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Sudha Narayanan, Judhajit Chakraborty

Indira Gandhi Institute of Development Research, Mumbai
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Email(corresponding author): sudha@igidr.ac.in

Abstract

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Keywords: Land, collateral, credit, India, household finance, land records

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Abstract
Land is often regarded as a crucial factor enabling credit access because it serves as an ideal collateral, for both borrowers and lenders. Yet in reality, in developing countries like India land is not used as collateral for a variety of reasons. This paper maps the use of land as collateral for borrowings by Indian households using a nationally representative survey of households, the All India Debt and Investment Survey (AIDIS) of 2012-13. The goal of the paper is to document the extent and patterns of use of land as collateral. We supplement this with insights from a field survey in select talukas of Maharashtra that examines borrower perceptions of use of land as collateral.

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1. Background

A long history of research on land titling emphasizes the link between clear land titles and credit access. Several argue that clarifying land titles enables greater use of land as collateral and hence improves access to credit from formal institutions, especially in contexts where the enforceability of credit contracts is weak (de Soto, 1987; World Bank, 2009). Based on this premise, a number of countries have embarked on efforts and have implemented policies relating to land titles. Despite these longstanding arguments on the presumed positive impact of land titles and credit access, existing empirical evidence suggests a more complex relationship between land title and access to finance. In particular, studies show that there are several conditions that need to be in place for land to serve as collateral and clear titles is just one of them; it is therefore not in itself sufficient to ensure credit access. Thus, while land titling is important to achieve broader economic gains, one should not expect titling to automatically improve credit access from formal institutions (Domeher & Abdulai, 2012; USAID, 2012; World Bank, 2012).

This paper is an invitation to examine this debate in the context of household debt in India. Currently, while there is a perception that a bulk of household debt in India is unsecured, there is not much data on the extent of the use of collateral, especially land. The sparse research on this subject puts forth different estimates. At the same time, the broad discourse pivots on the idea that land titling is key to improving formal credit access (See

[1] Sudha Narayanan is Associate Professor, Indira Gandhi Institute of Development Research, Mumbai, Judhajit Chakraborty is doctoral student at the Michigan State University, East Lansing. Email: sudha@igidr.ac.in, chakra57@msu.edu. We thank the participants of a Round table on Land and Access to Finance organized by the Finance Research Group at IGIDR for comments and suggestions.

Morris and Pandey, 2009, for example).[2] The Digital India Land Records Management Programme (DILRMP) has completed a decade in 2018 with efforts at streamlining title records. These efforts are taking place in a context where despite the spread of formal institutions and better management of land records, informal debt still appears to dominate the landscape of household finance (NABARD, 2018; Pradhan, 2013).[3]

The first objective of this paper is to review the theoretical basis and empirical evidence worldwide on the causal link between land titling and credit access to help define the contours of the debate in the Indian context (Section 2). The second is to map the status of use of land as collateral, by households in rural and urban India using the All India Debt and Investment Survey (AIDIS), 2012-13. (Sections 3 and 4). Third, we try to ascertain the possible reasons for the use (or not) of land as collateral drawing on a small primary survey in two blocks, one each from two different districts in Maharashtra, collected as part of a larger project on digitizing land records (Section 5).

2. Conceptual and Empirical Perspectives of Land Titles and Credit

Rationale for Land as Collateral

In theory, land has several characteristics that make it suitable as collateral (Sanjak, 2012). An ideal collateral for a loan transaction must be fixed and not mobile. This feature of a collateral directly reduces the lender's monitoring cost and hence makes the contract more feasible. Second, it must be appropriable, i.e., the ownership of the collateral can be easily transferred to the lender in case of a loan default. There should be no restrictions in enforcing such transferability in the event of default. In other words, the credit contract should be enforceable. Third, after transfer of ownership of the collateral, it should be easily saleable, or the lender should be able to liquidate the asset quickly in order to recover the losses associated with the non-payment of the loan. Along with this, the collateral should be durable and sustainable during the period of contract. Over time, the collateral should not depreciate in value. Indeed for loans associated with an interest rate, the collateral's value at the time of sale to recover bad debt must cover the loan and its interest dues. Fourth, the collateral should be such that for the borrower, there is substantial loss associated with the loss of the collateral in case of bad debts; this reduces the possibility of strategic defaults, thus effectively doing away with the problem of moral hazard. Also, from the borrower's perspective, to enable use of the asset as collateral, the transaction costs of doing so must not be too high and must directly relate to the loan amount and terms. Land is often regarded to possess all these qualities.

Causal pathways from land title to credit access

Key proponents of property rights reforms saw land titles as catalyst for credit access. The broad view in the literature is that the absence of certain specific information on land rights inhibits access to credit. Easy access to information provided by the state on a parcel of land with respect to its ownership, size, value, past encumbrances etc. enables borrowers to make an assessment of the potential for that parcel to serve as collateral in a loan transaction.

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[2] This is articulated in the popular press as well. See, for example, https://www.livemint.com/Opinion/RqVa2F89ZKwcFPdvYOUu3M/Opinion-The-need-for-digitizing-land-records-in-India.html.

[3] India has a long history of policy interventions geared to expand the reach of formal finance.

Theoretically, therefore, access to low cost information (public good- provided by the state) on land rights reduces the risks and inefficiencies like credit rationing (Stiglitz and Weiss, 1981). Formal lenders are in a better position to grant credit with land as collateral in a transaction, this in turn also increases access to credit. In this process, formalizing land titling- affects the credit market both from the supply and demand side (Boucher et al., 2005). The supply side is affected by the farmer's ability to provide collateral, while increased tenured security and farmers' willingness to invest increases credit demand.

Thus, a platform for easy access to essential information on land would lead to an increase of land as collateral and further an increased access to credit. This provides a rationale for dedicated interventions to secure property rights through steps like modernisation of land records, clearly defined land titles, mapping, standardizing valuation of land and access to transparent information on land parcels etc. are all believed to have a positive impact on various social and economic outcomes, in part due to increased use land as collateral and an increased access to credit.

Empirical evidence on the causal links between land titles and credit access

Yet, several existing impact assessments fail to find significant credit supply response and the impacts seem to be heavily conditional on the context. (Sanjak, 2012).

Using survey data on bankers from Indonesia, Dower and Potamites (2005) observe that land titling leads to an increase in access to formal credit. They attribute this increase to the "indirect signal" the title provides to the formal lender and not to the value it bears. One common finding is that the link to land title and access to credit is conditioned on the availability of credit supply. Feder and Nishio (1998) find land titling is most effective when robust financial markets exist. Pender and Kerr (1999) find in semi-arid India that land rights had scant effect on credit —because of the scarcity of formal credit sources in the survey areas.

Byamuguisha (1999) finds that land titling in Thailand had significant positive effects in the long run whereas it is negative in the short run. Carter and Olinto (2003) find that land titling program helps only medium and large farmers in terms of access to credit in Paraguay. Field and Torero (2008) find a causal relationship between land titling and credit access, but this only holds when the lender is a state bank. Macours (2009) studies 20 communities in Guatemala and finds impact of land titling on plot use and credit access varies based on the respective predominance of conflicts across these communities. The existence of conflict and conflict resolution mechanisms play an important role in the effectiveness of land titling on plot use and credit access. In India, computerisation of land registration in Andhra Pradesh, increased access to credit in urban areas only (Goyal and Deininger, 2010). According to the authors, the cost of acquiring information does not reduce for rural areas because registration information (obtained at the taluk headquarters) and land records (obtained at the village level) remains unintegrated. Hence, there is almost no impact of computerization of land registration on credit access in rural areas. Other evidence from India seems to suggest that clearer titles to land tend to facilitate borrowing from informal sources, as much from formal sources (Fowl, 2017). Besley, et al (2012) show, for Sri Lanka, that property rights have an impact on credit access only when it fosters competition among lenders and only for wealthier borrowers.

Overall, therefore, titling seems to increase access to credit only in urban areas, for more well-off clients or farmers, only in the long run and mostly from public institutions and/or informal sources. Further, there is evidence to suggest that title to land might be only one signal of credit worthiness and offering title to the poor may not necessarily make them bankable. The mechanisms that inhibit a direct impact of titling on access to credit are most often linked to the social, institutional and organizational dynamics of the country or region of study. The non-availability of formal credit, absence of robust financial markets, legal enforceability on non-transferability of land, varying social perspectives on use of land as collateral are all examples of social and institutional settings that hinder a direct impact of titling on credit access.

3. Land as collateral in India: Existing evidence on Extent and Patterns

In the Indian context, there are not many nationwide surveys that explicitly report the nature of collateral used for secured loans. Even when they do, barring a few exceptions these have not been widely reported at the country level. The Committee on Household Finance (2017) suggested that, nationwide, mortgage loans account for only a small part of total liabilities (23%) and that most Indian household debt is unsecured (56%). Other estimates suggest a much wider use of immovable property or land as collateral. One set of estimates suggests that nearly 50-60 percent of all retail loans are indexed to real estate (Krishnan, et al, 2016). They add that about 80 percent of all corporate debt is secured, of which about half of all term loans are collateralised against land and buildings. Among agricultural loans, more than 80 percent of all loans have land as collateral. However, only 10% use land as collateral from informal and unorganised lending sectors (Rajeev, Vani and Bhattacharjee, 2011). These studies use different units of analysis (loan level, household level, etc.), different samples and different datasets. While they all seem to point to systematic differences based on sectors, the picture of the extent of use of land as collateral remains under-researched.

Field studies at the microlevel on the use of land as collateral present a complex picture. Although many of these studies are from the 1980s, it is evident that the landscape of collateral based lending has not altered much. Early studies from rural areas reveal that land is kept as a last resort for borrowing and is only used as a collateral in cases of emergencies; land is also considered a high-quality asset and is thus used only when there is a need of a large loan size (Sarap, 1991). Sarap (1991) uses survey data from Odisha in the 1980s to show that the system of guarantee available to the lenders is much more nuanced and diverse than assumed in the theoretical literature. He finds that, at that time, around three-fourths of all loans were against some collateral greater for small and marginal farmers in both wet and dry areas – this declined with the rise in economic status of borrower. A wide range of collateral was used including land, gold, utensils; the share of loans against land, gold and brass utensils was 41% and 31% in dry and wet areas respectively. Amongst marginal and small farmers this was between 41% and 48% in dry and wet areas respectively. Sarap (1991) also found that land was used as collateral only for emergency loans and where the demand for such a loan is inelastic (such as medical need, or marriage of daughter). For marginal and small farmers, 91% of the loans borrowed against land collateral was for the marriage of a daughter and medical purposes. The rest 9% was for subsistence consumption. Swaminathan (1991) draws on two village studies to find that collateral often formed the basis of segmentation between the formal and informal credit markets. Informal lenders were more likely to lend without collateral and accepted a larger range of collateral – gold, jewellery, household goods, land mortgages, building, hut etc. Formal lenders were more reluctant to use movable collateral other than gold and promissory notes, although they too lent frequently without collateral. While credit from the formal sector was mainly channeled to productive activities, most of the informal borrowings were for generalized household consumption.

Another phenomenon well documented in the context of rural India is the undervaluation of the collateral (Swaminathan, 1991; Sarap, 1991). Sarap (1991) found for example that on average borrowers got loans worth about 40% of the market value of land with marginal farmers securing loans as low as a third of the value of land. In the case of default, it is likely that the lender actually stands to gain, and as such bears little risk from lending. Swaminathan, on the other hand, found that land was less likely to be undervalued relative to other types of collateral. She also finds that types of collateral used are correlated with interest rates.

Recent trends in household credit suggest that the complexity of the lending landscape persists. Mowl (2017) documents a rich variety of credit contracts in rural and urban Tamil Nadu, where a large number of items serve as collateral, ranging from land, vehicles to mobile phones. She elaborates specifically on the role of land titles in enabling access to credit. She notes that according to respondents, while both formal and informal lenders require primary documents such as a land *patta*, sale deed, and encumbrance certificate, formal lenders require additional documentation such as land *chittas* and "no objection" certificates. Further, formal financing operations often only grant loans on developed properties (if in urban areas), unlike informal lenders. She observes that formalization of titles itself may not increase effective access and suggests for example, that digitization of land title, intended as a tool for inclusion and to increase formal access and transparency, has created returns on information for informal providers as well. While it may increase access to credit, it may not necessary encourage borrowing from formal sources.

The emergence of gold loans, even in the formal sector, is also relevant (Nair, et al., 2014). Even in states that have modernized land records and where land titling is clearer it seems that gold rather than land is the preferred collateral for the banking system. For example, data on bank borrowings in 2014-15 from a survey of banks from three districts in Karnataka showed that 86.2% of all short-term crop loans were against gold as collateral (Rajeev and Vani, 2017). Nair, et al. (2014) highlight that using gold as collateral reduces the transactions costs of lending, ensures a low probability of default due to sentiments attached to gold and a way to meet lending targets by expanding the potential borrower base to those who may not have land.[4] In general, the informal sector continues to accepts a wider range of collateral than does the formal sector and it appears that even with collateral, the informal sector has clear advantages in terms of minimal documentation and transactions costs and only formal sector loan products that share these attributes find wide use.

In this paper our attempt is to map the extent of use of land as collateral in India and attempt to provide a countrywide picture of the use of land as collateral and provide a context to complement existing evidence.

4. Data and Methods

We use data from a nationally representative sample (70th Round National Sample Survey 2013) of agricultural households collected by the National Sample Survey Organisation (NSSO). Of the three types of questionnaires administered to separate samples, Schedule 18.2 contains information on assets and liabilities of 22,027 rural and 15243 urban households

[4] Priority sector lending targets that mandate a certain proportion of lending should go directly to cultivators also prompts bankers to expand lending to cultivators.

across most states in India. Called the All India Debt and Investment Survey (AIDIS), this survey has served as the source material for a number of key works that maps household indebtedness in India, including the Committee on Household Finance (2017), but remain underutilized (Satyasai, 2002). One such neglected aspect is the issue of security and collateral (Rajeev and Nagendra, 2018). This paper attempts to address this lacuna and focuses on modules relating to debt and collateral (Block 14).

In the survey period January-December 2013, each household was visited twice. In each visit, the liabilities position of the household was captured for a fixed reference date for all households. The indebtedness position of the households was assessed at the beginning of the agricultural year 2012-13, i.e. on 01.07.2012, in the first visit and at the end of the agriculture year, i.e. on 30.06.2013, in the second visit. The value of transactions of the household however is a flow and is captured for a recall period of July 01 - Dec 31, 2012 in the first visit and during the period Jan 01 - June 30, 2013 in the second visit.

In this paper, we focus on one aspect of household finance covered in Block 14 of the Schedule.[5] We restrict our analysis to specific aspects – loan outstanding as measured at a point of time and loans taken over the recall period. We analyze Visits 1 and 2 separately, since in much of rural India, seasonality in agricultural operations implies that there could be substantial differences across the two visits. We report results mainly from Visit 1, for both urban and rural households. From the perspective of the central goals of this paper, we are particularly interested in the nature of the loan and type of collateral used, where relevant.

The survey records the amount of loan, source, terms of the loan as well as whether or not it is secured through some means. These include surety, security or guarantee by third party, crop, first charge on immovable property, mortgage of immovable property, bullion/ornaments, share of companies, govt. securities and insurance policies, agricultural commodities, movable property other than bullion, ornaments, share and agricultural commodities, other types of security, personal security.[6] We interpret the use of immovable property for security as the use of land as collateral, recognizing that while this might be true of rural areas, in urban areas, immovable property is most likely to be built structures (with a building, house or apartment). The use of immovable property appears in two ways as a mortgage and also against first charge. As per the NSSO, the first charge on immovable property is the charge by the first mortgage when there is more than one mortgage for the same immovable property. In such cases, the liability of any mortgage cannot be cleared unless the liabilities of all the previous mortgages are cleared.

While the AIDIS remains the single authoritative source of nationally representative data on debt position of households, critics have pointed out that the estimates of indebtedness in the AIDIS surveys are lower than those emerging from village level studies or data from the Basic Statistical Returns from banks (Chavan, 2012).[7] These remain important caveats in our work.

5. Use of land as collateral: Estimates and Patterns

An analysis of the AIDIS data is revealing and provides several insights on the use of land as collateral. Previous work using the AIDIS has noted that the share of non-

[5] Particulars of cash loans payable by the household to institutional/ non-institutional agencies as on the date of survey, and transactions of loans during 01.07.2012 to the date of the survey.

[6] If the loan is taken without any security this is recorded. In case, more than one security is reported against a loan the one that appears first in the code list is recorded.

[7] For earlier assessments of AIDIS data, see EPWRF(2006) and Narayana (1988).

institutional credit in the rural areas has fallen continuously over time with the help of various financial inclusion policies and a decline in the share of moneylenders over time. Still, even in 2002, about 43% of the rural households were dependent on non-institutional sources of credit. (Pradhan, 2013).[8] In 2012-13, the percentage of loans that were sourced from non-institutional sources stood at 44% in rural areas and 15% in urban areas (70th round report-577, NSSO). Based on data from 2012-13, it is evident that Indian households, whether rural or urban, rely overwhelmingly on unsecured loans, most of which are on the basis of personal security (58.1% and 61.8% in urban and rural areas, respectively (Table 1).

[8] Institutional sources include government, cooperative society/bank, commercial bank (including Regional Rural banks), insurance, provident fund, financial corporation and institutions, financial company, self-help group (bank limited), self-help group-non bank financial institutions and other institutional agencies. Non-institutional sources refer to borrowings from landlord, agricultural moneylender, professional moneylender, input supplier, relatives and friends, doctors, lawyers and other professionals.

Table 1: Collateral use in borrowings: share of loans by source and location

	Percentage of loans						Average Loan Size (`000 Rupees)		
	Urban			Rural					
	Institutional sources	Noninstitutional sources	Both	Institutional sources	Noninstitutional sources	Both	Urban	Rural	All
Personal security	37.2	81.5	58.1	35.9	85.7	61.8	45.3	27.7	32.1
Bullion/ornaments	33.8	12.0	23.5	20.4	6.4	13.1	73.1	45.8	56.5
Financial assets	1.6	0.0	0.8	0.5	0.0	0.2	175.0	57.4	124.7
Surety/third party	8.3	2.4	5.5	7.2	2.6	4.8	107.6	43.3	62.1
Mortgage of immovable property	9.3	1.2	5.5	22.2	1.7	11.5	561.4	91.9	160.9
Other type of security	3.8	2.0	3.0	2.7	2.7	2.7	121.3	42.4	64.9
Other movable property	3.4	0.7	2.1	1.6	0.4	0.9	234.3	113.6	168.1
First charge on immovable property	2.1	0.2	1.2	5.8	0.3	3.0	449.1	76.3	123.4
Crop	0.6	0.0	0.3	3.3	0.3	1.7	116.6	59.9	63.5
Agricultural commodities	0.0	0.0	0.0	0.5	0.0	0.3	49.5	44.9	45.0
ALL	100	100	100	100	100	100	95.9	41.5	55.9

Source: Computed by authors from AIDIS data.

Despite this shared feature, there are significant differences in the use of collateral across rural and urban households and between institutional and non-institutional sources of borrowing. As one would expect, the proportion of loans that are against personal security is much higher with loans from non-institutional relative to non-institutional sources (Table 1). Bullion, ornaments and financial assets are more important as collateral for institutional sources than non-institutional sources, and even more so in the case of urban rather than rural areas.

Mortgage of immovable property is more prevalent than those reporting first charge on immovable property, only 3.5% of rural households, 1.4% of urban households of report the latter suggesting that multiple mortgages are uncommon. In general, the use of immovable property as collateral, either as mortgage or first charge, seems fairly low, except for mortgage of immovable of property in rural institutional borrowings which is at 22.2% of all such loans (Table 1). Of institutional borrowings in rural areas, 28% are against mortgage of or first charge on immovable property. Virtually all of these are agricultural loans from banks. It is noteworthy, but unsurprising, that in rural areas, the use of immovable property thirteen times for institutional sources than for non-institutional sources. This likely reflects the preponderance of crop loans against land. Use of immovable property as first charge is dominated by government, cooperatives, commercial banks as sources of finance. In each occupation category, the proportion of borrowers in rural areas using land as collateral is higher than in urban areas (Table 2); those in agriculture are the highest – however even within agriculture, the percentage of households using land as collateral is only 22.5%.

There are systematic differences between the type of collateral revealed preferred by institutional versus non-institutional lenders (Table 3). Bullion as collateral is more common for loans from cooperative banks, commercial banks and financial companies, corporation and institution. This reflects the growth of agrigold loans in recent years (Nair, et al, 2014). In urban areas, it is the professional moneylenders are most likely to use bullion. Land as collateral is more common when the lenders are input suppliers, who tend to rely on mortgage on immovable property. In rural areas, insurance companies too rely on mortgage and first charge on immovable property.

Table 2: Occupation-wise use of immovable property as collateral

Occupations	Share of households using Immovable Property as Collateral (%)			Ratio of households using immovable property to those using other forms of security		
	Urban	**Rural**	**All**	**Urban**	**Rural**	**All**
Self employed	10.3	-	10.3	0.10	-	0.10
Self-employed in agriculture	-	22.5	22.5	-	0.25	0.25
Self-employed in non-agriculture	-	11.6	11.6	-	0.11	0.11
Regular wage/salary earning	7.3	9.7	8.3	0.07	0.09	0.08
Casual labour	2.8	5.0	4.3	0.02	0.05	0.04
Others	5.5	5.5	5.5	0.05	0.05	0.05
All	**7.3**	**14.5**	**12.7**	**0.07**	**0.15**	**0.13**

Source: Computed by authors from AIDIS data.

Table 3: Collateral by type of lender

Collateral used by source of borrowing- Visit-1 Urban (Percentage)										
Type of Security Credit Agency	**Third party guarantee**	**Crop**	**First charge on immovable property**	**Mortgage of immovable property**	**Bullion/ornaments**	**Share of companies, govt. securities, insurance policies etc.**	**Agricultural commodities**	**Other moveable property**	**Other type of security**	**Personal security**
Government	31.3	0.9	4.3	6.2	3.8	3.0	0.0	1.7	12.2	36.6
Co-operative society/bank	5.6	1.2	4.1	14.7	48.0	1.1	0.0	2.8	3.5	19.1
Commercial bank incl. regional rural bank	5.8	1.0	2.9	15.9	49.4	1.9	0.1	4.9	4.6	13.6
Insurance	0.8	0.0	0.7	9.6	8.1	58.2	0.0	1.0	8.0	13.6
Provident fund	0.0	0.0	0.0	0.0	0.0	20.1	0.0	0.0	9.9	70.0
Financial corporation/institutions	3.3	0.2	3.5	5.9	43.6	1.2	0.0	5.9	0.3	36.1
Financial company	8.2	0.0	0.6	4.9	47.0	0.3	0.0	8.9	2.3	27.8
Self-help group-bank limited	15.4	0.0	0.2	1.2	0.4	0.3	0.0	0.1	3.4	79.0
Others	4.5	0.0	0.3	0.6	20.6	0.2	0.0	1.3	3.2	69.4
Self-help group, non-banking financial companies	11.9	0.0	0.1	0.7	2.1	0.4	0.0	0.2	4.4	80.3
Other institutional agencies	6.2	0.2	0.1	2.4	30.0	1.1	0.0	4.8	1.9	53.4
Landlord	0.0	0.0	0.0	0.0	8.8	0.0	0.0	0.0	14.1	77.1
Agricultural moneylender	1.7	0.5	0.0	9.9	5.0	0.0	0.2	2.1	19.4	61.2
Professional moneylender	3.7	0.0	0.2	1.7	20.0	0.0	0.0	0.9	1.9	71.5
Input supplier	2.2	0.0	0.0	30.6	2.0	0.0	0.0	0.0	2.9	62.2
Relatives and friends	0.6	0.0	0.0	0.2	0.4	0.0	0.0	0.4	1.8	96.7
Doctors, lawyers and other professionals	0.5	0.0	0.0	0.6	17.5	0.0	0.0	0.2	0.8	80.3
All	**5.5**	**0.3**	**1.2**	**5.5**	**23.5**	**0.8**	**0.0**	**2.1**	**3.0**	**58.1**

Collateral used by source of borrowing- Visit-1 Rural (Percentage)										
Government	13.1	8.3	12.4	16.6	0.8	1.1	1.6	1.1	6.5	38.5
Co-operative society/bank	5.8	5.3	7.8	34.2	24.8	0.5	0.8	0.9	2.0	18.1
commercial bank incl. regional rural bank	4.9	4.5	10.2	32.9	29.9	0.3	0.6	1.6	2.2	13.0
Insurance	0.0	0.3	9.1	34.9	0.5	49.0	0.0	0.0	0.0	6.2
Provident fund	0.0	3.0	0.0	0.0	0.0	7.1	0.0	0.0	5.1	84.8
Financial corporation/institutions	15.2	0.0	1.8	6.0	33.7	0.4	0.0	3.4	1.8	37.7
Financial company	8.2	1.3	1.5	4.7	32.3	0.3	0.0	9.6	6.6	35.5
Self-help group-bank limited	14.6	0.2	0.0	0.5	1.0	0.6	0.2	1.4	3.9	77.7
Others	4.2	0.1	0.1	0.8	6.7	0.0	0.2	1.5	5.2	81.1
Self-help group, non-banking financial companies	6.0	0.0	0.1	0.3	0.5	0.0	0.0	0.6	3.6	88.8
Other institutional agencies	3.0	0.8	1.5	15.5	32.4	0.2	0.1	1.5	1.0	44.1
Landlord	5.3	0.2	0.4	2.9	7.4	0.0	0.0	0.0	8.4	75.3
Agricultural moneylender	6.3	0.9	0.6	6.2	3.1	0.0	0.1	0.2	6.1	76.4
Professional moneylender	2.9	0.2	0.3	1.6	11.0	0.0	0.0	0.5	2.8	80.6
Input supplier	1.5	3.2	0.0	0.0	0.3	0.0	0.6	0.0	3.2	91.1
Relatives and friends	1.0	0.1	0.3	0.7	0.2	0.1	0.0	0.1	1.3	96.3
Doctors, lawyers and other professionals	2.4	1.3	0.0	0.4	3.5	0.0	0.0	2.8	4.8	84.9
ALL	**4.8**	**1.7**	**2.9**	**11.5**	**13.1**	**0.2**	**0.3**	**0.9**	**2.7**	**61.8**

Source: Computed by authors from AIDIS data.

Table 4: Purpose of the loan by collateral use (Figures in Percentage)

Type of security	Capital and Current expenditure in farm business (1)	Capital and Current expenditure in non-farm business (2)	Financial expenses (investment, litigation, debt repayment) (3)	Personal, household expenses (4)
Urban				
Surety security or guarantee of third party	9.7	22.3	2.0	66.1
Crop	86.9	0.0	0.0	13.1
First charge on immovable property	28.3	10.2	2.8	58.6
Mortgage of immovable property	22.0	11.7	3.4	62.9
Bullion/ornaments	4.9	8.1	9.3	77.8
Share of companies, govt. securities, insurance policies etc.	1.6	7.8	2.4	88.2
Agricultural commodities	61.5	6.4	0.0	32.1
Movable property other than bullion, ornaments, shares etc.	1.0	26.3	0.9	71.9
Other type of security	2.4	15.4	3.2	79.0
Personal security	2.6	12.7	3.0	81.7
Total	**5.1**	**12.3**	**4.4**	**78.2**
Rural				
Surety security or guarantee of third party	26.5	13.6	3.8	56.1
Crop	91.2	1.6	0.0	7.2
First charge on immovable property	76.9	3.1	0.6	19.5
Mortgage of immovable property	72.6	3.1	1.9	22.4
Bullion/ornaments	14.2	5.6	7.2	73.1
Share of companies, govt. securities, insurance policies etc.	40.7	6.7	9.6	43.0
Agricultural commodities	83.3	1.5	0.0	15.1
Movable property other than bullion, ornaments, shares etc.	37.3	13.5	3.1	46.1
Other type of security	25.8	7.9	1.9	64.5
Personal security	15.5	5.5	2.3	76.7
Total	**26.2**	**5.6**	**2.9**	**65.3**

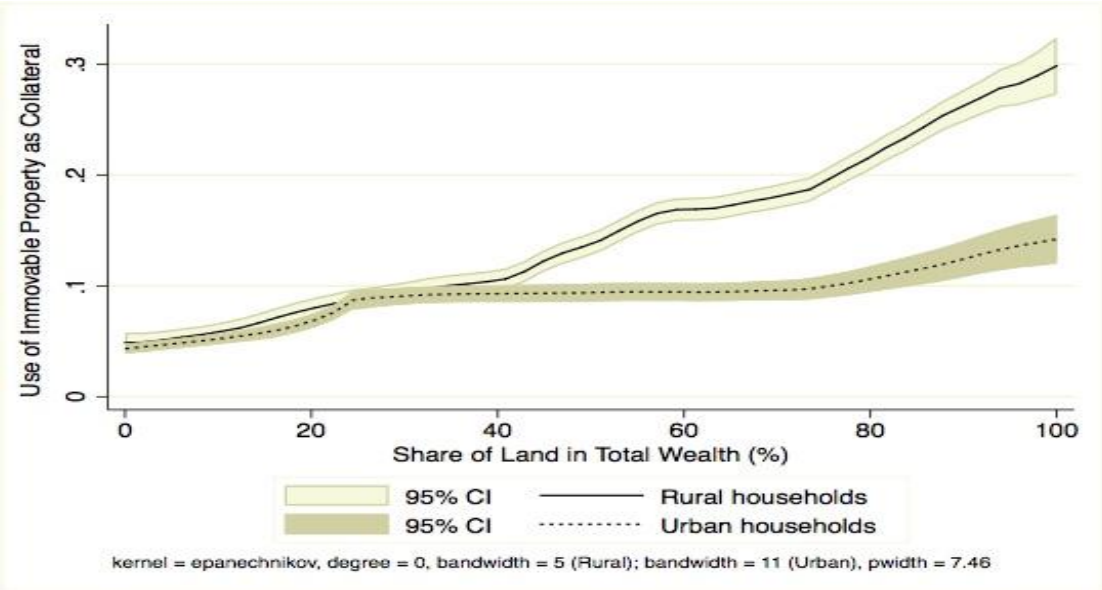
Source: Computed by authors from AIDIS data.

With respect to the use of land as collateral for loans, the AIDIS data confirms several observations from microstudies, reviewed earlier in Section 3. Loans that use land as collateral are associated with higher ticket size. There are two indicators that suggest this. While 11.5% and 7.9% of total value of all loans use land as collateral in rural and urban areas respectively, in terms of number of loans only 2.9% and 4.5% of the number of all loans do so. Also, the average loan outstanding for the use of land is higher on average than of other collaterals. Loans against personal security are the lowest in size. Comparatively, loans using immovable property for mortgage or first charge are 10-12 times that of personal security in urban areas and 2-3 times that in rural areas (Table 1). It seems to been an enduring feature of rural credit that land represents a high quality asset and as the price of land too increases, land is only used when households seek larger loans (Sarap, 1991).

Just as the loan size correlates with the type of collateral used, there are differences in the purpose of the loans when land is used as collateral versus those against other forms of security. For instance, among rural households whereas 74% of loans against the mortgage of immovable property is directed to support economic activities, farm and non-farm (with 24% diverted to personal, household needs and medical/educational expenditure), the reverse is true for loans secured by bullion and ornaments. In the latter case, almost 80% is for household expenditures, with only close to 20% directed at supporting economic activities (Table 4, Columns 1 and 2 versus 3 and 4).

Further, single owners are more likely than joint owners to use immovable property as collateral but the odds are higher in rural areas - twice as likely in rural areas and 1.2 times in urban areas. Given that many records are not updated or property has not been subdivided, it is not uncommon in rural India to have multiple owners or joint ownership for a parcel of land. In these circumstances, it is harder for a specific household/owner to use that parcel as collateral for a loan. Thus, among rural households who had full ownership of land, 15.6% of those who reported any cash loan used immovable property as collateral, among respondents who said they had only partial ownership of land, only 7.3% used immovable property as collateral. The corresponding figures for the urban were 2.3 and 1.9% respectively.

There is also a clear pattern on what kind of borrowers use land as collateral. Whereas a greater proportion of those with less land use bullion/ornaments rather than land as collateral, this pattern reverses as land owned by the household increases (Figure 1). Households that own larger pieces of land are more likely to use land as collateral over bullion/ornament. It is also apparent that as the share of land in total wealth increases, it is more likely that the household uses land as collateral (



), implying that even if land might be the collateral of the last resort, if that is the only or most important asset or the only high quality asset the household has, the more likely it is to be used as a collateral.

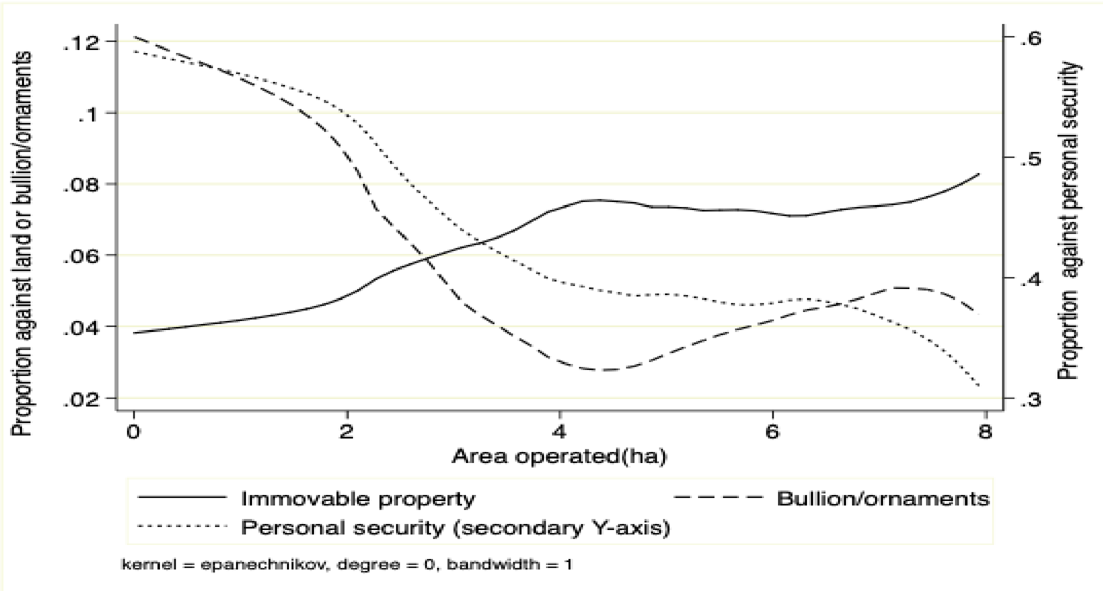
While the use of land as collateral is clearly driven by household characteristics, there are also larger policy issues, conventions and practices that influence the use of land as collateral.

Figure 3 shows the spatial variation in the use of land as collateral for borrowings in rural areas; Figure 4 shows that for urban areas. It maps the percentage of households in rural areas using land as collateral at the NSS-region level.[9] There are clear spatial patterns in the extent of use of land as collateral and there are potentially several explanations for this. For example, in many states, where land titles and records are not clear, there appears to be a clear preference of lenders for bullion/ornaments, that offer more flexibility as collateral than does land.

While gold was always popularly used as collateral, the growth of agrigold loans in formal financing is a relatively recent phenomenon (Nair, et al, 2014). Rajeev and Nagendra (2018), for instance, point out that in the middle and high-income districts, there is a possibility that gold loans are crowding out land-linked loans. It is in the absence of gold, that banks seem to opt for land-linked loans. Expansion of the banking system and bank branch presence along with banking practices and preference for meeting priority sector lending targets (PSL) could influence which collateral is more commonly used for loans.

It is also possible the landholding, land tenure and tenancy patterns influence, via land ownership, the extent to which cultivator households use land as collateral, although there is not much research on these links. The spatial variations in the use of collateral could in this case merely reflect the land ownership patterns. For example, where tenancy is more common, especially among landless households who lease in land for farming, the use of land as collateral is unlikely to be significant. Spatial variations in the emergence of self-help groups and microfinance institutions could also shape the forms of collateral that dominate in different areas.

Figure 1: Use of security vis-à-vis area operated (Visit 1)



[9] The NSS clusters districts within a state into different regions. For the map, we attribute the value of each NSS-region to its constituent districts.

Figure 2: Share of land in total wealth and use of immovable property as collateral in Rural and Urban areas (Visit 1)

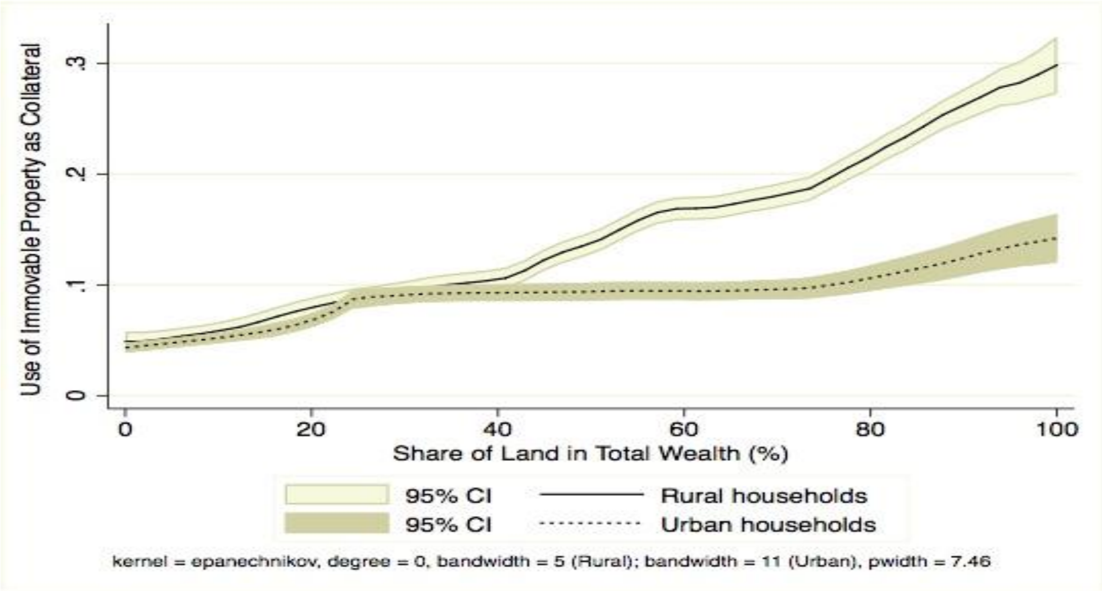


Figure 3: Spatial distribution of use of immovable property as collateral (Rural, Visit-1)

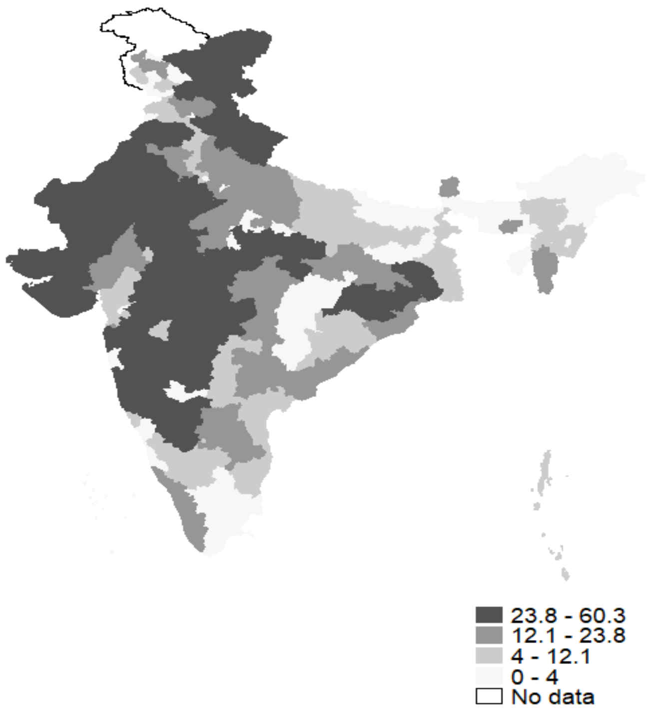


Figure 4 Spatial distribution of use of immovable property as collateral (Urban, Visit-1)

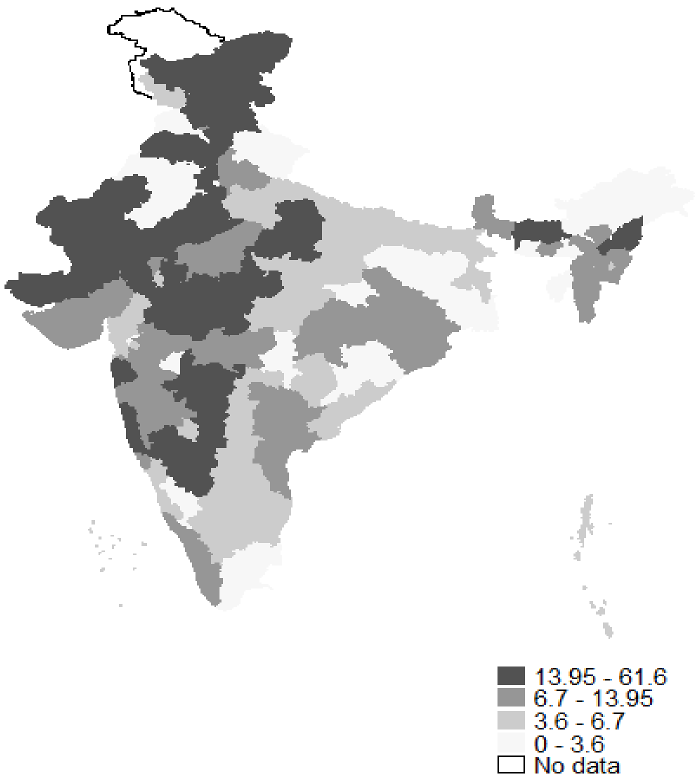
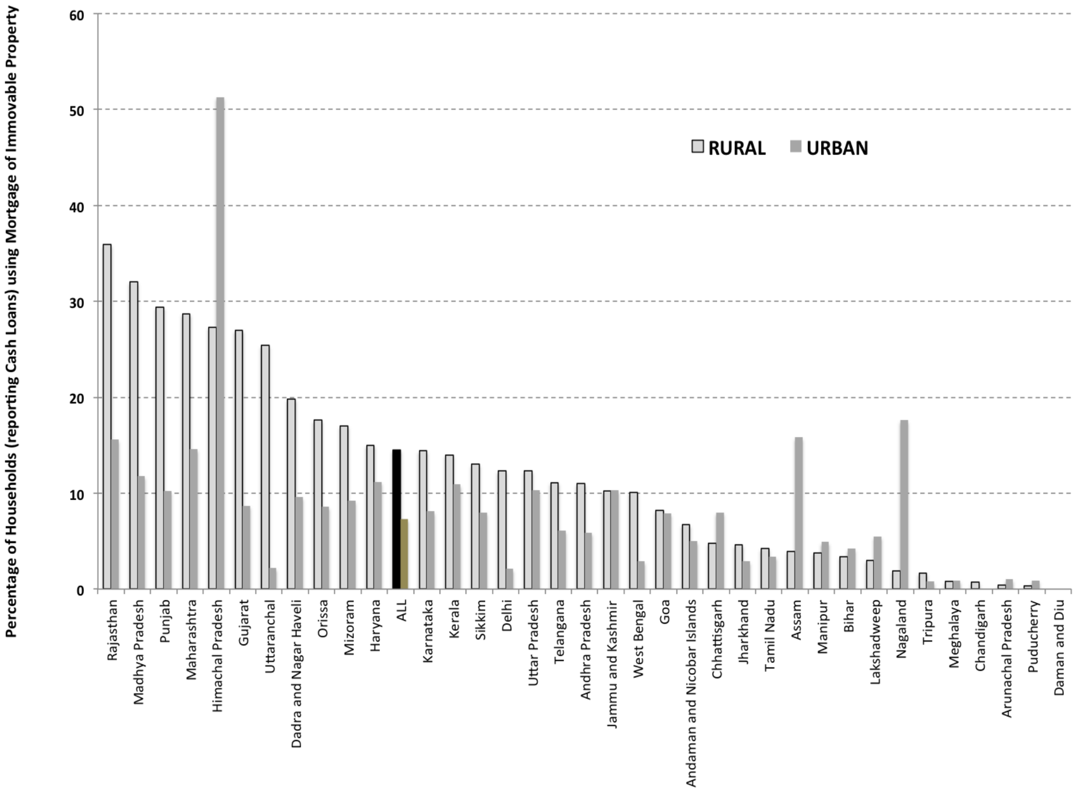


Figure 5: Statewise percentage of households with immovable property as collateral (Rural and Urban)



6. Why is the use of land as collateral so low? Insights from the Field

The analysis so far, using nationally representative household data, suggests that the use of land as collateral is not particularly high in India and confirms the idea that unsecured debt dominate borrowings in both rural and urban India. Why is the use of land as collateral so low? Existing literature suggests that there may be several reasons for this. One crucial factor is indeed that land records are largely poorly maintained. Despite the efforts of land record modernization (NCAER 2018, IGIDR, 2017), there is still much work to be done. Multiple owners staking claim to a parcel of land is one challenge. Often, the land is still in the name of ancestors, who may have passed away implying that the land cannot be used as collateral by the borrower; encumbrances are not often recorded and updated; further, communal ownership and shared use of land in many rural areas also make it infeasible to use land as collateral. Apart from this, it has been suggested that the quality of an asset as an ideal collateral is not absolute and is institutionally and socially determined. This suggests that people may attach values to land that prevent them from using it as collateral. The poor, for instance, may deem the land too valuable to risk using as collateral. Also, the value to bequeathing land to progenies may also prevent households from collateralizing land.

High transactions costs to the borrower of using land as collateral can also be barriers. For example, Nagendra and Rajeev (2018) point out that for farmers in Karnataka, agri-gold loans require less documentation as farmers only need to show a proof of cultivation activity (at times, even a signed letter from the tahsildar was deemed sufficient). Whereas, to use land as collateral, a no due certificate from every bank branch in the taluk of the branch was required. Alternatively, as Sarap (1991) points out, land, a high quality asset, might only be used for large loans and these needs may be fewer or is used only during emergencies.

It may also be the case that the willingness of lenders to accept loan as collateral is low if enforcement is low or if the legal system does not support the transfer of land in case of a default. As Nagendra and Rajeev (2018) point out, the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI Act, 2002), governs loan recovery mechanisms and banks are obliged to initiate any loan recovery process only under this law. Under the Act Section 31(i), the provisions of the act do not apply to “security interest (collateral) created in agricultural land,” including the provisions of Section 13(a), which allows creditors to enforce repossession of security interest. In effect, there is no legal recourse for loan recovery through repossession of land by banks if land is used as collateral and there are defaults. Further, as Nair et al. (2013) point out the gold loans have emerged as important since it requires minimal documentation, less effort on verifications on the part of bank staff and quick disbursement of loans relative to when land is used as collateral. From the perspective of bankers too, therefore, they may prefer to use other collateral for many reasons.

To get a better sense of these issues, we draw on a field survey 102 owners of land parcels sampled randomly across 20 villages in Palghar and Mulshi talukas in the Indian state of Maharashtra. The survey, conducted in 2016-17, was focused on land record modernization and as part of this we asked landowners about their perceptions and use of land as collateral and as a form of wealth.[10] In our sample, despite clarity of titles, i.e., ownership was clear, and complete concordance of the records with reality with respect to ownership, only 11% used land as collateral for loans/mortgage, half of whom borrowed from the cooperative society locally. All those who borrowed against land as collateral typically raised loans for agriculture.

Given that in most cases, titles were clear, whether or not land was used as collateral seemed to be a matter of preference and respondents offered diverse views. Many said that loan is “instant” if one uses land, some mentioned that they get more loans and others suggested they were able to borrow a larger amount. Among those who had not used as collateral said that they would only use it if they needed a very large loan and as such they had not required to use it thus far. At the same time, many were reluctant to use land as collateral as it is the “only thing” they have. Those who typically do not use land as collateral reported using gold instead; they also mentioned that as long as gold were available, this was the preferred collateral. “Land is like a mother” some said emphasizing the value they attach to land and that they would never use it as collateral and still others said that using land as collateral would be the last resort.

Land (along with jewelry) seemed to be the most preferred form of storing wealth. Respondents were unanimous in stating that if they defaulted on a loan for which land was collateral, nothing would happen and that when land is used as collateral it was rarely enforceable if there was a default. In this survey, it was also apparent that for many the ownership status on record matched with reality. That despite this, there is a reluctance to use land as collateral suggests a number of potential issues. First, the value attached to land by its owners might go beyond simply its monetary value so that using land as a part of an economic transaction was inadmissible. Second, it could be that the transactions costs of interacting with the formal banking system are onerous. Third, the phenomenon of multiple landowners for a given parcel might make it harder to use land as collateral (Table 5). In the sample, indeed, a bulk of the sample parcels had two owners, close to a quarter, i.e., 24% had

[10] The survey was part of a larger project titled “Pilot Impact Assessment of the Government of India’s Digital India-Land Records Modernisation Programme”. For more information, see http://www.ncaer.org/publication_details.php?pID=284.

more than 5 owners as per the Record of Rights. Thus land titles, even if clear, might be complex.

Table 5: Land as wealth and collateral: Insights from a field survey, Maharashtra, 2016-17

	Details		Number of valid responses
1	Proportion who say land is the single most important form of wealth	87.25%	102
	- those who say land is among the most important source of wealth	94%	
2	Proportion of sample for whom reality mirrors records		
	- in terms of ownership	99%	102
	- in terms of possession	94%	102
3	Proportion of sample who use land as collateral	11%	102
4	Proportion of sample parcels with multiple owners	61%	102
5	Reasons for using land as collateral		
	1. Easy to use		11
	2. Quick money		11
	3. Larger loans		11
6	Reasons for not using land as collateral		
	1. No need as yet	34	85
	2. Would not use land as collateral	13	85

Source: Survey data.

7. Concluding remarks

The goal of this paper was to provide an overview of the use of land as collateral for credit in India. Several facts stand out in the analysis. First, the use of land as collateral is relatively low (as compared to many developed countries and emerging economies) and unsecured loans based on personal security still dominate the landscape of household debt, in both urban and rural India. Second, the use of land as collateral varies substantially across regions, as also across households. Many of these are along expected lines. Those for whom land constitutes a greater proportion of wealth are more likely to use land as collateral; the use of land as collateral is also associated with higher loan values. Third, our analysis documents the persistence of several phenomena/patterns that have emerged from field studies in the 1980s, suggesting that despite the rapid growth of formal institutions of finance and also perhaps of land records modernization, a significant shift to the use of land as collateral is yet to take place. This is despite the fact that when land is used as a collateral, very rarely is it the case that in the event of default, the loan is recovered by taking possession of the land. Our field research points to norms and values that people attach to land as perhaps a constraining factor.

Our study does not directly attempt to answer the question as to whether land titling issues/ land market structure are binding constraints in access to finance or is it on account of credit market failures. These might well be the case in many contexts. In other contexts it is possible that even with titling, the use of land as collateral requires other enabling conditions.

From the borrower's perspective, the borrower should have clear title and must have the capacity to repay the loan against land, which tend to be of higher value. The borrower should be able to register the mortgage and have the option of foreclosing the loan. From the lender's perspective, accepting land as collateral should either imply higher certainty of repayment, given how valuable land is to the borrower or alternatively be able to monetize the collateral should the borrower default. Moreover, the transactions cost of offering and accepting land as collateral for loans must be low enough relative to the loan size. In a socio-economic context such as India, each of these conditions requires significant policy effort. While there have been impressive efforts in several areas, it might be a while before the conditions are conducive for households, especially those with limited immovable property, to use land as collateral to raise productive capital. In other words, the project of expanding formal finance would require looking beyond land as collateral.

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