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Credit Exclusion of the Poor:

A Study of Cultivator
Households in India

The International
Center for Development
and Decent Work

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Abstract

In India, about 55% of the workforce is dependent on agriculture and most of these cultivators, being small or marginal farmers, require financial help on a regular basis for their farming activities. Needless to say, such poor farmers suffer from irregular and volatile income. As these households do not possess adequate savings, accessibility to financial resources at reasonable terms and conditions is becoming a crucial parameter for their productive activities and hence, in turn, their well-being. Based on the household level data provided by the National Sample Survey Organisation (NSSO) of India, this paper examines the nature of exclusion faced by farmer households in credit market across selected prominent states of India. The paper also tries to identify the factors that explain exclusion from access to financial resources by developing a methodology for detection of credit exclusion. It is observed from this analysis that economic development and education increase access to financial resources.

Keywords: Accessibility to credit, financial exclusion

JEL Classification O1, O2



1 Introduction

Poorer households of developing countries like India suffer from irregular and volatile income. As these households do not possess adequate savings and depend on credit to meet even their basic expenses, accessibility to financial resources at reasonable terms and conditions is crucial for the well-being of the households. However, in India most of the households are excluded from a formal lending network which provides such services. In particular, the post-liberalization phase has witnessed a decline in rural branches of the formal banks (see Shetty, 2005; Ramachandran and Swaminathan, 2001, 2005) indicating a reduction in banking facilities for the rural populace of the country. Further, NSSO (2005a; 2005b) shows that the period between 1991 and 2001 was characterized by a decrease in the share of formal loans in household borrowing vis-à-vis loans provided by informal sources such as private money lenders. While accessibility to credit through a formal banking network remains a critical issue across the nation, there have been regional variations which can be witnessed by looking at the state level scenario. In addition, there are different social classes such as historically disadvantaged groups (officially called *backward classes*) or women who may not have equal access as others (see Rajeev et al., 2011). Against this background, the paper examines the problem of accessibility to financial services state-wise for major states of India and highlights how accessibility varies across different economic and social groups. The paper further evolves a methodology to identify credit-constrained households and utilizes an econometric technique to obtain the determinants of inaccessibility to credit among cultivator households across 15 major states in rural regions of India.

The present analysis utilizes unit level data of the 59th round of the National Sample Survey Organisation (NSSO) and bases the work on two important surveys. The data set based on All India Debt and Investment Survey provides substantial information regarding household debt and investment for 143,285 households in India, covering both rural and urban areas. The Situation Assessment Survey (SAS) of the farmer households provides information for 51,770 cultivator households spread over 6,638 villages across the country. While both of these surveys provide rich micro level information through large

samples, there has been a limited number of studies that came up with an analysis of unit record data (see Bhattacharjee et al., 2009, 2010) and the existing studies are usually based on the published data in the NSSO reports (see Narayanamoorthy et al., 2005). There are a few studies that have examined the debt situation of farmer households based on the *Situation Assessment Survey of Farmers (SAS)* and *All India Debt and Investment Survey* of NSSO. We may note in this context that these are presently the most recent data on farmers' indebtedness available at the macro economy level.

The paper is subdivided into the following sections. The next section highlights the nature and extent of accessibility to credit from formal as well as informal sources. The third section provides a methodology for detection of financially excluded households. An econometric analysis is carried out thereafter. A concluding section is presented at the end.



2 Nature of Accessibility to Credit across Different States

NSSO data provide information regarding household borrowing based on which one can arrive at the percentage of households that has availed loans in a given year. This indicator is termed *incidence of borrowing* (IOB) and we argue that it can be used as an indicator of **access to credit**. It is in contrast to the general perception that IOB refers to a debt-ridden situation in which the respondents (who are mostly from the lower income category) are having outstanding credit and hence indebted. This negative connotation had been ascribed by many authors in the literature without careful analysis of the data. As is well known, NSSO data is huge, and analyzing unit record data is not a trivial task. In this regard, our careful scrutiny of unit record (household level data) reveals that IOB is higher for the higher income groups; secondly, economically advanced states have a higher level of IOB, and thirdly social backward schedule tribe (ST) households (India's indigenous population) generally have a lower IOB than the *General or Other Backward Castes* households. Thus, we argue that a negative connotation should be ascribed to IOB with caution.

Table 1: Incidence of Borrowing by Cultivators in Rural Areas of Different States

States	Formal	Informal	All
Andhra Pradesh	18	28.2	41.6
Assam	1.6	9.3	10.9
Bihar	1.3	12.4	13.6
Gujarat	9.2	9.2	16.1
Haryana	13.2	13.5	23.8
Karnataka	11.8	17.7	27.9
Kerala	27.7	14.1	36.3
Madhya Pradesh	10.8	13.2	20.8
Maharashtra	16.3	7.2	22.4
Orissa	6.1	11.8	16.9
Punjab	24.2	21.4	40.7
Rajasthan	5.9	12.4	17.7
Tamil Nadu	20.2	34.7	49.4
Uttar Pradesh	7.3	12.9	19.3
West Bengal	8.8	14.8	22.5
India	10.1	14	22.4

Source: Computed using 59th Round *All India Debt and Investment Survey*

Note: The figures in bold imply incidence below national average

2.1 Incidence of Borrowing

If we interpret the incidence of borrowing (IOB) as access to credit, one observes that accessibility remains low among cultivators in rural areas of most states (see Table 1). Table 1 reveals that only 22.4 percent of households have accessed credit in an average Indian state. Based on NSSO data sources, borrowing can be classified into two major groups: formal and informal. The formal sector includes commercial banks, cooperative banks and regional rural banks, which are regulated by the central bank that is the Reserve Bank of India (RBI). The informal sector consists of private money lenders (including pawn brokers, large farmers lending to small farmers and so on), friends and relatives who are usually not registered with any authority and hence can charge any interest rate and security. As far as borrowing from the formal credit market is concerned, it is observed that eastern states such as Assam, Bihar, Orissa or West Bengal (see map of India presented in the Appendix) have a lower incidence of borrowing from the formal credit market compared to states situated in the western parts of India such as Gujarat or Maharashtra. If one attempts to relate this to incidence of poverty figures published by the government of India, it is observed that barring Assam, states located in eastern parts have higher poverty ratios as compared to the states located in western parts of India. The per capita income figure of the eastern states is also low (see table 2). Thus, it seems that the households in eastern states are economically backward and have lower access to credit; these two indicators no doubt impact each other.

Table 2: Incidence of Poverty (IOP) and Per Capita Income (PCI) of the States (2004–05) and IOB (2002–03)

States	IOP	PCI (Rupees)	IOB
Andhra Pradesh	11.2	15507	41.6
Assam	22.3	12269	10.9
Bihar	42.1	5766	13.6
Gujarat	19.1	18864	16.1
Haryana	13.6	21966	23.8
Karnataka	20.8	16758	27.9
Kerala	13.2	19264	36.3
Madhya Pradesh	36.9	12384	20.8
Maharashtra	29.6	23340	22.4
Orissa	46.8	10567	16.9
Punjab	9.1	25611	40.7
Rajasthan	18.7	13477	17.7
Tamil Nadu	22.8	19378	49.4
Uttar Pradesh	33.4	9405	19.3
West Bengal	28.6	15826	22.5
India	28.3	15839	22.4

Source: Computed by authors using Government of India and 59th Round *All India Debt and Investment Survey* data

In fact, if one computes the correlation coefficient between incidence of borrowing and incidence of poverty, one would find that there is a significant negative relationship between poverty and the amount of borrowing from the *formal* sector (see Table 3).

Table 3: Correlation coefficient between Incidence of Poverty (IOP) and Incidence of Borrowing (IOB)

IOP	IOB		
	Formal	Informal	Total
Pearson Correlation coefficient	-0.613*	-0.364	-0.553*
Significant (2 tailed)	0.015	0.182	0.032

Source: Computed by authors using 59th Round *All India Debt and Investment Survey*, NSS and Government of India data

2.2 Average Amount Borrowed

Observing the fact that only a few borrowers get loans in the eastern states, one may argue that the existing borrowers in eastern states like Assam, Bihar or Orissa possibly avail large volumes of loans, which in turn may crowd out other potential borrowers. However, one would refute such a hypothesis if one considers the average amount borrowed per cultivator in the selected states. Table 4 depicts the loan **amount** per borrower from the formal and informal sectors. The last column of Table 3 shows that loan per cultivators is much lower for the eastern states like Assam, Bihar or West Bengal vis-à-vis Punjab or Haryana, or for that matter other states of India. This is worth noting because not getting an adequate level of credit is also considered as a major impediment to agriculture production.

Thus, the extent of accessibility or the size of a loan that a cultivator household could avail is less in the eastern states. In addition, one also observes that households availing loans from the formal sector could borrow larger loans compared to households availing loans from the informal sector.

Table 4: **Average amount Borrowed per cultivator in the selected states**

States	Formal	Informal	All
Andhra Pradesh	17888.9	17691.5	19733.2
Assam	17687.5	3537.6	5614.7
Bihar	24769.2	5897.1	8264.7
Gujarat	12739.1	12739.1	28086
Haryana	70848.5	36303.7	59886.6
Karnataka	32889.8	13367.2	22390.7
Kerala	45426	16099.3	40917.4
Madhya Pradesh	23787	12197	20091.3
Maharashtra	24901.8	15125	22982.1
Orissa	10623	4474.6	6946.7
Punjab	50074.4	43859.8	52835.4
Rajasthan	25881.4	18911.3	21875.7
Tamil Nadu	24861.4	14870.3	20611.3
Uttar Pradesh	18726	7596.9	12160.6
West Bengal	11659.1	6705.4	8404.4
India	26207.9	12850	19848.2

Source: Computed using 59th Round *All India Debt and Investment Survey*

Lower accessibility in terms of both incidence and extent could be due to two reasons. First, it may happen due to lower repayment, which would make lending riskier (supply side argument). Alternatively, lower accessibility to credit in eastern states could be due to a higher cost of borrowing (in terms of rate of interest), which might have a negative impact on demand.

As far as repayment of a loan is concerned, it is observed that states with households having lower accessibility to credit such as Uttar Pradesh, West Bengal, Bihar and Orissa have a much lower incidence of repayment (IOR) compared to states such as Punjab and Haryana (see Table 5), which are economically advanced states. For instance, while the ratio of IOR and IOB is 36.1 for Haryana, the figure for Bihar is 21.3. Thus, it seems that poorer repayment ability of households plays a major role in influencing supply of credit.

However, when we try to relate accessibility with cost of borrowing (interest rate), a careful examination reveals that though there are differences in accessibility to credit across eastern and western states, no observed differences exist in terms of interest rates. Thus, one tends to refute the hypothesis that lower accessibility to credit in eastern states is due to a higher cost of borrowing. Rather it might be due to lower repayment capability of households, which has made lending riskier in the eastern states leading to poorer supply. More precisely, it is the lenders (i.e. the suppliers) who are not forthcoming to lend due to the high risk of default involved.

Table 5: Incidence of repayment (IOR) of loans availed from July 2002–June 2003 and the ratio of IOR and Incidence of Borrowing (IOB) for Cultivator Households in Rural Areas

States	IOR			IOR / IOB		
	Formal	Informal	All	Formal	Informal	All
Andhra Pradesh	5.1	7.1	12.1	28.3	25.2	29.1
Assam	1	3.9	5	62.5	41.9	45.9
Bihar	0.2	2.7	2.9	15.4	21.8	21.3
Gujarat	3.1	3.1	6.7	33.7	33.7	30.3
Haryana	4.8	4	8.6	36.4	29.6	36.1
Karnataka	3.7	8.8	12.2	31.4	49.7	43.7
Kerala	11.6	6	16.8	41.9	42.6	46.3
Madhya Pradesh	2.4	1.8	4.1	22.2	13.6	19.7
Maharashtra	4.8	2.2	6.9	29.4	30.6	30.8
Orissa	1.3	4.1	5.1	21.3	34.7	30.2
Punjab	7.9	5.8	12.8	32.6	27.1	31.4
Rajasthan	1.6	1.8	3.3	27.1	14.5	18.6
Tamil Nadu	9.2	19.6	27.1	45.5	56.5	54.9
Uttar Pradesh	1.3	2.3	3.6	17.8	17.8	18.7
West Bengal	1.6	3.9	5.4	18.2	26.4	24
India	2.9	4.1	6.8	28.7	29.3	30.4

Source: Computed using 59th Round *All India Debt and Investment Survey*

To summarize, from the tables given in this section it seems that economically backward regions are characterized by poor accessibility to financial resources. Even though we have ascribed it to poor accessibility, strictly speaking one is not sanguine whether the low level of borrowing results from demand or supply side reasons. Theoretically, one may very well argue that some of these states have a lower level of incidence of borrowing as there is no demand for loans; not because they are looking for funds but because resources are not available on reasonable terms and conditions. It is therefore necessary to examine the issue of accessibility more rigorously to identify whether a household is actually credit constrained or not. The next section concentrates on the issue.

3 Methodology for Detection of Credit Excluded Household

To define credit exclusion, we would consider only production activities of cultivator households², where a household would be considered as credit constrained if the household has not availed a loan in spite of having a positive demand for it. It is assumed that demand for credit is positive if the saving/financial assets of the household are less than the average cost of cultivation in the district. In other words, our presumption is that households which have savings would not desire to borrow. Households that have not availed credit services due to sufficient financial assets are defined as non-excluded/non-constrained households. For a better understanding, one can consider the following diagram.

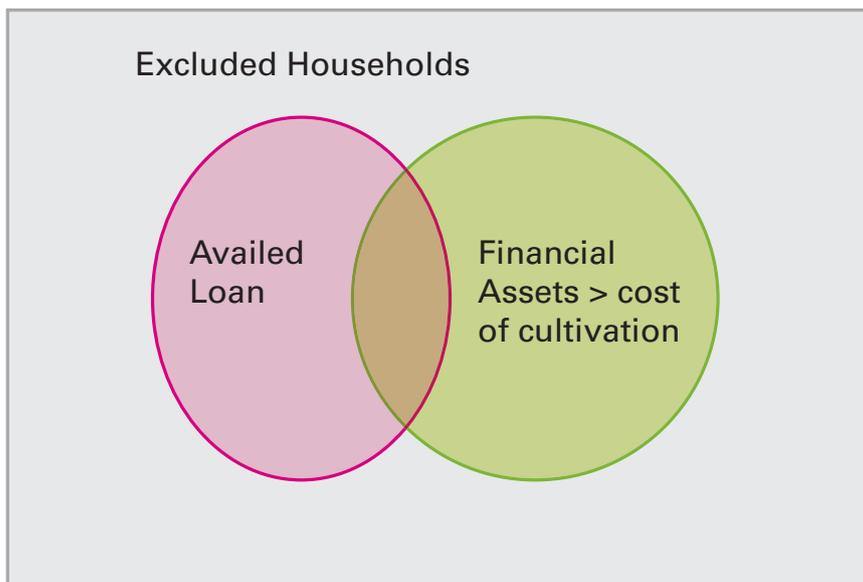


Figure 1: Detection of Credit Excluded Households
Source: Formulated by Authors

² We have not considered the consumption aspect, as it is difficult to capture the demand for loans using the above two data sets.

In the above diagram, the households are segregated into three categories, namely, households that have availed loans, households that have not availed loans but possess financial assets above the cost of cultivation, and households which have neither availed loan nor possess sufficient financial assets to carry out production. Clearly, households which have availed a loan have access to credit. Households having financial assets above the cost of cultivation can be considered as non-excluded households. The last category, i.e. households which have not availed loans and at the same time have less financial assets, could be termed as credit excluded/constrained households. In Figure 1, the credit excluded households are represented by the shaded region.

In the econometric analysis part, we have mainly used 'All India Debt and Investment Survey'; however, to compute the average cost of cultivation per hectare we have used the 'Situation Assessment Survey of Farmers' data. The cost of cultivation has been computed at the district for the principle crop. This is then compared with financial assets per hectare of land for each household. If financial assets per hectare of land are less than the average costs of cultivation and also the household has not availed a loan, it is classified as constrained. In this regard, it is essential to note two aspects which this paper could not tackle. First, households that have availed a loan might also be constrained in terms of the amount borrowed and secondly, the cost of cultivation per hectare of land might decrease with an increase in the size of the land under cultivation.

4 Econometric Specification

To find out the determinant of credit exclusion, a probit model was considered. It is assumed that there is an unobservable index li , determined by the explanatory variables, such that the larger the value of the index li , the greater the probability of a family being excluded from a credit market. We express the index li as:

$$l_i = X_i' b + u_1$$

where X_i s are the set of explanatory variables.

The relation between li and actual exclusion can be summarized in the following way:

$$\begin{aligned} l_i^* &= 1 \text{ if } li \geq k_1 \\ &= 0 \text{ if } li < k_1 \end{aligned}$$

In the above formulation, k_1 is the threshold value (of the index variable) above which a family is considered as credit excluded.

Given the assumption of normality, the probability that k_1 is less than or equal to li can be computed from the standardized normal cumulative distribution function (CDF) as:

$$\begin{aligned} P_i &= P(Y = 1 | X) = P(k_1 \leq l_i) = P(Z_i \leq X_i' b) = F(X_i' b) \\ P_i &= P(Y = 0 | X) = 1 - F(X_i' b) \end{aligned}$$

The estimation of b is approximated by using the maximum likelihood method.

If b is positive, it implies that the probability of being excluded from credit service increases with an increase in the explanatory variable.

In probit models, the joint significance of the variables is tested by the likelihood ratio test or the Wald test.

5 Variables selected for analysis

The dependent variable in the analysis is a dichotomous variable, which assumes a value of 1 if a household is credit excluded and a zero value is assigned otherwise. A household can be excluded from credit services for three reasons: demand side reasons, supply side factors and institutional factors.

Demand side factors

A household may prefer to remain credit excluded due to risk aversion behaviour, which either depends on the cost of availing a loan (see Stiglitz and Weiss, 1981) or on the economic status of the household (see Friedman and Savage, 1948). In our analysis, the cost of credit is captured by incorporating the rate of interest as a variable. We note that in our sample there are households that have not availed a loan and we wish to examine whether this is due to demand or supply side reasons. But for such households, we do not have the figure for the rate of interest. For households which have not availed a loan, we ascribe an imputed interest rate which is equal to the average rate of interest prevailing in the district to which the household belongs. Further, the economic status of a household is captured by considering land size as one of the explanatory variables.

In addition to risk aversion behavior, households having alternative nonfarm sources of income are likely to have smaller demand for credit since they have a possibly higher level of income compared to households engaged in a single activity. This aspect is captured by a dummy variable. Households which derive a major portion of their income from non agricultural activities were assigned the value 1, while zero values were assigned otherwise.

Supply side factors

Generally, the supply of loans will be less for those households lenders consider risky. This may happen if the household possesses fewer assets (compared to the loan demanded) or if the household is already deeply in debt. We have considered land size as a proxy of assets owned by a household; outstanding loans as of 30.06.2002 have also been considered as a variable to represent existing liabilities (outstanding debt).

The nature of risk may also vary from region to region. For instance, moneylenders in agriculturally developed regions may face lower risks of default and therefore they may be extending loans to more households. To capture this aspect, we have introduced average profit per district as one of the variables.

Apart from this, studies have also pointed out differences in financial accessibility to credit with respect to the caste status of the respective households (Jodhka, 1995). Generally, lending relationships are built among households belonging to same caste. Since the economic status of higher caste households is better, one can expect the higher caste households to face less exclusion from access to credit. In the proceeding analysis, to capture this aspect, a dummy variable has been introduced. A value of 1 has been assigned for households belonging to a general caste, and a 0 value has been assigned otherwise.

To look into the impact of differences in accessibility to credit across male and female headed households, appropriate dummy variables have been considered.

Education can also play a major role in the supply of credit. Owing to better information, one can expect educated households to have a greater supply of credit.

Institutional factors

'Institutions are social rules, conventions, and other elements of the structural framework of social interaction' (Bardhan 1989). We have considered religion specific and region specific dummies to capture the institutional differences across regions as certain social conventions and rules vary across different religion and localities. For example, charging an interest rate is not desirable in Islam religion. Securities provided for availing a loan can well be considered as an institutional variable. However, the data which we have used here does not provide terms and conditions of confiscating a security. In other words, appropriate data is not available to capture the institutional aspect of this variable. Usually in case of cultivators, land is considered as security and land size is already considered as a determining variable.

6 Results

The results of our analysis are given in Table 6. As expected, it is observed that a household for which the principal activity is non-agricultural faces a lower probability of being excluded from credit services. Agriculture is more shock-prone and hence agents engaged in both agriculture and non agricultural activities are able to diversify their risks compared to the agents engaged in agriculture alone. Hence, lenders may consider the former set of households less risky to advance loans. Secondly, one finds that the higher the supply of loans from the formal market, the lower the probability of being excluded in a region. One also observes that possessing a higher level of education (e.g. secondary education vis-à-vis primary education or illiteracy) reduces the probability of exclusion.

There are, however, certain unanticipated results. First, it is observed that the variable 'interest rate' is negatively related with the probability of being excluded from financial services. It was expected that a higher interest rate would stop many households from availing credit due to risk aversion as it carries the risk of default. However, an opposite result may have happened due to the following reasons. In this context, it is necessary to recall our construction of the variable 'interest rate' as mentioned above. We have formed the variable 'interest rate' in the following way: for households which have availed a loan, the actual rate of interest was considered; for households which have not availed a loan, the 'interest rate' variable was formed by taking the average rate of interest of households that have availed a loan in the district.

The problem of framing the variable in this way is that districts with more formal borrowing will show a lower average interest rate. Studies have shown that the formal sector is the main source of credit in the less developed regions (Bhattacharjee et al., 2009; Bhattacharjee and Rajeev, 2010; 2012). Informal lenders who are usually from the rich households are less numerous in poorer regions since such resourceful households themselves are less prevalent in such regions. Moreover, in less developed districts owing to poorer repayment ability of the borrowers, informal lenders may not be forthcoming. Thus, a negative relation between credit exclusion and interest rate results from the fact that households in less developed districts (where the average interest rate is low due to primarily accessing low interest bearing formal loans) have lower accessibility to credit (as the informal sector is not active and the formal sector is the only source).

The nature of the relationship between rate of interest and credit accessibility proves two things: first, the Indian credit market remains dependent to a large extent on the performance of private players for the need of financial support. Secondly, the financial market does not clear in risky zones through private participation. Thus, there is a greater need for government intervention for the provisioning of credit.

Let us now consider the differences that exist across the states. It is observed that households in Assam are less excluded from financial services compared to other states in India. In this context, one should note that Assam is characterized by a lower incidence of borrowing. Looking at lower incidence of borrowing figures, one may initially tend to conclude that borrowers in Assam face credit market constraints. However, the methodology derived in this paper clearly shows that considering only incidence of borrowing figures, one cannot draw a conclusion about the extent of financial inclusion or exclusion. This is because the low incidence of borrowing may also be due to the fact that the households have no demand for credit. The case of Assam is a clear example of that.

However, apart from Assam, it is observed that other eastern states such as West Bengal, Bihar and Orissa have more households excluded from credit services. Our analysis in the previous section revealed that among the eastern states, Assam has a higher repayment rate and fewer households live below the poverty line. All other eastern states had a repayment rate below the national average. Thus, lower repayment rates and the economic status of households are some of the major reasons behind credit exclusion. This is because private players do not wish to provide credit in risky regions. Therefore, many households are excluded from the market, which in turn may affect their income.

Table 6: Regression Result: Determinants of Exclusion from credit market (Probit Model)

Number of observations	38808			
Wald chi2 (22)	3194.27***			
Pseudo R2	0.0678			
Log pseudo likelihood	-23934.51			
Explanatory Variables	Coefficient	Robust Standard Error	z	P> z
Presence of majority of Income from Non-agricultural Source (D.V)	-0.31003***	0.018236	-17	0.000
Incidence of Borrowing Formal	-0.01313***	0.001798	-7.3	0.000
West Bengal (D.V)	0.405204***	0.030869	13.13	0.000
Uttar Pradesh (D.V)	0.473027***	0.027812	17.01	0.000
Tamil Nadu (D.V)	0.073935*	0.040328	1.83	0.07
Rajasthan (D.V)	0.751883*	0.036729	20.47	0.000
Punjab (D.V)	0.14104***	0.052186	2.7	0.007
Orissa (D.V)	0.560485***	0.039734	14.11	0.000
Maharashtra (D.V)	0.677645***	0.035743	18.96	0.000
Madhya Pradesh (D.V)	0.699266***	0.035781	19.54	0.000
Karnataka (D.V)	0.58935***	0.039373	14.97	0.000
Haryana (D.V)	0.427949***	0.050039	8.55	0.000
Gujarat (D.V)	0.534806***	0.043766	12.22	0.000
Bihar(D.V)	0.581184***	0.035614	16.32	0.000
Andhra Pradesh (D.V)	0.36918***	0.038189	9.67	0.000
General Caste (D.V.)	-0.09337***	0.015828	-5.9	0.000
Long Term Loan (D.V.)	-0.42366***	0.014886	-28.46	0.000
Secondary Education (D.V.)	-0.26119***	0.014822	-17.62	0.000
Average agricultural Profit per district	-3.67 E-07	4.65 E-07	-0.79	0.43
Land Size	-3.8 E-05***	4.29 E-06	-8.86	0.000
Interest Rate	-0.00372***	0.000449	-8.3	0.000
Amount Outstanding as on 30.6.2002	2.69 E-06***	3.14E-07	8.58	0.000
Constant	0.426803***	0.031828	13.41	0.000

Note: Kerala is dropped because of collinearity, D.V. = dummy variable

7 Conclusions

Economic theory establishes that investment (be it in fixed capital or working capital such as seed, fertilizer and so on) is critical for generating growth. Financial intermediaries provide the necessary link for mobilizing savings and channeling them for productive investment. For inclusive growth, easy accessibility of credit facilities by the poor has to be ensured. In India, these facilities come from different sources, which can be broadly classified as formal and informal. The sources of credit in turn influence terms and conditions of a loan. Stringent terms and conditions can act as a critical constraint for new investment. They can also make loan burdens untenable for the poor, leading to debt trap. Thus, accessibility to credit at reasonable terms and conditions is essential for the well-being of the poor. Within the poor households, accessibility as well as terms and conditions may differ across various social groups. If that is so, it is necessary to take corrective actions to bring about equity in the system.

This paper highlights the problem of accessibility to credit across states in India and shows how certain regions need prioritized attention from the Government for the proper delivery of credit.

The major focus of this paper was to identify the factors that explain exclusion of cultivators from the credit market, both formal and informal. It is observed that households in India are credit constrained mainly due to supply side factors. The Indian credit market depends to a large extent on the performance of private/informal players for the need of financial services. However, the development of informal markets largely depends on the repayment ability of households in a region. If the risks of default are higher for poor households due to poverty, informal lenders will reduce credit services, which would in turn increase credit exclusion. Thus, the main contention of this paper is that there is a greater need for government intervention for the provisioning of credit.

In addition, the paper also shows that diversion of economic activity to non agricultural sources and the spread of education reduces the problem of excludability.

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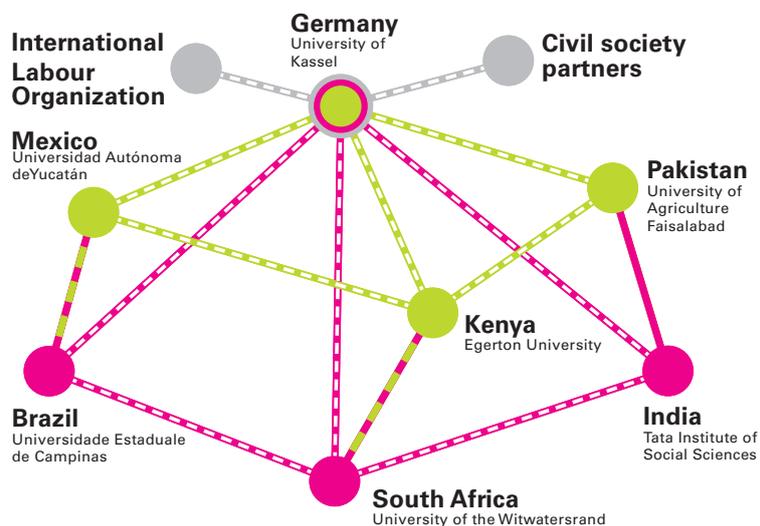
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Appendix



Courtesy: mapsofindia.com

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