5 | 9.71 | 5.15 | 2.32 | 2.79 |
| 2023-24 | 4.09 | 2.1 | 1.5 | 6 | 3.46 | 1.9 | 2.05 |

*Source: Status of Microfinance Report, NABARD*

Examining the agency-wise NPA of the SHG-BLP, we observe a notable overall decline in NPAs in 2023-24 compared to 2021-22 (see Figure 2). Among the major lenders of the SHG-BLP, cooperative banks have consistently recorded the highest NPAs over this period.

**Figure 2: Agency-wise Percentage (%) of NPA to loan-outstanding**




| | COMMERCIAL BANK | REGIONAL RURAL BANK | CO. OPERATIVE BANK | INDIA |
|---|---|---|---|---|
| 2021-22 | 3.23 | 3.14 | 13.29 | 3.8 |
| 2022-23 | 2.63 | 2.48 | 6.15 | 2.79 |
| 2023-24 | 2.01 | 1.62 | 4.7 | 2.05 |

*Source: Status of Microfinance Report, NABARD*

This paper aims to analyze the potential factors contributing to the high NPA levels of the SHG-BLP in specific regions, particularly the central and northern states in 2023-24. The paper is structured into five sections. Section 1 provides a

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concise overview of the agency-wise and region-wise NPA status of the SHG-BLP in India. Section 2 outlines the research objectives. Section 3 details the data, description of variables and methodology. Section 4 presents the discussion and analysis, while Section 5 offers the conclusion.

## 2. OBJECTIVES OF THE STUDY

(i) To identify and evaluate the potential factors contributing to the high Non-Performing Assets (NPAs) within SHG-Bank Linkage Program (BLP) in the Central and Northern states of India for 2023-24.

(ii) To find economic insights into the prevalence of high NPAs within the SHG-BLP across the Central and Northern Regions.

## 3. DATA, DESCRIPTION OF VARIABLES AND METHODOLOGY

For this study, we utilized data from the Status of Microfinance Report, NABARD (2023-24) in India. This report offers comprehensive insights into various aspects of the SHG-Bank Linkage Program (SHG-BLP), including agency-specific outreach, state and region-wise savings, bank loan disbursements, and non-performing assets (NPAs) related to SHG loans, among other key metrics.

We conducted an analysis of the NPA data for the SHG-BLP, segmented by both agency and region. To meet this objective, we compiled data from SHG-BLP agencies—including public sector banks, private banks, regional rural banks, and cooperative banks—focusing on Central and Northern India for the year 2023-24. The Central region encompasses the states of Chhattisgarh, Madhya Pradesh, Uttarakhand, and Uttar Pradesh, while the Northern region includes Chandigarh, Haryana, Himachal Pradesh, Jammu & Kashmir, New Delhi, Punjab, and Rajasthan.

For the purpose of our analysis, the total non-performing assets (NPA) of SHG-BLP (denoted as total_npa) are considered the dependent variable. The explanatory variables include the total number of Self-Help Groups (SHGs) in terms of accumulated savings (number_sav_shg), the total number of SHG members (shg_member), the total savings of SHGs (total_saving), the total number of SHGs in terms of loan disbursement (number_loan_shg), the total SHG loan (total_loan), the total number of exclusive women-focused SHGs in terms of loan disbursement (number_womenshg), and the total loan disbursed to exclusive women's SHGs (total_womenloan).

It is hypothesized that an increase in the total number of SHGs-both in terms of savings accumulation and loan disbursement may lead to a decrease in the overall NPA of SHGs. This is because heightened competition among SHGs seeking loans from formal financial institutions could push out underperforming or delinquent groups from the market. Moreover, it is expected that a rise in SHG savings would result in a reduction in NPA, as a greater savings propensity may encourage members, especially those with previous debt issues, to be more mindful of timely loan repayments.

Conversely, an increase in the total loan amount disbursed to SHGs and the overall membership size of SHGs may have an adverse effect, potentially straining the repayment capacity of these groups and contributing to a higher NPA. Finally, it is anticipated that an increase in the number of exclusive women's SHGs and the total loan disbursed to such groups may lead to a decrease in NPA, as recent data indicate significant growth in women-centric SHGs.

**Table 1: Descriptive Statistics of relevant variables**

| Variable | Observation | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| total_npa | 42 | 1614.38 | 4029.266 | 0 | 22358.82 |
| number_sav_shg | 42 | 67622.36 | 105702.1 | 3 | 456862 |
| shg_member | 42 | 757761.3 | 1248134 | 36 | 5694607 |
| total_saving | 42 | 18210.79 | 36610.51 | 0 | 178361 |
| number_loan_shg | 42 | 12757.24 | 22011.12 | 0 | 83532 |
| total_loan | 42 | 25962.81 | 44110.94 | 0 | 157999.9 |
| number_womenshg | 42 | 12498.64 | 21521.65 | 0 | 82520 |
| total_womenloan | 42 | 25574.53 | 43419.81 | 0 | 157999.9 |

*Source: Computed by Authors using data from Status of Microfinance Report, NABARD (2023-24)*

In order to analyze the potential factors contributing to the high NPA levels of the SHG-BLP particularly in central and northern states, we have employed Multiple Linear Regression Model.

Multiple Linear Regression Model can be defined as:

$Y_i = \alpha + ß_1 . X_{1i} + ß_2 . X_{2i} + ß_3 . X_{3i} + \ldots\ldots\ldots + Ɛ_i$

Where; $Y_i$= total non-performing assets (NPA) of SHG-BLP (amount in akh) (total_npa)

$\alpha$ = intercept term

$ß_i$'s= coefficients of independent variables

$X_{1i}$= total number of SHG (in terms of savings activity) (number_sav_shg)

$X_{2i}$= total SHG member (shg_member)

$X_{3i}$= total amount of SHG-BLP saving accumulation (amount in Lakh) (total_saving)

$X_{4i}$= total number of SHG (in terms of loan disbursement activity) (number_loan_shg)

$X_{5i}$= total amount of SHG-BLP loan disbusement (amount in Lakh) (total_loan)

$X_{6i}$= total number of Exclusive-Women SHG (in terms of loan disbursement activity) (number_womenshg)

$X_{7i}$= total amount of Exclusive-Women SHG-BLP loan disbusement (amount in Lakh) (total_womenloan)

$Ɛ_i$ = random error ter

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## 4. DISCUSSION AND ANALYSIS

**Table 2: Results**

| Source | SS | df | MS | No. of Obs | 42 | |
|---|---|---|---|---|---|---|
| Model | 637710399 | 7 | 91101485.5 | F (7,34) | 110.92 | |
| Residual | 27923846.2 | 34 | 821289.593 | Prob>F | 0.0000 | |
| Total | 665634245 | 41 | 16234981.6 | R-squared | 0.9580 | |
| | | | | Adj R-squared | 0.9494 | |
| | | | | Root MSE | 906.25 | |
| total_npa | Coef. | Std. Err. | t | P> \|t\| | 95% Conf. Interval | |
| number_sav_shg | -.0511262 | .0143956 | -3.55 | 0.001 | -.0803816 | -.0218708 |
| shg_member | .0095636 | .0011761 | 8.13 | 0.000 | .0071735 | .0119536 |
| total_saving | -.0321639 | .0105406 | -3.05 | 0.004 | -.053585 | -.0107428 |
| number_loan_shg | 3.227849 | 1.195731 | 2.70 | 0.011 | .7978317 | 5.657866 |
| total_loan | -1.220124 | .4698782 | -2.60 | 0.014 | -2.175032 | -.265217 |
| number_womenshg | -3.219312 | 1.226453 | -2.62 | 0.013 | -5.711764 | -.7268592 |
| total_womenloan | 1.140777 | .4766502 | 2.39 | 0.022 | .1721074 | 2.109447 |
| _cons | -27.90595 | 178.7074 | -0.16 | 0.877 | -391.083 | 335.2711 |

*Source: Computed by Authors using data from Status of Microfinance Report, NABARD (2023-24)*

From an economics perspective, the regression analysis appears to investigate the impact of various factors related to Self-Help Groups (SHGs) and on the level of Non-Performing Assets (NPAs), as represented by the dependent variable total_npa. Here is an interpretation of the results.

Firstly, number_sav_shg and total_saving have negative coefficients and significant relationship (P values are 0.001 and 0.004 respectively), meaning that higher SHG activity and savings within these groups are associated with lower NPAs. This suggests that as SHGs grow and accumulate more savings, they may improve repayment behaviours and financial discipline among their members, which reduces the level of non-performing loans. This aligns with economic theories emphasizing the role of community-based financial groups in enhancing creditworthiness and promoting savings. SHGs often provide a support structure for members, enabling better financial management and reducing credit risk.

Secondly, shg_member has a positive coefficient and high significant relationship (P value=0.000), implying that an increase in SHG membership correlates with an increase in NPAs. While counterintuitive at first glance, this could indicate that larger group sizes may dilute the effectiveness of peer monitoring or result in lending to riskier individuals, leading to higher defaults.

Similarly, total_womenloan has a positive coefficient and significant relationship (P value=0.022). This suggests that loans specifically directed toward women's SHGs might be associated with increased NPAs, potentially due to socio-economic challenges faced by female borrowers, such as lower income stability or limited access to financial resources. It highlights a possible need for tailored support programs to improve repayment performance in women-led groups.

Further, number_loan_shg shows a positive coefficient and significant relationship (P value=0.011), suggesting that higher loan taking SHGs are associated with higher NPAs. This could indicate a higher risk associated with larger loan taker SHGs, as larger debts may strain the repayment capacity of SHG members, particularly if they lack diverse income sources or experience business volatility.

On the other hand, total_loan has a negative coefficient and significant relationship (P value=0.014), meaning that higher aggregate loan levels (perhaps from non-SHG sources) are associated with lower NPAs. This could reflect better repayment performance for larger loans outside SHGs, possibly due to stricter eligibility criteria, better risk assessment, or higher creditworthiness of individual borrowers.

Finally, number_womenshg has a significant negative coefficient (with P value=0.013), indicating that a higher count of women's SHGs is associated with lower NPAs. This suggests that women-led SHGs as a whole contribute positively to repayment outcomes, possibly due to stronger community bonds, peer accountability, or better financial management.
The significant R-squared value (over 0.95) suggests that the model explains a substantial proportion of the variation in NPAs, indicating that SHG activities and associated factors are strong predictors of loan performance in this context. This reinforces the important role of SHGs in the economic landscape.

## 5. CONCLUSION

Regression result highlights the importance of understanding gender dynamics in SHGs particularly in central and northern regions of India. While women-led SHGs may perform well collectively, targeted interventions to support SHGs,

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particularly those led by women, could improve repayment rates and reduce NPAs. Policy measures could include capacity-building programs to enhance financial literacy, offering flexible repayment schedules, or providing business development services to boost income generation.

Moreover, the positive association between larger loans within SHGs and NPAs suggests that careful risk assessment and monitoring are essential when extending significant credit to SHG members. Formal credit institutions in central and northern states may benefit from developing specific guidelines for lending to SHGs, with a focus on ensuring loan amounts are manageable relative to the repayment capabilities of group members. The analysis supports the view that while SHGs can improve financial inclusion and economic empowerment, there are inherent risks, especially when credit size increases or when group size grows too large. Effective management of these groups and provision of appropriate financial products tailored to the needs of SHGs are crucial to minimizing the risk of default.

In summary, this regression analysis reveals a nuanced picture where SHGs contribute positively to financial inclusion but also introduce specific challenges in credit risk. Policies that balance support for SHGs with risk management practices are essential for sustainable economic development and financial stability.

## REFERENCES

1. *Devi, S. S, Kumar, S., Rede, G. D. (2018) Growth of Self-Help Group-Bank Linkage Programme in India. Journal in Science, Agriculture & Engineering. ISSN: 2277-7601, Vol. 8 (15)*
2. *Hashimy, S.Q. (2023) Role of Self-Help Groups in Socio-Economic Development of Women in India. Law and Social Policy Review. Vol. 1 (1) ISBN: 978-81-960677-7-9*
3. *Jalota, S., Patel, A.K. (2023) Self-Help Groups in India: Effectiveness of Government Support Programmes Towards Reducing NPAs. International Journal of Governance and Financial Intermediation. Vol. 1 (4).*
4. *Kom, S. S., Sharma, A., Nikas, N., Chand, K., Zion, G. (2024) Microfinance in North-Eastern Region of India. Bulletin of Pure and Applied Sciences. ISSN: 0970-0765, Vol. 43B (1), Pg. 1076-1083*
5. *Mondal, A., Bhattacharjee, G. (2024) Assessing the Resilience of Women-SHGs in India: Pre- and Post Pandemic Comparative Study of Bank Linkage Program. International Journal of Advance and Applied Research. Vol. 12(1) ISSN: 2347-7075*
6. *Muduli, S., Sharma, M. (2022) Loan Repayment Dynamics of Self-Help Groups in India. Margin: The Journal of Applied Economic Research. ISSN: 0025-2921*
7. *Ramesh, S. (2023) Role of Self-Help Groups in upliftment of women in India. Journal of Women Empowerment and Studies. ISSN: 2799-1253, Vol. 4 (1)*
8. *Sharma, N., Pundir, V. (2024) Empowering Women Entrepreneurs through Self-Help Groups: A Study on Growth amidst the Covid-19 Pandemic. Juni Khyat. ISSN: 2278-4632, Vol. 14 (7)*
9. *Sihag, R., Vermani, S. (2022) SHGs: An Approach for Economic Empowerment of Rural Women in India. Asian Journal of Agricultural Extension, Economics and Sociology. ISSN: 2320-7027, Vol. 40 (4)*
10. *Srinivas, C., Banothu, H. (2024) Microfinance System through SHGs in India. International Journal of Exclusive Global Research. ISSN: 2456-2076. Vol. 9 (5)*