

Intersecting Inequalities: Gender, Caste, and Access to Formal Credit in Rural India¹

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Abstract: Access to credit is not merely a financial transaction - it is a foundation for economic resilience, social mobility, and a tool for poverty alleviation. For millions of rural Indian households, credit enables the purchase of agricultural inputs, sustains consumption in lean seasons, and provides a cushion against health or income shocks. Yet, for large segments of the population—especially women and those belonging to socially marginalized castes—access to timely and affordable credit remains limited. Their exclusion from formal financial systems is not just an economic gap but a reflection of deeper structural inequalities.

Recognizing this, India embarked on an ambitious financial inclusion (FI) agenda in 2005, which was defined as “the process of ensuring access to financial services and timely and adequate credit for vulnerable groups such as weaker sections and low-income groups at an affordable cost” (Committee on Financial Inclusion, RBI, 2008). The policy aligns with global development priorities under the Sustainable Development Goals (SDGs)—particularly SDG 1 (No Poverty) and SDG 5 (Gender Equality).

The gender gap in account ownership has narrowed from 18 percentage points in 2011 to near parity by 2021 (Global Findex Database, World Bank, various rounds). The share of formal debt in total household debt also increased from 57 per cent in 2002 to 66 per cent in 2019 (Pradhan, 2013; All India Debt and Investment Surveys, various rounds). However, having a bank account does not guarantee equitable access to credit. While the first step toward inclusion has been achieved, the quality and depth of access remain uneven, particularly when gender and caste interact to shape outcomes.

Despite progress in expanding financial access, rural credit markets in India remain stratified along social lines. Women are less likely to receive formal loans, tend to borrow smaller amounts, and often face stricter repayment terms compared to men. Among women, those belonging to Scheduled Caste (SC) households experience the most severe exclusion. Existing research has studied gender-based and caste-based differences separately, but very few studies examine how these two axes of inequality reinforce each other in determining access to credit. Understanding this intersection is crucial for policy design: an inclusive financial system must not only count how many are included but also who remains excluded, under what conditions, and at what cost.

This study employs a mixed-method approach combining secondary and primary data to capture both macro-level patterns and micro-level realities. Secondary data were drawn from two key national databases: The World Bank Global Findex (2011, 2014, 2017, 2021), which provides gender-disaggregated information on account ownership and credit usage; and The All-India Debt and Investment Surveys (AIDIS) (2019), which offer caste-wise data on sources and magnitude of household credit. Primary data were collected through a field survey conducted in two villages in Uttar Pradesh (UP), covering 220 households. The survey gathered

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detailed information on loan size, source, interest rate, repayment conditions, and purpose of borrowing, along with gender and caste identifiers.

While Findex and AIDIS independently capture gender and caste dimensions, respectively, the primary survey bridges this critical gap by analysing both simultaneously - allowing a direct assessment of how gender and caste intersect to shape credit access.

The findings reveal a dual narrative of progress and exclusion.

Expansion in access but inequality in utilization: While more women now own deposit accounts and interact with formal financial institutions, they continue to lag behind men in borrowing from formal sources. Women's share of loans, relative to their population share, remains disproportionately low. The average loan size received by women is smaller, and they are more likely to rely on short-term, high-interest credit compared to men.

Caste compounds gender disadvantage: Among women, those belonging to Scheduled Caste (SC) households face a deeper form of exclusion. They not only access fewer formal loans but also bear higher borrowing costs. SC women are more dependent on microcredit and group-based loans that often carry strict repayment conditions, leaving little room for investment in productive activities. These loans tend to be used for consumption smoothing rather than income generation, trapping them in cycles of low income and recurring debt.

Policy inclusion ≠ equitable empowerment: India's financial inclusion drive has successfully increased the number of account holders but has not ensured meaningful inclusion, characterized by equitable access to quality credit and improved financial wellbeing. The structural factors of caste hierarchy, gender norms, and unequal asset ownership continue to limit women's financial autonomy.

Financial inclusion policy must go beyond counting accounts or loans to assess the quality, cost, and purpose of credit, especially for women from marginalized castes. Targeted interventions, such as caste-sensitive lending, tailored credit for women's enterprises, and flexible repayment can deepen true inclusion. Empowerment requires policies that would reduce poverty increasing household incomes so that they can confront structural inequities, ensuring credit access translates into meaningful and equitable financial participation.

Introduction and review of literature:

Access to timely credit is very crucial, particularly for income poor households. For a country like India where a substantial section of the population resides in rural areas and are income-poor, credit remains a sensitive issue – access, availability and repayments. To address this, governments and agencies across the world have pushed the financial inclusion policy for over two decades now. The Reserve Bank of India defines financial inclusion as access to four financial services: deposit accounts in a financial institution, access to credit, digital and other payments and insurance services. In this paper, I focus on access to credit from the regulated sector (formal sector).

In rural areas, agriculture continues to be the primary mode of employment and income. In that context, credit plays a crucial role. Against this background, this paper attempts to examine the

access to formal credit by social groups and estimate the extent of discrimination in the credit market against Scheduled Caste (SC) relative to the other social groups.

The paper is organised as follows: the second section discusses the data source and methodology; the third section highlights the findings of the paper and the fourth section concludes the paper.

While existing studies have studied the impact of financial inclusion and the role of caste in India, there is limited literature using the latest round of the NSS, 77th round (AIDIS) to study rural inclusion across caste. This is important as the AIDIS is the single large dataset that analyses quantitative data at the individual and household level across states, geography and social groups.

Credit penetration remains a weak link in rural financial inclusion, with limited penetration among asset-poor households and under-banked regions. Access to bank credit in rural areas remains low; although there has been an increase over the last decade, observed from the All-India Debt and Investment Survey (AIDIS) data (Chavan and Kamra 2022). Forward Castes have significantly better access to formal credit compared to Scheduled Castes, concluded by a study using data from the AIDIS, 2013 (Karthick and Madheswaran 2018). There exist caste-based differences in farmers' access to bank loans which is reflected in lower approval rates of Scheduled Caste borrowers compared to others. The analysis uses data from the India Human Development Survey (IHDS) 2011–12, a nationally representative household survey (Kumar and Venkatachalam 2019). Evidence of both caste-based discrimination (prejudice against lower castes) and statistical discrimination (perceived higher default risk) was found, particularly in bank lending for production loans. General Castes receive significantly higher loan amounts than lower castes, found using data from the IHDS, 2011–12 (Sangwan and Saha 2024).

Female-headed households are 8 per cent less likely to access formal finance compared to male-headed households, and their loans are often smaller and more directed towards consumption. Women borrow 20 per cent less in cash loans from formal sources than men. The study uses data from AIDIS, 2013 (Ghosh and Vinod 2017). Caste plays a nuanced role. Upper-caste women showed lower probabilities of financial inclusion due to restrictive socio-cultural norms, while women from disadvantaged castes continue to face systemic barriers in accessing credit. The study utilizes data from the 4th round of the National Family Health Survey (NFHS-4), 2015-16 (Govindapuram et al. 2023). Men have higher odds of availing credit compared to women, and financial literacy plays a crucial role in credit uptake, found from a primary data study, based on a survey of 780 rural households across 78 villages of Uttarakhand (Kandari et al. 2021).

The research questions addressed in this paper are:

1. How does access to formal credit vary across gender and for Scheduled Caste and non-Scheduled Caste in India?
2. What are the variations in formal credit from the formal sector between the two caste groups and what is the extent of discrimination?

Data and methodology: This study uses unit level data from the All-India Debt and Investment Survey (AIDIS) of the National Sample Survey (NSS), 77th round. This survey collects information at both the individual and household level. Data is collected on loans borrowed by all members of the household and debt outstanding on the date of the survey from

all sources. This helps provide a broad understanding of the financial inclusion landscape in rural India. This nationally-representative, cross-sectional surveys have been conducted decennially and the last round was conducted in 2018-19. This study is analysed by using both descriptive and econometric methodologies. The analysis is based on rural households in India to examine the access to formal credit across social groups. The conventional caste-groupings followed by the Government of India have been used. I have merged Other Backward Classes (OBC) and Unreserved (upper caste) in this paper for their similarity across various parameters and have labelled them as non-SC social group. I additionally use the Global Findex database of the World Bank. The Global Findex was conducted five times till now, with 2011, 2014, 2017, 2021 and 2024 being the survey years. They collect information on ownership of deposit accounts by adults, among other things, for women and men separately for countries all over the world. It does not capture rural and urban areas separately, due to lack of a homogeneous definition of rural and urban globally. It also does not capture any information by caste.

I have used primary data collected for my doctoral work in the northern state of Uttar Pradesh, India in two villages. All indicators of the household accessing formal credit, including caste and gender, have been captured.

Access to formal credit (proxy for measuring financial inclusion) is considered as a dependent variable, and is defined as access to financial services from regulated financial institutions. The independent variables are gender of the head of the household, education level of the head of the household measured by years of schooling and ownership of landholding of the household categorised by land size class. All figures are rural.

Econometric Model Specification

In the regression model, the dependent variable (access to formal credit) is binary (1 = has access; 0 = otherwise). A binary response model is specified, and the Logit model is selected due to its sustainability for qualitative dependent variables.

The probability of credit access is modelled as follows:

$$P(Y_i = 1|X_i) = F(X_i' \beta), \text{ con } F(z) = e^z / (1 + e^z)$$

where,

$Y_i = 1$ if individual i has access to formal credit; 0 otherwise

X_i = vector of independent variables (gender, education, land size)

β is the vector of estimated parameters

$F(.)$ is the cumulative logistic distribution function.

The model used in this paper is:

$$P(\text{access to formal credit}) = F(\beta_0 + \beta_1 \text{Yearsofeducation}_i + \beta_2 \text{Genderofheadofthehousehold}_i + \beta_3 \text{landsizeholding}_i + \epsilon_i)$$

In order to estimate the gap in access to formal credit, the Oaxaca-Blinder decomposition technique was used (Oaxaca 1973; Blinder 1973). This technique separates the mean difference in the dependent variable between two groups (Scheduled Caste and non-Scheduled Caste) into two components:

- Explained component (E) : Due to differences in observable characteristics (education, gender, land size)

- Unexplained component (U) : Due to differences in return to those characteristics or unobserved factors (example: discrimination)

$$\Delta \bar{Y} = (\bar{X}_{SC} - \bar{Y}_{NSC})' \beta^* + \bar{X}'_F(\beta_{SC} - \beta_{NSC})$$

where,

$\Delta \bar{Y}$ is the average difference in credit access between the caste groups

\bar{X}_{SC} and \bar{Y}_{NSC} are the respective averages of the characteristics for each group

β^* is the vector of reference coefficients

The first term is the explained component (differences in characteristics).

The second term is the unexplained component (differences in returns or unobserved factors).

Table 1a Description of research variables

Type	Variable	Indicator	Scale
Dependent	Access to formal credit/Financial Inclusion	Access to credit from financial institutions	Binary (Yes/No)
Independent	Years of education	Total years of schooling or college	Discrete quantitative
	Gender	Gender of the Head of the household	Nominal categorical
	Land size class	Ownership of land holding in hectares	Discrete quantitative

Table 1b Descriptive statistics for regression to explain access to formal credit

Variable	Dependent variable	Type	Unit/category
	Access to formal credit	Categorical	1 if yes
			0 if no
	Independent variable		
X ₁	Caste	Categorical (binary)	
	SC		0
	Non-SC		1
X ₂	Education	Categorical	
	Till primary		1
	Upper primary till secondary		2

	Higher secondary		3
	Graduate and above		4
X ₃	Gender	Categorical	
	Male		1
	Female		2
X ₄	Ownership of land	Categorical	
	Marginal		<1 ha
	Small		1-2 ha
	Semi-medium		2-4 ha
	Medium		4-10 ha
	Large		>10 ha

Findings:

According to the descriptive results shown in Table 2, in general terms, 77 per cent of households are excluded from the formal sector, meaning they do not have access to formal financial services. More specifically, when analyzing the distribution of financial inclusion in Indian households by caste, and disaggregated by financial inclusion status, almost two-thirds of the rural population do not have access to a formal loan. Among SC households, 19 per cent have access to formal credit while it is 24 per cent for non-SC households. This comparison indicates that non-SC households have better access within the financially included group.

Based on Pearson's Chi-Square (χ^2) test of independence for this distribution, which yielded a value of 165.3 with a p-value < 0.001, there is a statistically significant association between caste and credit access. In other words, access to financial services is not independent of caste, and a measurable gap exists that cannot be attributed to random variation (Table 2). These results underscore the persistence of a social access gap in financial inclusion, with SC households showing lower access than non-SC households. Although the percentage difference may not appear very large, its statistical significance indicates that this gap is structural and should be considered in the design of public policies that promote equal access to the formal financial system.

Table 2 Access to formal credit gap, by caste

Variables	Category	Caste group		Total	Statistic
		SC	Non-SC		
Access to formal credit	No	81 (22)	76 (78)	100	Pearson chi2 = 165.3
	Yes	19 (18)	24 (82)	100	
	Total	100	100		

*Numbers in parentheses are the shares of rows

Based on households who have access to formal credit, the paper looks at credit outstanding, measured by the sum total of the principal loan amount plus the interest accrued on the loan till the date of the survey.

There is a significant gap between the average loan size and the median. This indicates financial concentration and inequality in credit access. There is also a significant gap between the loan sizes of the two caste groups. Non-SC households have an average double that of SC households, reflected by the inequality ratio. According to Dev (2012), most of the marginal and small farmers are SCs, and their average amount is lower than the national average. This can also be attributed to the discrimination they face from banks and cooperatives (Karthick and Madheswaran, 2019).

There exists inequality in credit access with the unequal access further deepening in access for formal credit. The ratio for formal credit is even lower highlighting a further gap in access.

Table 3 Credit distribution of rural households by social group in 2018

Total credit outstanding				
Region	Descriptive statistics	SC	Non-SC	All
India	Mean	94747	185587	165146
	Median	48600	71600	63600
	SD	165051	697032	619755
	Minimum	2	500	2
	Maximum	4530000	62496728	62496728
	Inequality ratio	0.51	1	0.89
Uttar Pradesh	Mean	80785	133085	121876
	Median	50000	68000	61000
	SD	118116	237913	218911
	Minimum	1000	800	800
	Maximum	1046500	6474000	6474000
	Inequality ratio	0.61	1	0.92

Source: Authors calculation based on unit level data (AIDIS), NSS, 77th (2019) round

Note: Non-SC is reference category for mean inequality ratio

Table 4 Credit distribution of rural households from the formal sector by social group in 2018

Formal debt outstanding				
Region	Descriptive statistics	SC	Non-SC	All

India	Mean	91650	200741	177947
	Median	47240	73900	64000
	SD	184101	868196	778019
	Minimum	1000	800	800
	Maximum	4530000	62496728	62496728
	Inequality ratio	0.46	1	0.89
Uttar Pradesh	Mean	99966	161484	150541
	Median	57510	90630	83200
	SD	150959	288959	270651
	Minimum	1200	800	800
	Maximum	1046500	6474000	6474000
	Inequality ratio	0.62	1	0.93

Source: Authors calculation based on unit level data (AIDIS), NSS, 77th (2019) round

Note: Non-SC is reference category for mean inequality ratio

The dependent variable is the natural log of formal credit amount per household. Each coefficient measures the percentage change in formal credit associated with a one-unit change in the explanatory variable, holding other variables constant. Education significantly enhances access to formal credit in both groups, but the impact is stronger for non-SCs. This suggests that financial institutions reward education more for socially advantaged groups, or that non-SC households can better translate educational gains into creditworthiness. The coefficient for gender for both groups is small and statistically insignificant. This indicates no meaningful gender difference in formal credit access once other variables are controlled. The gender of the household head does not independently explain variation in formal credit within either caste group. Land continues to be the dominant determinant of formal credit, reflecting the role of land as collateral. The slightly higher coefficient for non-SCs implies that returns to land ownership in credit markets are larger for non-SCs, consistent with the “unexplained” discrimination component seen later in Oaxaca-Blinder results.

While it is observed that caste plays a role in access to formal credit, what happens when other factors like land size class, gender and education levels are introduced. In the next section, Blinder-Oaxaca decomposition (1973) method is used to analyse discrimination between SC and non-SC groups.

Table 5 Credit function: Regression results of formal credit by social group

Variables	Non-SC	SC
Education	0.2562*** [26.45]	0.2950*** [13.68]
Gender	0.0122 [0.38]	0.0418 [0.72]
Landsizeclass	0.3989*** [43.41]	0.3909*** [13.76]

Constant	10.3561*** [228.81]	9.9093*** [114.21]
Observations	17,509	3,831
R-squared	0.14	0.089
F-statistic	898.01	124.4
Prob > F	0	0
Adj R-squared	0.1331	0.0881

Note: Figures in parentheses indicates t-value

*** p<0.01, ** p<0.05, * p<0.1

The Blinder–Oaxaca decomposition examines the sources of disparity in access to formal credit between Scheduled Caste (SC) and Non-SC households. Using household-level data, the results show a statistically significant difference in the log of formal credit amounts: SC households receive on average 0.576 log-points less formal credit than non-SC households—equivalent to roughly a 44 percent lower credit level. About 37 percent of this disparity is explained by lower endowments in education and land ownership, while 63 percent remains unexplained. The largest explained contributor is land ownership, underscoring the importance of asset inequality in credit access. The unexplained component, driven primarily by differential returns to land, suggests that SCs face structural disadvantages within the formal credit system. Complementary OLS regressions show that both education and land ownership significantly increase credit access for all groups, but their effects are stronger for non-SCs. The models explain around 14 percent of credit variation for SCs and 16 percent for non-SCs, suggesting that observable socioeconomic factors account for more variation among socially advantaged groups, while unobserved or structural constraints remain more binding for SCs. These results are consistent with Karthick and Madheswaran (2019), who report that caste-based disparities in credit markets persist even after accounting for observable socioeconomic factors.

In summary, three broad patterns emerge from the empirical analysis:

Persistent exclusion: A majority of rural households, particularly those belonging to SC groups, remain outside the formal credit system.

Structural inequality: Education and land ownership significantly improve credit access, but their benefits are not equally distributed across caste groups.

Discriminatory mechanisms: The decomposition results reveal that over half of the caste-based credit gap cannot be explained by observable socioeconomic factors, highlighting potential institutional and social discrimination in credit markets.

Table 6 Results of Blinder Oaxaca decomposition technique

The formal share of women in total debt outstanding was 16 per cent in Mahatwar and 15 per cent in Harevli (for men, their share was 67 and 72 per cent respectively). Traditional institutions like banks and co-operatives lent 87 per cent (Mahatwar) and 92 per cent (Harevli) of their total debt to men, as they have physical collateral. In the case of the formal private sources, there is a differential picture. In Mahatwar, women have a 24 per cent share while in Harevli, their share is 66 per cent. Women primarily borrow using the group lending model due to their lack of a physical collateral/security where the group acts as their social collateral. The formal sector has ensured that women are beneficiaries of credit allocation through microfinance using SHGs and JLGs. Banks play a crucial role as they either directly lend to these groups or use the microfinance model for further on-lending.

The average debt outstanding of a woman in the two villages was around one-fifth that of a man. The average loan size of a female was only 30 per cent of that of a man. The gap was less stark between men and women of the SC community, where the average loan size of a SC woman was 84 per cent that of a male SC, while it was worse in case of non-SC women whose loan size was only 24 per cent that of a non-SC man. Women, irrespective of their caste, had limited access to credit. However, among women, SC women fared better than their non-SC counterparts.

Conclusion:

Despite India's progress in financial inclusion, deep-seated social inequalities continue to shape access to formal credit. The evidence from AIDIS (2018–19) reveals that Scheduled Caste households remain significantly disadvantaged both in the likelihood of accessing formal loans and in the size of credit obtained. While differences in education and land ownership account for part of the disparity, a larger unexplained component signals the persistence of institutional and social barriers. While there is scope for improving inclusivity, even among the sections that currently have access, constraints still exist. These findings highlight that equalizing endowments alone cannot close the credit gap; systemic reforms in lending practices, collateral requirements, and risk assessments are equally crucial. Expanding collateral-free and targeted credit programs, coupled with financial literacy and social sensitization measures, can help ensure that inclusion translates into genuine equity. Future research should explore the interaction between social identity, financial institutions, and policy design using longitudinal or experimental data to understand how discrimination operates within rural credit markets.

Primary data suggests that the gender gap is predominant where men, despite constituting an almost equal share as women in the population, have a disproportionate share in number of loans, amount borrowed and average loan size. Men have a higher share across all parameters of rural credit and women, despite making progress, continue to lag behind.

Second, although women have greater access to credit now, it also comes with an additional burden of repaying all these loans on time (missed repayments are a rare case, particularly due to societal peer pressure), a higher loan cost as it carries a substantially greater interest rate, along with the burden of household chores that falls entirely on them. This is doubly punishing considering they rarely own any assets and have limited sources of income. They continue to be outside the ambit of commercial banks whose lending cost is comparatively lower.

Third, among women, the average loan size of SC women was higher than those of non-SC women. The formal private sector functioning using the microfinance-group lending structure, has been the popular choice among women. Additionally, SC women had loans issued to them by regional rural banks (formal public) under the NRLM scheme. Almost three-fourth of all

debt borrowed by SC (excluding that single large loan) and non-SC women was from the formal private sources.

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