

**SOURCES AND UTILIZATION OF RURAL
HOUSEHOLD BORROWINGS: SOME ANALYTICAL
AND EMPIRICAL ISSUES**

**SYNOPSIS SUBMITTED
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DOCTOR OF PHILOSOPHY
IN
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A strong financial system acts as a pillar to the growth of an economy. It plays a pivotal role in the development of a nation and the welfare of households in today's globalized world by facilitating persistent growth. However, the stability of the credit sector as well as the financial system is jeopardized when the size of non-performing assets (NPA) rises in an economy. A major upsurge of NPA leads to significant loss to the financial institutions, which in turn is detrimental to financial stability for a country. Now, in India, the rural sector constitutes 68.84% of the total population. Therefore, a strong rural credit system is required to stimulate investment and production in rural India. Financial policies towards the economic development of the country rely on the inclusion of the financial interests of individuals residing in rural areas to enhance their quality of life. Among all, rural credit is one of the crucial areas that demand more attention and focus.

Chapter 1: Overview of Rural Credit Market in India

Chapter 1 discusses a brief overview of the rural credit market that starts in the 19th century and ends in the 21st century. We begin with a picture of the late colonial or pre-independence period of India concerning the rural credit system. Dependence on the informal lenders, especially on the moneylenders remains a crucial part of the rural credit system in India and it continues throughout this period. The rural credit market was characterized by the high-interest rates of moneylenders and rich landowners, which was a major drawback in the pre-independence period. Literature also showed that repayment of debt was a major concern for the farmers and they are forced to borrow again and again to repay their old debt. The later part of this period saw the beginning of cooperative credit societies.

The rural credit market in India gained its importance in the post-independence era. At that time, several policies were taken to build up the institutional framework of the rural credit system in India. Co-operatives were given a pivotal role in the post-independence period in India. Reportedly, after independence, the first five-year plan (1951-56) of India

emphasized cooperative development. But later, following the insignificant performance of co-operative credit societies in leveraging in rural India, 19 commercial banks were nationalized in 1969. That was the first step towards the expansion of the institutionalization process followed by the setting up of RRBs in 1975-76 and then the formation of the National Bank for Agriculture and Rural Development (NABARD) in 1982. The establishment of NABARD acted as a major impetus to rural credit in India. Further, from 1990 onwards, Microfinance Institutions (MFI) models and Self-Help Group Bank Linkage (SBL) approach, etc. have been taken to make a potential impact on the rural credit system in India.

Chapter 2: Review of Literature and Research Gap

Chapter 2 discusses the review of existing literature. Literature shows that borrowers often use or divert a part of the productive credit, taken from formal sources, for unproductive purposes to meet their daily consumption requirements and social obligations. Consumption smoothing is an important cause of loan diversion. Repayment of previous debt by taking new loans and multiple borrowing from different financial institutions become a common practice among the borrowers. Studies have found that loan diversion and multiple borrowings are the major reasons for loan default among borrowers.

The literature review indicates the fact that borrowing in the credit market and its various aspects have been a matter of concern for a long time. It is also evident that outstanding credit poses a major concern as it increases the risk of loan default. Available literature has mainly focussed on the economic consequences of outstanding credit instead of finding the underlying reasons. Addressing this research gap, it is necessary to understand why such outstanding credit arises in the credit market and it is important to emphasize the reasons behind the outstanding credit among the borrower households. In this regard, misuse of the household credit has been regarded as the main cause of the outstanding credit in this thesis and therefore, the purpose of borrowing and utilization of the loan proceeds in India

have been studied to suggest policies. This dissertation focuses on the purpose of taking loans, that is, the intended use of loans in India using NSSO (National Sample Survey Organization) data. Further, the study highlights the issue of multiple borrowing which is also alarming as it creates indebtedness or debt-trap among the borrowers. In this regard, the study discusses the purpose of taking institutional loans to repay the previous debts which is one of the reasons for the multiple borrowing using NSSO data. Both of these contribute to the existing literature as no literature has been found to explore the NSSO data in this regard. Next, the study concentrates on the diversion of institutional loans after analysing the actual utilization of loan proceeds using a primary sample survey in the two districts of the West Bengal, a state in India. Few literature has been found in this regard. This study also focuses on the diversion of loan with special reference to financial literacy. Existing literature mostly concentrates either on formal or semiformal (MFI) loans but this thesis deals with institutional borrowing which combines both formal and semi-formal loans.

Against this background, the present study analyzed the purpose of borrowing and its actual utilization in the Indian context using secondary as well as primary data. The present thesis examines the following issues. 1) To identify the socio-economic variables that determine the probability of institutional borrowing for non-production purposes in India. Also, to examine the socio-economic determinants that affect the extent of institutional borrowing for non-production purposes in India. 2) To identify the socio-economic variables that determine the extent or size of institutional borrowing for physical and human capital investment purposes in India. 3) To discuss the issue of multiple borrowing and to find out the socio-economic variables that affect the household's decision to repay the outstanding debt by taking new institutional loans. 4) To emphasize the utilization of institutional loans and incidence of loan diversion. Also, to observe the variables that affect the probability of loan diversion with special reference to political participation and financial literacy in rural

India. 5) To examine whether the religious and caste differences in the socio-economic variables contribute towards the disparity in institutional borrowing, use of institutional loans, and use of banking services in rural India.

Chapter 3: An economic analysis of the determinants of pattern of institutional borrowing in Indiaⁱ

Institutional borrowing encourages the production and investment capacities if these loans directly contribute to the physical production. In this regard, Chapter 3 explores the patterns of different purposes of institutional borrowing in India by identifying the effect of the different socio-economic-demographic factors on the probability (as well as extent) of institutional borrowing for non-production purposes in India. For this purpose, the study uses the data of 59th All India Debt and Investment Survey (AIDIS) (2003) and 70th (2013) rounds. While choosing the suitable econometric model, the study has considered the issue of sample selection bias. To avoid this bias, the study uses a two-stage decision process using the Heckman sample selection model. To identify the socio-economic determinants that affect the probability of institutional borrowing for non-production purposes, the Heckman probit model has been used. Again, to find out the socio-economic determinants that affect the size of institutional borrowing for non-production purposes, the Heckman tobit model has been used. The econometric findings show some exciting facts. 1) The likelihood of Institutional borrowing significantly increases from 2003 to 2013. 2) The likelihood of Institutional borrowing significantly increases for households in the states with higher consumption and asset inequality in India. 3) The households in the states with higher levels of infrastructural development are significantly more likely to borrow from institutional sources. However, there are some alarming facts also. These are 1) The urban population is significantly more likely to borrow a larger amount of institutional credit for non-production purposes. 2) The higher educational level of the household head not only increases the

probability of taking institutional credit for non-production purposes but also increases the size of the loan. 3) The formally employed household heads are significantly more likely to borrow a larger amount of institutional credit for non-production purposes. 4) The probability of institutional borrowing for non-production purposes significantly increases among the households in the states with a higher infrastructural development index.

This chapter makes important contributions to the existing literature. *First*, it associates the institutional loans taken for non-production purposes with the infrastructural development in the states of India as well as the consumption and asset inequality condition present in India, which are not considered in the existing studies so far. *Second*, the study has taken into account sample selection bias and uses the Heckman sample selection model which deals with another methodological research gap in the economic literature relating to the selectivity bias in the credit market. *Third*, the existing studies have separately investigated the borrowing either from the commercial banks and co-operatives or from the MFIs. On the contrary, the present study has combined formal (banks, co-operatives, etc.) and semi-formal (MFIs) credit sources together to define them as institutional borrowing sources.

Chapter 4: What determines the household decision to borrow for investment or repayment of old debt? The Indian storyⁱⁱ

Borrowing for investment in either physical or human capital promotes growth while that for consumption or debt repayment may lead to so-called ‘debt-trap’ for the households. Institutional borrowing for non-production purposes may lead to the sub-optimal utilization of resources. Chapter 4 probes deeper into the decision-making process of the households regarding the choice between these alternative borrowing purposes. It has two parts. In the first part, it identifies the socio-economic demographic variables that determine the intensity and size of the decision to have institutional borrowing for physical and human capital

investment purposes in India using AIDIS survey data of 2013. This part of the study is unique from the previous chapter as AIDIS survey data of 2003 does not separately show the purposes of borrowing for medical treatment, housing, and educational expenses. However, the AIDIS survey of 2013 includes this segregation, and owing to this, it becomes possible to study the purpose of borrowing for human capital investment (investment for education and medical treatment) purposes separately along with the loans taken for physical capital purposes. In the econometric analysis, the study has used the Box-Cox Double Hurdle model. The reason for using an alternative econometric approach is that Heckman's outcome equation leaves out those who have zero responses in the response variable. Literature has shown that zero observations pose difficulties whenever analyzing the micro-data. Thus, using the Box-Cox Double Hurdle model, the study makes an important contribution to the existing literature on the credit market. Some of the important results are as follows. 1) Higher financial inclusion in states also encourages households to borrow more for investment. 2) The expected size of institutional credit borrowed for investment significantly increases for self-employed household heads. 3) Casual labourers are less likely to take institutional loans for investment purposes.

The second part of Chapter 4 points out the fact that multiple new loans are being taken by the institutional borrowers even when all the previous institutional loans are not fully repaid in the reference period of the 70th AIDIS survey. It examines the determinants of institutional borrowings that are taken to repay outstanding debt using the Instrumental Variable Probit model for the dichotomous dependent variable with continuous endogenous regressor (which is the size of outstanding Institutional loan as on date of survey) in India. This also contributes to the existing literature. Some of the important findings are as follows. 1) Urban households are prone to multiple borrowing to repay previous debts. 2) The likelihood of multiple borrowing to repay previous debts significantly increases for

households with a higher level of education. 3) Asset and rural landowning household heads are prone to multiple borrowing to repay previous debts.

Chapter 5: Borrowing & Spending behaviour: Evidence from Rural West Bengal, India

From the above discussion, it is clear that NSS surveys do not provide the data of actual usage of loan proceeds after borrowing. Therefore, to find out the actual usage after borrowing and to identify the extent of loan diversion in India, a primary sample survey has been carried out in four villages from the two districts of West Bengal. Chapter 5 focuses on the actual utilization of loan proceeds and explores the borrowing and spending behaviour using a primary rural household sample survey data of 1438 households. Data shows that the use of institutional loans is not limited to the stated purposes according to their loan applications. Institutional loans taken for working capital needs are mostly diverted either partly or fully. Also, most of the loan diversion occurs to meet up household expenditure.

This chapter also has two parts. In the first part, the study identifies the socio-economic and political determinants of the probability of loan diversion among institutional borrowers using Heckman probit analysis. Some of the important findings from the econometric results are as follows. 1) The Hindu principal earner is significantly more prone to the probability of loan diversion than the Muslim counterpart. 2) Political participation plays an important role in the probability of institutional loan diversion. 3) Financial literacy has a positive and significant impact on the probability of loan diversion. This part makes an important contribution to the existing literature by associating political participation with spending (only a few works have been found) and borrowing behaviour. By taking into account whether deprivation, as represented by a suitable index, has any effect on an individual's borrowing and spending behaviour as well as on indebtedness or not also contributes to the literature. Further, by establishing a strong link between the financial

literacy and spending behaviour of loan proceeds of the institutional borrowers this study contributes to the existing literature.

The second part of this chapter investigates the joint occurrences of incidence of indebtedness and loan diversion (Model 1), the incidence of multiple borrowing and loan diversion (Model 2), the incidence of indebtedness and institutional borrowing (Model 3) using the bivariate binary choice model. Some of the important findings are as follows. 1) Political participation plays a major role in all the models. 2) The borrowers involved in loan diversion are also significantly involved in multiple borrowing. 3) The less deprived principal earners (in terms of deprivation index) are significantly more prone to the probability of loan diversion. 4) SC/ST and OBC principal earners are less prone to the probability of loan diversion but more prone to the probability of multiple borrowing.

Chapter 6: Religious and Social group diversity in Borrowing and Spending behaviour: Analysis of Survey Results from Rural West Bengal, India

Chapter 6 examines the role of different socio-economic characteristics to identify the disparity in the use of banking services, institutional borrowing, and use of institutional loans for production purposes by religious and caste groups in rural India using the same primary survey, as of Chapter 5. This chapter focuses on whether the religious and caste differences in the socio-economic variables contribute to the disparity in the institutional borrowing, use of institutional loans for production purposes and use of banking services in rural India through a decomposition analysis. As the outcome variable is binary, the commonly used Blinder–Oaxaca decomposition technique is inapplicable. Therefore, the study uses Fairlie nonlinear decomposition technique. This chapter makes important contributions to the existing literature by reviewing the religious and caste differences in the use of banking services, institutional borrowing, and use of institutional loans for production purposes

Some of the important findings in terms of social group differences are as follows. 1) The *unreserved* population is significantly more likely to hold a savings bank account, go for institutional borrowing, and use the loan for production purposes than the *reserved* counterparts. 2) The occupation type of principal earner is the most important contributor here. The gap in *unreserved* and *reserved* population in institutional borrowing and use of loan for production purposes widens for regular wage earners and casual labourers in non-agriculture. On the other hand, the difference between *unreserved* and *reserved* population regarding institutional borrowing and use of loans for production purposes shrinks for self-employed in agriculture and non-agriculture and also for the casual labourer in agriculture.

Some of the important findings in terms of religious group differences are as follows. 1) The Hindu population is significantly more likely to have a saving bank account, institutional borrowing, and loan for production purposes vis à vis the Muslim population. 2) The difference between the Hindu and Muslim population in holding saving bank account shrinks significantly for aged principal earners and also for those having financial literacy. 3) The difference between Hindu and Muslim population to have institutional borrowing widens significantly for self-employed in non-agriculture, regular wage earners, casual labour in non-agriculture, and for higher levels of income. On the other hand, the gap goes down for self-employed in agriculture, casual labour in agriculture, those having financial literacy, and for lower levels of income.

Chapter 7: Summary, Findings, and Policy Implications

Chapter 7 summarizes the key findings and suggests policy implications as well as the scope of further research. In the context of this study, it has been found that higher the financial inclusion level of the states, the greater is the likelihood and extent of growth-enhancing institutional borrowing in India. Thus, financial inclusion is an important dimension for economic growth in a developing country like India.

Next, the policymakers should focus on the self-employed population in India. As per Census 2011, in rural India, among the male workers, almost 54.5% are self-employed and almost 59.3% of the female workers are self-employed. Thus, self-employment turns out to be an important occupation in India. Now, this study has found that the likelihood, as well as intensity of institutional loans taken for non-production purposes, significantly decreases for self-employed households. In Chapter 4, it has also been found that the expected size of institutional credit borrowed for investment significantly increases for self-employed household heads. Thus, access to institutional credits should be encouraged for the self-employed household in India.

Chapter 3 of this study has found that the likelihood, as well as the intensity of institutional loans taken for non-production purposes, significantly increases for the urban population. This might be due to the fact that the growth of consumerism and love for luxury products induces the urban population to borrow from institutional sources for non-production purposes. The Report of NSS 68th round (2011-12) survey of consumer expenditure also indicates this. Now, this is quite alarming from the policy point of view. Chapter 4 of this study also indicates that the debt trap significantly increases for the urban population. To curb this, strict monitoring is very much desirable.

Chapter 3 also shows that households in the states with the higher levels of consumption inequality (West Bengal, Orissa, Madhya Pradesh, Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu, etc.) are less likely to take institutional loans for non-production purposes. This acts as a good indicator for the economy as a whole. To encourage these households, easier terms of institutional loans can be initiated where consumption inequality is higher in India.

The present study proves the existence of loan diversion as well as borrowing for non-production purposes for institutional loans in India. However, the loan default might be an

inevitable consequence of this. But, the present study does not throw any light on this issue as AIDIS survey data of 2003 and 2013 does not provide the necessary information. Information on loan repayment was not pursued in the primary survey also due to time and fund constraints as it requires a visit of respondents regularly to collect that information. Therefore, a comprehensive study taking into account both of these issues, loan diversion as well as loan default will provide possible solutions to avoid bad loans in India. However, the non-production use of institutional loans may reduce the formation of physical capital but may enhance human capital, especially when the distinction between expenditure on consumption and that of health and education is blurred. Such segregation is theoretically possible but empirically difficult to measure. Future work and survey data need to focus on these aspects to frame better policies.

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