Pattern of Rural Credit Access: A Micro-Level Study from Baksa District, Assam

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Abstract

This paper examines the patterns, determinants, and challenges of rural credit access in the state of Assam, India, with a specific focus on four villages from Baksa district. Drawing on cross-sectional primary data from 510 households, the analysis investigates both institutional and non-institutional borrowing behaviour using a two-stage probit regression model. Estimation results signify that despite major policy initiatives, access to credit from formal lending sources remains uneven and exclusionary. Several key factors like operational landholding, gender of household head, educational attainment, caste, and proximity to financial institutions significantly influence access to institutional credit. Socio-economically disadvantaged groups such as Scheduled Tribes (STs), Scheduled Casts (SCs), landless laborers, women-headed households, and the poorly educated continue to face structural barriers to formal financial services. As a result, informal lenders remain prominent, accounting for over 50% of total borrowings in study villages, in spite of often exploitative interest rates exceeding 100% per annum being charged. This research recommends localised and inclusive financial reforms that address socio-regional disparities, simplify credit access, and expand institutional outreach. Expanding institutional credit accessibility and designing targeted interventions for excluded groups are crucial measures toward reducing rural indebtedness and promoting inclusive economic development.

1. Introduction

Rural credit plays a crucial role in shaping economic landscape in countries like India, where overwhelming majority of agricultural reliant populations lives in rural areas. It enhances agricultural investments, strengthens financial security, and assists reduce dependence on non-institutional sources of credit, which often charge exorbitant interest rates. Timely access to credit can thus play crucial role in advancing agricultural development, improving livelihood security, and reducing poverty. Acknowledging the significance, Government of India has introduced major initiatives targeting to strengthen rural credit infrastructure and expand credit outreach to marginalised and excluded groups. For intense, nationalisation of commercial banks in 1969 and 1980, the formation of Regional Rural Banks (RRBs) in 1975 and the National Bank for Agricultural and Rural Development (NABARD) in 1982 (Pradhan, 2013). These measures are intended to expand formal financial services and prioritise the provision of agricultural credit in rural areas, especially targeting underserved groups (Thorat, 2006; Kumar et al., 2015). Moreover, Kisan Credit Card (KCC), introduced in the late 1990s, Pradhan Mantri Jan Dhan Yojana (2014) and the SHG–Bank linkage initiative under the National Rural Livelihood Mission (NRLM) launched in 2011 are other major initiatives which have also improved access to short-term credit by simplifying documentation process and offering flexible repayment options (Pradhan, 2013; Akoijam, 2013; Mani & Goud, 2023). These initiatives have made the baking services easier to access, encouraged savings among rural populations, and promoted collateral-free lending. All these measures resulted in a remarkable increase in institutional credit share from just 7% in 1951 to over 60% by 2013 in our country (Singh & Singh, 2010; Kumar et al., 2015).

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However, despite these initiatives, access to institutional credit in rural India remains to be retarded by deep-rooted structural barriers, administrative shortcomings, and persistent social inequalities (Chavan, 2005; Thorat, 2006; Akoijam, 2013). Procedural rigidity in loan sanctioning like collateral requirements, complex documentation, and inflexible repayment terms and conditions, often excludes marginal and landless farmers from borrowings through financial institutions. Additionally, socially marginalised communities including SCs, STs, economically weaker sections, and women often encounter exclusion, even within grogramms especially designed to support them (Mani & Goud, 2023). Low level of financial literacy and the physical remoteness of banking services also contributed to limited borrowings from formal credit systems among these groups (Tang et al., 2010; Kumar, 2020). In addition, institutional shortcomings—such as poor management, political interference, and increasing levels of non-performing loans—further erode the effectiveness of the rural credit infrastructure (ibid). On the contrary, informal lenders disburse loan quickly with minimal formalities, enabling them to be prominent in rural credit markets despite often charging exploitative interest rates (Akoijam, 2013; Mani & Goud, 2023). For example, in certain Indian states, annual interest rates charged ranged between 45–60% (Kumar et al., 2015). This underscores the fact that although informal credit addresses crucial gaps in financial access, it reinforces rural indebtedness and deepens socio-economic insecurity.

The prevalence of informal credit dominance in rural context has been widely discussed issue in India's policies discourse. Yet, ground-level studies capturing rural credit patterns and determinants remain scarce. Research focusing on who actually accesses formal credit and what influences their borrowing choices is also limited. Understanding how rural borrowers make decisions and interact with different credit channels requires closer and localised analysis. This kind of detailed examination could inform better-targeted credit programs and reforms. In light of above, the present study is designed to explore two areas (i) had institutional credit distribution is inclusive across different regions and communities, and (ii) what factors influence debtors to approach either formal or informal lenders.

2. Data and Methodology

This study draws upon cross-sectional household-level data collected from four villages within the Gabardhana Development Block of Baksa District, Assam. A stratified random sampling method was employed to ensure representative selection across the villages. A house listing survey was first conducted across the villages in December, 2019, identifying a total of 1,703 households. These households were then categorised according to India's social classification system into four groups: STs, SC, OBC, and General category. The distribution was as follows: ST households made up 23%, SC 18%, OBC 27%, and General 32% of the total households. From each social group, 30% of households were randomly selected, resulting in a total sample of 510 households. Employing a structured questionnaire, comprehensive data on pattern of borrowings, household demographics, and socio-economic characteristics were gathered. Key variables included land ownership, social background, educational attainments, and proximity to financial institutions and borrowing from various sources. Since, the data were directly collected from households; these offer a reliable foundation for analysing rural credit behaviour. A two-stage econometric analysis was employed to address these research objectives. In the first stage, a simple probit model was used to

estimate the likelihood of a household deciding to borrow. The second stage involved applying McFadden's Choice Model through a conditional probit framework to analyse the selection among different credit sources. To address potential selection bias, Mills ratios derived from the first-stage probit estimates were incorporated as additional explanatory variables in the second-stage model.

3. Socio-economic conditions of study villages

Caste continues to serve as a fundamental axis of social stratification in India, particularly in rural settings, where it remains closely tied to socio-economic status (Mohapatra & Sahoo, 2016; Rao, 2012). In the study villages, the distribution of households by caste was as follows: 23% belonged to ST, 18% to SC, 27% to OBC, and 32% to the General category (refer annexure1). Furthermore, certain key socio-economic variables, typically occupation, levels of educational outcomes, and land ownership—play crucial roles in improving household's economic positions. Occupation, more often used as a proxy for financial well-being, reflects a household's position in the social hierarchy. Similarly, land ownership is a critical asset in rural settings, as a means of agricultural production as well as form of economic security (Mohapatra & Sahoo, 2016). The land ownership in the study villages was just estimated to be 0.96 hectare of per household, indicating the constrained agricultural potential in the region.

Educational attainment in the study area was found notably low. Nearly half of the respondents (49%) had either not completed or just completed primary level. While 34% had completed secondary level, just 15% had completed higher secondary or above. The occupational structure in the study villages highlights that a substantial 41% of households rely on casual labor, either in agricultural or non-agricultural sectors. In contrast, 39% of households are self-employed in agriculture, while only 20% are engaged in salaried jobs or self-employment within organised sectors. These occupational patterns reflect entrenched structural disadvantages, shaped by limited access to education, unstable sources of livelihood, and persistent land scarcity.

4. Results and discussion

4.1 Pattern of credit access

Table 1:*Amount of institutional & non-institutional borrowings per household, 2019*

Village	Institutional	Non-Institutional	All sources	% of institutional borrowing
Bunmaja Pathar	3525	5573	9098	38.74
Khagrabari	5705	6784	12489	45.68
Moinamata Goan	8987	8903	17890	35.23
Moirajhar Pathar	9625	8940	18565	51.84

Source: Primary survey, 2019

The pattern of credit access in the study villages, as summarized in table-1, reveals significant variations across the four surveyed villages. The villages were heavily reliant on non-institutional sources for credit. Among the villages, Moirajhar Pathar stands out with the highest total of institutional borrowing in both absolute (INR 18,565) and proportion (51.84%), indicating comparatively better access to formal credit systems. In contrast, Moinamata Goan, despite a similarly high average borrowing (INR 17,890) by households, shows the lowest institutional credit share (35.23%), suggesting the village was primarily

dependent on informal lenders. Bunmaja Pathar demonstrates both the lowest total borrowing (INR 9,098) and a low institutional share (38.74%), pointing to overall limited credit access. Khagrabari falls in the middle, with institutional borrowing accounting for 45.68% of its total. These patterns underscore the uneven access to formal credit across villages, with informal sources still playing a dominant role, especially where institutional outreach is limited. The findings highlight the need for targeted financial inclusion efforts to expand formal credit access and reduce rural households' reliance on potentially exploitative non-institutional lenders.

4.2 Determinants of access to rural credit

The regression estimations summarized in Annexure 2 identifies key determinants of household decision regarding credit access irrespective of sources. With a modest pseudo R^2 0.0702 and a highly significant likelihood ratio test, the model effectively captures relevant predictors of rural credit access in a relatively small sample of 510 households. The results reveal the complex interactions between credit worthiness and demographic, socio-economic, and occupational factors. Family size positively affects borrowings, suggesting that the likelihood of larger households were more likely to borrow to fulfill financial need to manage household expenses. Conversely, gender of the household head has a statistically significant negative impact on borrowing from formal sources, suggesting that the women-headed households were less likely to access formal credit. Operation land holding has a statistically significant positive effect, reaffirming the role of land as collateral or a proxy for wealth. However, distance between the place of residence and location of financial institution negatively effects the decision of the household to access credit. Social identity plays a critical role, with Scheduled Tribe households facing significant disadvantages in credit access, while those in the 'Others' category show modest advantages. Estimates also show that the educational attainments have positive influence on credit access. The chance of accessing credit increases with increase in level of education. This suggests that the households with the family heads, completed low levels of education especially below primary and primary, were less likely to credit. This might be so due to limited financial awareness, illiteracy, or difficulties in dealing with formal procedures. Household occupation also matters: both self-employed agricultural and non-agricultural households have better access to credit compared to laborers, indicating the importance of stable income sources or entrepreneurship in improving financial inclusion.

4.3 Determinants of access to institutional credit

The probit regression estimations (refer annexure-3) identify the demographic, socioeconomic, educational, and locational factors which significantly influence the decision of households to borrow from financial institutions. With a pseudo R^2 of 0.0534 and a high LR chi^2, the model explains a moderate yet statistically meaningful portion of the variation in credit access. The statistically significant coefficient for nearly all variables turns out to be at 1% level (***), indicates strong associations with access to institutional credit. A negative coefficient for family size indicates that the likelihood of accessing formal credit decrease with increase in family member, suggesting that larger families are less able to borrow from institutional sources. Conversely, a positive and significant coefficient for operational landholding signifies that households with more land are more likely to secure formal loans. This pattern reflects the collateral-based

nature of institutional credit, where borrowers must provide adequate security to access loans. Households with larger landholdings size were capable to meet these collateral requirements, and hence they get more chance to obtain loan from financial institutions. In the study villages, economically disadvantaged households typically have larger family sizes and possess only small or marginal landholdings. Consequently, such households were often denied formal credit due to inadequate collateral. These results are consistent with previous studies, including studies by Thorat (2006), and Kumar & Yadav (2020). Their studies also highlighted the exclusionary impact of collateral-based lending on landless and marginal farmers. The coefficient for proximity to financial institutions was found to be negative and statistically significant, suggesting that the households situated farther from urban centers or banking facilities are less likely to get loan from formal institutions. This underscores the role of spatial barriers in limiting financial inclusion, as greater physical distance reduces the likelihood of engaging with institutional credit sources.

Further, the estimation shows a positive coefficient for male-headed households, pointing to their more chance of getting access to institutional credit than their female counterparts. With regard to social groups, the finding signifies that the STs and SCs encounter greater obstacles in obtaining formal credit, as evidenced by statistically significant negative coefficients. The estimation also shows consistently negative coefficients for lower levels of education, particularly for respondents with less than primary or only primary education. These findings highlights that socially marginalized groups, such as women and SCs, and STs were disproportionately excluded from formal credit access, a situation further exacerbated by low financial literacy. Akoijam (2013) and Mani & Goud (2023) in their studies pointed similar findings. They claim that complex procedures, bureaucratic hurdles, and limited awareness further discourage these vulnerable populations from obtaining credit from institutional financial systems. Moreover, household type also appears to influence credit access. Households engaged in agricultural and non-agricultural labor, as well as those self-employed in agriculture, exhibit negative coefficients, implying that these households were less likely to access credit form institutional sources than the households with self-employed in non-agricultural sectors.

Socio-economically disadvantaged households are, therefore, systematically excluded from accessing institutional financial services. Because of such exclusionary financial system, the informal lenders—who offer quick and flexible, yet often exploitative, maintain stronghold in financial market of rural areas. In the surveyed villages, reportedly charge over 50% of total credit was sourced from non-institutional channels in the villages except the Moirajhar Pathat, where traders, moneylenders, and relatives served as primary lenders. Strikingly the rate of interest charged on such informal loans ranged from 36% to 60% per annum. Notably, many farmers and agricultural laborers borrowed in cash during the cultivation period, but were required to repay in kind—typically 40 kilograms of paddy—for a loan of just Rs.300 to 350, repayable within three to four months. This practice effectively results in an annualized interest rate exceeding 100%, highlighting the severe exploitation of borrowers by informal lenders in these villages.

5. Conclusions

The study critically examines rural credit challenges in India, based on primary data from five villages in Baksa district, Assam. In spite of several efforts for financial inclusion of underserved groups such as nationalisation of commercial banks, foundation of NABARD, introduction of Kisan Credit Card (KCC), and Jan Dhan Yojana, informal lending remains prominent in the study villages. Borrowings from formal sources were hindered by several key factors such the requirement of collateral, rigid bureaucratic procedures, and limited bank accessibility. Such structural and institutional factors disproportionately affected vulnerable groups such as landless households, female-headed families, ST and SC communities, and individuals with low levels of education. Furthermore, spatial inequality, reflected in the distance to financial institutions, also significantly reduces formal borrowing. Even in villages with better access, institutional credit accounts for just 52% of total borrowing, underscoring the continued reliance on informal sources. These informal arrangements often involve exploitative conditions, such as repayment in kind or interest rates exceeding 100% annually, exacerbating debt cycles and financial vulnerability. The findings stress that formal financial reforms must go beyond expansion; they must address local realities and systemic exclusions. Recommendations include simplifying credit access, deploying mobile banking in remote areas, and designing credit products tailored for marginalized groups. Enhancing the financial inclusion of women and vulnarable communities through targeted subsidies, literacy programs, and SHG (self-help group) integration is essential. Replacing exploitative informal lending with a responsive and equitable formal financial system is crucial for poverty alleviation and inclusive development.

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Annexure 1. Socio-economic variables used in regression estimation

Variable	Mean	Standard deviation
Household size (family members shared common kitchen)	4.02	0.53
Household-head (1 for Male, 0 for female)	0.87	0.31
Operated land (hectare)	0.96	2.06
Distance between financial institutions and residence		
Caste1 (1 for OBC, otherwise-0)	0.21	0.49
Caste2 (1 for ST, otherwise-0)	0.49	0.39
Caste3 (1 for SC, otherwise-0)	0.10	0.31
Caste4 (1 for others, otherwise-0)	0.20	0.42
Edn1 (1 if Higher secondary & above, otherwise-0)	0.12	0.24
Edn2 (1 if completed Secondary, otherwise-0)	0.34	0.44
Edn3(I if completed primary, otherwise-0)	0.26	0.32
Edn4 (Below primary -1, otherwise-0)	0.23	0.48
Occupation (Agricultural labor-1, otherwise-0)	0.20	0.33
Occupation (Casual labor-1, otherwise-0)	0.21	0.32
Occupation (1 Agricultural self-employed, otherwise-0)	0.39	0.40
Occupation (1 for other occupation, otherwise-0)	0.20	0.37

Annexure 3. Determinants of borrowings from financial institutions			
Dependent variable is binary of access to institutional credit, 1 if yes and 0-otherwise			
Explanatory variable	Coefficient	Standard error	
Household size (number.)	-0.0456***	0.00360	
Operated land (ha)	0.0300***	0.00325	
Household-head (Male - 1, otherwise -0)	0.181	0.0143	
Distance of financial institution/banks from home	-0.0241***	-0.00276	
Social category			
ST-1, otherwise-0	-0.0512**	-0.0150	
SC-1, otherwise-0	-.00421		
Others-1, otherwise-0	0.0141	0.00751	
Educational attainment			
1 if completed secondary, if not 0	-0.0282	0.0112	
1 if completed primary, if not 0	-0.0901	0.0138	
1 if below primary, 0 otherwise	-0.035***	0.0114	
Types of household			
Agricultural labour-1, otherwise-0	-0.241***	0.0119	
Casual labour-1, otherwise-0	-0.246***	0.0109	
Self-employed in agriculture-1, otherwise-0	-0.0985	0.0107	
IMR	-1.876***	0.106	
Constant	1.709***		(0.0964)
State fixed effects	Yes		Yes
No. of observations		510	
LR chi^2(51)		418.93	
Pseudo R^2		0.0702	
log likelihood		-437.17	

Annexure 2 Determinants of access to rural credit			
Explanatory variable	Coefficient		Standard error
Household size (Number of family)	0.0811***		0.00202
Household head (1 for Male, 0 for female)	-0.213***		0.0127
Operated land measured in hectare	0.0653***		0.00412
Distance of financial institution/banks from home	-0.0252***		-0.00254
Social category			
1 for Scheduled Tribes, Otherwise 0	-0.214***		0.0153
1 for Scheduled Casts, Otherwise 0	-0.312***		
Others-1, otherwise-0	-0.0376		0.0110
Educational attainment			
1 if below primary, 0 otherwise	-0.0324**		0.0133
1 if completed primary , 0 otherwise	-0.0154**		0.0170
1 if completed secondary , 0 otherwise	-0.0213		0.0141
Type of household			
Agricultural labour-1, otherwise-0	-0.145***		0.0107
Casual labour-1, otherwise-0	-0.0232***		0.0171
Self-employed in agriculture-1, otherwise-0	-0.147		0.0199
IMR	0.00829		0.0169
Constant	0.184***		0.0371
State fixed effect		Yes	
Number of observations		2050	
LR chi^2(50)		832.92	
Pseudo R^2		0.0534	
log likelihood		-1901.17	