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Determinants of Borrowing by Poor: Evidence from Urban Slums of Mumbai in India

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Abstract

The study seeks to empirically investigate the determinants of borrowing of urban slum households in Mumbai. The study is based on extensive survey of 448 urban households from six major slum clusters of Mumbai. The Heckman two stage model is used to analyse the data. The findings of this paper indicate the significant factors influencing the probability of getting the loan and the households' loan amounts.

The study is unique as it expounds the reasons of borrowing behaviour of urban slum dwellers and can help in the effective formulation of policy or strategy for credit delivery mechanisms by the government and policymakers.

Keywords: Financial inclusion, Slum, borrowing behaviour, credit.

Introduction

Globally, the share of urban population is growing at an exponential rate. By 2050, it is expected that 66% of world's population to become urban (United Nations, 2014). The increase in urbanisation on the other hand is accompanied with rise in the urban poverty. It is seen that around 11% of the global urban population is living in India out of which 81 million people in urban India are living below the poverty line as per NSSO's 61st round data 2004-05. When we compared the poverty statistics of rural and urban counterparts in India, it is found that the number of poor in the rural areas declined by about 231 lakhs during 1993-94 and 2004-05; on the contrary, the number of poor increased nearly to 44 lakhs in urban areas. It has become imperative to focus on inclusive growth of these poor. The financial development by broadening the base and coverage of financial intermediaries can have major impact, as the "capital" is generated through this which in turn can be used for economic development.

There have been many studies in past which empirically suggests a close relationship between financial development and economic growth (Jalilian and Kirkpatrick, 2002; Abu-Bader and Abu-Qarn, 2008). The Financial development can consecutively influence the poverty reduction through increase in economic growth, thus these three are inter-related to each other (Beck et al., 2007; Odhiambo, 2009 & 2010; Jeanneney and Kpodar, 2011, Inoue and Hamori, 2012; Sehwat & Giri, 2016). Poor generally tend to engage in microenterprise activities which help them to generate income for their households. One of the major constraint being faced by such microenterprises is the lack of access to finance as they have poor base of income and

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assets, despite the fact the poor are willing to pay high interest rates for quick access to financial services (Brandsma and Ghaouali, 1998). Thus, widening the access to financial services in some extent can help in addressing the problem of poverty. On the other hand, banks in India are generally facing many constraints in providing credit to such customers. They are experiencing the issue of credit risk, inadequate collateral, high cost of lending, legal and regulatory limitations. Further, the targets and sub-targets set by the Government under priority sector lending (PSL) for all scheduled commercial bank (SCB) has become a major difficulty. Due to growing credit default, banks are these days undergoing a severe issue of managing their non-performing assets (NPA). As per RBI (Central Bank in India) Financial Stability Report 2017, it is seen that the gross non-performing advances (GNPAs) ratio of Scheduled Commercial Banks (SCBs) ascended from 9.2 per cent in September 2016 to 9.6 per cent in March 2017. Therefore, considering the present scenario extending large amount of micro-loans can be burden rather than a profitable business to bank.

Despite this, government is making consistent efforts to extend finance to poor and destitute people through various schemes and initiatives. Pradhan Mantri Jan Dhan Yojana (PMJDY) is one such recent scheme which aims at greater financial inclusion of poor under banking system. This scheme also provides the overdraft facility to its beneficiaries up to Rs.5000. In continuation to this scheme, the Government introduces the Micro Unit Development and Refinance Agency, or MUDRA bank to 'fund the unfunded' as a statutory body to regulate and refinance Microfinance institutions under Pradhan Mantri MUDRA Yojana scheme (PMMY). The small and poor entrepreneurs are encouraged to opt for formal finance through various interventions like 'Shishu' (loan up to Rs. 50,000), 'Kishor' (loan from Rs. 50,000-5 lakh) and 'Tarun' (loan upto Rs. 5 lakhs to 10 lakh). The advantage of the same being collateral free, zero loan application fee, easy access and systematic guidelines. In 2015, to ease the access to financial services for the poor, the RBI granted licences to payment bank and small finance banks, the payment bank can though collect deposits up to Rs. 1 lakh on the other side the small banks have advantage of offering both the loans and the deposit of small businesses and farmers.

Yet, the increased presence of formal finance did not undermine the importance of informal sources. A large number of the poor relied on expensive informal sources. (Economic Survey Report, 2016-17). The credit market in India (which include both private & commercial banks and various other financial intermediaries) is highly complex and dynamic. Though, households in India's urban slums are more developed than in rural areas, still they are equally affected with changing regime of credit market. As per the latest NSSO 70th round data, it is observed that the urban households face more problems in availing loan and seems to get fewer loans from both the institutional and non-institutional credit agencies. The self-employed with low income level in urban areas generally runs micro-enterprises for which they need regular funds, 40% of urban self-employed have borrowed funds (Rajeev et al, 2017). In India, a larger part of urban population seems to be voluntarily or involuntarily excluded from the banking services (Census of India, 2011). In urban counterparts, this exclusion is mainly seen in the large pockets of poverty i.e. slums. In this context, this paper is an effort to expound the empirical suggestions on the determinants of urban household borrowing especially in slums of Mumbai. This paper can aid to broaden our understanding of the socio-economic dimensions to help the policy makers in formulating the better financial products and services aimed at financial inclusion.

The paper is organized into 4 sections. Section 2, presents the literature review into two parts: Formal finance, Informal finance and factors influencing the borrowing. In Section 3, the research methodology is presented. In Sections 4 and 5, we present the results and analysis. Finally, the conclusion in section 6 we provide the conclusion and recommendations.

Literature Review:

Globally, around half of the world's adult population (approx. 2.5 billion people) lack access to formal financial institutions. The barriers like contact cost, documentation requirements are affecting largely especially the women, poor, youth and rural household of the society (World Bank, 2014).

Financial inclusion is often defined by various authors (Hannig and Jansen 2010; Demirgüç-Kunt and Klapper 2013; Fungáčiová and Weill 2014; Allen et al. 2016), which mainly highlights the significance of "access" and "use" of financial services through inclusion of unbanked poor and disadvantaged people of the society under the banking system. The access to finance plays an important role in number of ways to poor like economic empowerment and income equality (Beck and Demirgüç-Kunt 2008; Hudon, 2009; Han and Melecky 2013). The household borrow to consume against their future income to fulfil their present demands (Del-Rio and Young 2005; Kirchler et al. 2008). The debt or saving can help them to address the unforeseen shocks such as any health problems, accidents etc. and increased investment towards the productive areas like education, durable goods, home (Collins et al., 2009). Further, the access to finance has direct relationship in development of microenterprises (Dupas and Robinson 2013).

Though, it is seen that the demand for credit and consumption varies during the lifetime. As per the life cycle theory, the consumption of an individual increases up to a certain age after which they used to spend out their asset (Modigliani, 1986; DeJuan and Seater 2007)

There exists a relationship between the growth of household borrowing and the banking system liberalization, where ease of access to borrow plays a critical role (Brown et al. 2005). Therefore, it is pertinent that we examine the efficacy of credit market in India, that we will discuss in the next part of this section.

Credit Market in India

In India there exist two types of financial market i.e. formal and informal. The formal sector includes institutions like commercial banks, regional rural banks (RRB), co-operative banks, government lending institution etc. While, the informal sector includes all the non-institutional credit agencies like moneylenders, traders, landlords, friends and relatives who extend loans.

There have been many developments so far in India to strengthen the banking system. In 1949 the banking regulation was enacted to make it compulsory to all banks to obtain the banking licence for opening any new branch from Reserve Bank of India (RBI), a central bank in India. The bank nationalization in 1969 has been another milestone in Indian history to meet the growing needs of the economy, wherein fourteen largest commercial banks were nationalized to equalize the per capita access to bank and ease the credit access for the poor. Later, seven more banks were nationalized in 1980. As a result, between 1969-1990, bank branches were opened in around 30,000 rural unbanked location with no preceding formal credit institutions (Datta & Sriram, 2012). Despite this rapid branch expansion, there were many problems in credit market like limits on amount of borrowing, need of approval from RBI for lending beyond a certain limit (credit authorization scheme), strict credit control measures, low competition etc. (RBI, 2008). Therefore, a wide number of regulatory reforms were introduced in 1990 to improve the efficiency of credit market based on the recommendations of Narasimham Committee. Micro-finance was one such programme which was introduced in 1992 to make the bank credit more accessible for poor, particularly the poor women. The Self-Help Group-Bank Linkage (SHG-BL) and Micro-Finance Institutions (MFIs) are the two-major model under the microfinance (RBI, 2008).

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There were many studies which highlights the significance of credit facility in financial inclusion on socio-economic development of poor and disadvantaged people of the society (Singh & Yadav, 2012; Jiaming, 2017). Based on the recommendations of the Khan Committee setup under RBI in 2004 the need of financial inclusion was highlighted in mid-term review of the RBI policy (2005-06) with the introduction of “no-frill” account. The no-frill account provides the opportunity to a poor individual to open bank account with zero balance which was later replaced with Basic Saving Bank Deposit Accounts (BSBDA) which has feature of overdraft facility. Besides this, number of banking products and services are introduced like Kisan Credit Cards (KCCs), General Credit Cards (GCCs), usage of regional language, simplified KYC (know your customer) norms, simplified branch authorization (RBI, 2007). There are various committees constituted by government and RBI timely like Rangarajan Committee (2008), Raghuram G. Rajan committee (2009), Nachiket Mor Committee (2014) which have a greater influence in financial inclusion.

In earlier programmes, only few areas were targeted therefore, considering a wider need of financial inclusion in India, a flag-ship programme called Pradhan Mantri Jan Dhan Yojana (PMJDY) was initiated in 2014. The main purpose of this scheme is to include a large proportion of excluded population under banking system. The 6 pillars of the programmes like universal access to banking facilities, financial literacy, basic banking accounts with an overdraft facility of Rs. 5000 after six months, creation of Credit Guarantee Fund, unorganized sector Pension schemes like Swavlamban and microinsurance scheme are envisaged to be implemented under phase manner (PMJDY website). The opening of 1.8 crores accounts under this programme in a week has also been recognized by Guinness World Records. Another important feature of this scheme is that the beneficiaries can get direct subsidiaries in their bank account by linking it with the biometric details. This bank linked benefit transfers have an added advantage of addressing the issue of leakage and corruption. The current approach of the government is to promote “JAM trinity”- Jan Dhan Aadhar Mobile for better financial inclusion of poor (Economic Survey of India, 2016-17).

The major constraint affecting formal finance is the need of collateral (Yitayal, 2004; Kihimbo et al. 2012). Though this requirement is being addressed by the Government with the introduction of Micro Unit Development and Refinance Agency (Mudra) scheme which is also known as ‘funding the unfunded’. Under this scheme MUDRA bank formed will refinance the Micro-Finance Institutions (MFI) through Pradhan Mantri Mudra Yojana. The programme will help the small micro-entrepreneurs to get loan upto INR 10 lakhs under three main categories being named as ‘Shishu’ (loan upto INR 50,000), ‘Kishor’ (loan between INR 50,000 and up to INR 5 lakh) and ‘Tarun’ (loan between INR 5 lakh to INR 10 lakh) to signify the stage of growth or development (Venkatesh, 2015; Roy, 2016).

Though, there seems to be a positive relationship between financial inclusion and growth of banking system, more growth of banking system leads to more of financial inclusion (Raman, 2012; Kunt et.al, 2015). Still these interventions seem to be insufficient to satisfy the needs of poor. Poor people in developing countries generally tend to borrow from informal channels like money lenders, family and friends (Banerjee and Duflo, 2007; Kunt and Klapper 2013; Campero and Kaiser, 2013; Chen and Zen, 2017). Informal credit though involves the higher cost and financial risk (Beck and De la Torre, 2007). In India, it is seen that the conventional moneylender can charge annual interest rate between 12-150 percent, while the rate charged by the formal institutions can merely range from 6 to 20 percent on larger loans (RBI, 2011).

Though, the size of credit, interest rate, duration of loan varies from formal and informal sector, the timely repayment of loan depends largely on the terms and utilization of the credit

(Bhattacharjee & Gupta, 2014). Therefore, it becomes essential that we study the socio-economic factors affecting the borrowing behaviour of the poor households.

Factors affecting the Borrowing Behaviour

As the formal and informal finance can co-exist together in the market (Das-Gupta et al., 1989; Conning, 2001; Banerjee and Duflo, 2007; Giné, 2011). Therefore, it is important that we study on the factors influencing directly or indirectly the choice of borrowing by the people. Some of the Socio-economic factors influencing the demand for credit are mentioned in the table 1 below:

Table 1: Literature on socio-economic determinants of borrowing

Variables	Literature
Income	(Crook, 2001; Koomson et al., 2014; Pastrapa & Apostolopoulos, 2014)
Ownership of Asset (like house etc.)	(Crook, 2001; Tsai 2002; Cousin 2007; Nguyen, 2007; Thanh et al., 2015)
Family size	(Crook, 2001)
Employment status	(Crook, 2001)
Age	(Dutta and Magableh, 2006; Mpuga 2010; Pastrapa & Apostolopoulos, 2014)
Head of household	(Dutta and Magableh, 2006)
Religious beliefs or culture	(Dutta and Magableh, 2006)
Saving	(Dutta and Magableh, 2006; Tang et al. 2010)
Last loan amount	(Dutta and Magableh, 2006)
Education	(Nguyen, 2007)
Distance from the bank	(Nguyen, 2007; Nwaru, 2011)
Gender	(Mckernan, 2005; Steiner et al., 2009; Nwaru, 2011.)
Financial Literacy (Awareness towards the credit sources)	(Claessens, 2006; Campero & Kaiser, 2013)

(Source: Self Author)

While, the amount of loan taken being influenced by many factors, but the rationale behind the demand for credit is best explained by the life-cycle hypothesis (Modigliani, 1996), where it is stated that if income grows at a constant rate, then both aggregate private saving and aggregate private wealth will tend to grow at the same rate, the individual consumption over the life-cycle

follows the trend that people usually borrow when young, saving when in middle age, and spending down their assets in later phase of the life. In line with this theory, numerous studies provide the empirical bases to highlight the relationship between age and demand for the credit, wherein it is explained that with increase in age the demand for loan progresses but up to certain age after which the demand for loan decreases (Mpuga, 2010; Pastrapa and Apostolopoulos 2014). The individual aims at utility maximisation from their entire life-cycle consumption and consumption must be continuous even if income is discontinuous (Baranzini, 2005). So, the individual with lower saving demand for higher loan amount (Casolaro et al. 2005).

Despite many development, formal finance is still insufficient for a larger mass (Hoda and Terway, 2015; Allen et al. 2016). It is further seen that the urban households apparently face more problems in availing credit and appear to get lesser loans both from formal and informal sources (Rajeev & Vani, 2017). There were many empirical studies which tried to study the determinants of demand for credit (Zeller, 1994; Crook, 2001; Nwaru, 2011; Pastrapa and Apostolopoulos, 2014). These studies provided us various variables based on the contextual and geographical variations. As the socio-economic conditions of households vary from region to region, therefore, more such studies are needed to understand the demand for credit specific to a region.

Thus, based on the literature review above, the study strives to achieve the region-specific information on the determinants of borrowing in urban context. The methodology of this study is discussed in the next section.

Research Methodology

Data and Sample

The study involves a wide survey of 448 urban households in slum. The response rate was found to be 91.4%. The study was conducted between February 2017 to May 2017. The respondents are selected in a way that they should be above of 18 years age and were interviewed with the structured questionnaire. In Mumbai six cluster were selected using multistage cluster sampling (Malad, Kandivali, Chembur, Vikhroli-Bhandup, Andheri and Matunga).

Empirical Model

There were many studies in past which carried out the analysis on demand for finance through the multinomial models (Dutta & Magableh, 2010; Wydick et al, 2011; Pastrapa & Apostolopoulos, 2014).

In this study, we examined the factors influencing the amount of household's loans of varying amount through Heckman two-stage procedure (Heckman, 1979). In the first stage, probit model is employed to study the probability of getting a loan. The probit model basically provide the probability of choosing an alternative. The equation depicting the relationship of the dependent variable with the explanatory variables in probit model is as follow:

$$(PL) = a YL' + eL \dots \dots \dots (1)$$

In our study, the dependent variable for the stage 1 is a dummy variable depicting whether the respondent availed the loan. While in the equation (1), (PL) defines the probability of a household having a loan and YL as set of the explanatory variables (for details refer table 2) as mentioned in the equation(1). The Heckman procedure is best fitted in our study as it analyse the amount of loan accounting the sample bias. The selection bias control factor is called lambda (?) which is equivalent to the Inverse Mill's Ratio. Following the empirical equation (1), the expanded probit equation in our case is expressed is as below:

$$(PL) = a(0) + a(1) \text{ LOGAge} + a(2) \text{ LOGAge}(\text{square}) + a(3) \text{ LOGHouse_Mem} + a(4) \text{ Employed} + a(5) \text{ LOG_Income} + a(6) \text{ HomeOwn} + a(7) \text{ LOG_YearsHouse} + a(8) \text{ EDU} + a(9) \text{ GENDER} + a(10) \text{ LOG_DIST} + eL \dots\dots\dots (2)$$

Table 2: Details of the independent variables used in the empirical analysis

Variable	Description of the Variable (Code)
LogAge	The natural logarithm of respondent’s age
LogAge(Square)	The square of the natural logarithm of respondent’s age
LOGHouse_Mem	The natural logarithm of household members number
Employed	A dummy variable with value 1 if the respondent is employed and zero otherwise (unemployed)
Log_Income	The natural logarithm of family’s total monthly income measured in Rs.
HomeOwn	A dummy variable with value 1 if the dwelling has been owned and Zero in rest of the cases (Rented).
LOG_YearsHouse	A natural logarithm of respondent’s number of years where the household is presently residing
EDU	A dummy variable with value 1 if the respondent has an education above 5th class and Zero otherwise (illiterate)
LOG_Distance	Distance of nearest bank from the respondent house
GENDER	A dummy variable with value 1 if the respondent is male and Zero for female
Loan	A dummy variable with value 1 if the respondent has availed loan in past and Zero otherwise (Not availed)
logLoan_Amt	A natural logarithm of respondent’s last loan amount taken
Mills	The inverse Mill’s ratio

(Source: Self Author)

Though, the substitute to probit model is the logit model. These models vary only in the S-shaped curve which is used to constrain probability to the (0, 1) interval.

While, in the second stage of the Heckman procedure, we tried to find out the factors influencing the amount of household’s loans, which is expressed as in equation below:

$$A_i = bXL + eL \dots\dots\dots (3)$$

The equation (3) can be further expanded with our explanatory variables as mentioned in the figure as below:

$$\text{Log_LoanAmt} = b(0) + b(1) \text{ LOGAge} + b(2) \text{ LOGAge}(\text{square}) + b(3) \text{ LOG_House_Mem} + b(4) \text{ Employed} + b(5) \text{ LOG_Income} + b(6) \text{ HomeOwn} + b(7) \text{ LOG_YearsHouse} + b(8) \text{ EDU} + b(9) \text{ GENDER} + b(10) \text{ LOG_DIST} + \text{MILLS}_i + eL \dots\dots\dots (4)$$

The lambda (?) or the Inverse Mill's Ratio (MILLSi) as mentioned in the equation (4) above is already being calculated in the probit model (as mentioned in the equation 2) through the OLS regression(Dougherty 2007; Guo and Fraser 2010; Pastrapa & Apostolopoulos, 2015).

Results and Discussions

In this section, the results of the Heckman two stage procedure (Heckit Model) will be discussed in two parts i.e. Determinants of demand for credit and Determinants of factors influencing the amount of loan.

I. Determinants of demand for credit (Stage 1: Binary Probit estimation)

As shown in the table 3, out of 448 sample only 27 % households have availed loan in past.

Table 3: Frequency table showing loan availed

Loan (Availed Loan)	Frequency(Percent)
No (0)	327 (72%)
Yes (1)	121 (27%)
Total	448 (100%)

(Source: Author's estimation)

The result of binary probit regression as obtained through statistically analysis of the equation 1, is summarized in Table 4. The empirical results were found to be in line with the previous studies. The marginal effects as depicting in the table represents the change in probability for a household receiving loan when each explanatory variable is increased by one unit (Christofides et al, 1997; Arulampalam et al, 2000;).

Table 4: Probit estimations (PL) for borrowing households (n = 448)

Variables	Coefficients	Marginal effect (*)	P> z
Constant	-7.491(-4.55)		0.00
LogAge	0.192 (2.26)	0.855	0.02
LogAge2	-0.002 (-2.06)	0.133	0.04
Employed	-0.173 (-0.64)	-0.622	0.47
Home_Owner	-0.121 (-0.21)	-0.053	0.76
LogHouse_Inc	-0.504 (1.89)	0.137	0.09
YearsHouse	0.553 (9.82)	0.151	0.00
Education	0.034(0.17)	0.023	0.83
logDistBank	-.086 (-1.05)	-0.023	0.21
Gender	0.480 (2.49)	0.122	0.02
Family_Size	0.213 (2.93)	0.040	0.05
Log Likelihood	-151.09718		
Pseudo R2	0.4218		

(*) dy/dx is for discrete change of dummy variable from 0 to 1

Z statistics are presented in the parentheses (5 % significance level)

(Source: Author's estimation)

The results of the probit equation indicate that the probability of receiving loan is positively correlated with age (0.192) as when age progresses the probability of taking loan increases. On the other hand, the probability of getting loan is negatively correlated with the age square. When we see the marginal effect, it is seen that with 1-year increase in the age the probability of getting loan is increased by 0.855 times but upto an age after which it decreases by 0.133 times (marginal effect of AgeSq). This can also be supported by the life-cycle hypothesis and other studies (Zeller, 1994; Chen and Chivakul 2008; Pastrapa & Apostolopoulos, 2015), which states that the respondent tends to borrow more with age but upto a certain age after which they prefer to spend their accumulated assets or savings.

The probability of getting loan decreases with increase in household income, as the low-income households are unable to fulfil their needs and they borrow frequently (Kamleitner and Kirchler 2007; Swain 2007; Petrides et al. 2009; Pastrapa & Apostolopoulos, 2015). In our study, the probability of getting loan decreases by 0.137 times with increase in one unit of income. In Contrast, to one such study (Chen and Chiivakul, 2008) it was mentioned that an individual can demand for more credit with increases in income due to high expectations for future income in return.

The bigger family size has more consumptions; therefore, they address their requirements generally through borrowing (Swain 2007; Bending et al, 2009; Togba 2012; Fidrmuc et al. 2013), this is also evident in our study when family size increase the probability of getting loan increases.

The number of years for which the respondent resides in the same house seems to be positively affecting the demand for credit. As the social capital and network build with time can help them in getting the loan (Tang et al., 2010). However, this being contradicted in some studies where it was reported that it is negatively related to demand for credit (Crook ,1996;Mpuga;2010).

Further, the gender does affect the demand for credit positively. The probability of getting loan is more with the male rather than the female headed household, which is also being supported in some past studies (Steiner et al., 2009; Nwaru, 2011).

The variables like employment status, education, distance of bank and home ownership are found to be insignificant at 5 % significance level.

II. Determinants influencing the amount of credit (Stage 2: OLS Regression)

The result of the OLS regression is summarized in table 4. The Adj. R-squared of the estimate is found to be 56.25 %.

The study confirms that the demand for loan amount increases with the age of the respondent (7.652 times); some previous empirical surveys also indicate the similar outcomes (Fabbri and Padula, 2004; Pastrapa & Apostolopoulos, 2015).

The results display a positive correlation between the loan amount and household income, with increase in 1 % of household income could lead to 0.510 times increase in loan amount. Similar results were found in various studies (Jappelli and Pistaferri 2007; Pastrapa & Apostolopoulos, 2015).

While, the household size, and gender (or being male) have positive relationship with the loan amount (Flitschner and Carter, 2008; Steiner et al., 2009; Nwaru, 2011). The coefficient of Inverse Mill's Ratio as mentioned in table 4 for selection correction models is positive and insignificant indicating that no sample selection biases exist in our study.

While the variables like employment status, home ownership, distance from bank and education

Table 4: Estimated selection correction models for the loan amount of household (n =121)

Variables	Coefficients	P> t
Constant	-0.410 (-0.12)	0.00
LogAge	7.652 (0.39)	0.03
LogAge2	-2.982 (-0.31)	0.04
Employed	0.138 (0.61)	0.03
Home_Owner	0.049 (0.17)	0.86
LogHouse_Inc	0.510 (1.96)	0.05
YearsHouse	0.148 (0.28)	0.78
Education	-0.034 (-0.23)	0.81
logDistBank	-0.399 (2.87)	0.56
Gender	0.404 (2.5)	0.01
logFamily_Size	0.524 (1.46)	0.04
invMills	-0.836 (-2.41)	0.251
R-squared	0.602	
Adj. R-squared	0.5625	

t statistics are presented in the parentheses (5 % significance level)

(Source: Author's estimation)

are found to be insignificant in affecting the loan amount.

Conclusions

The socio-economic determinants of the borrower have been examined by two staged Heckman procedure (Heckit method). In the first stage, the probability of getting loan is studied through binary probit estimation. While, in the second stage the OLS regression was performed to study the correlation of factors with the amount of loan being taken. Those with high income, male, larger family size and have spent a longer time in same dwelling have more probability of getting loan. The factors like employment status, education, distance from bank and homeownership are found to be insignificant from the estimates value. The results from stage-II Heckman process seems to be in cognizance with the stage-I results highlighting the significant role of age, household income, family size and being male except the number of years spent in the same dwelling. Though, the estimations are contradicting the views of other studies, where predominant factors like employment status, distance from nearby bank and home ownership seem to increase the probability of taking loan (Nguyen, 2007; Pastrapa & Apostolopoulos, 2015). Perhaps, one of the major reason for such outcome being our geographical and demographic choice of selection in the study. In urban areas like Mumbai city, access to

finance is not a major constraint. Also, having the home-ownership can help them to serve it as “collateral” for obtaining formal loan, the result of our study, thus, possibly indicate the inclination of people towards the easy collateral free informal loans instead of formal loan.

Thus, through this study we venture to discuss some possible implications. The finding of the study could help the policy makers to make the strategies for better utilization of the formal finance by slum dwellers. The urban slum dwellers have better access to finance; and exclusion from the formal banking system is a major concern. Despite government great initiatives like Mudra Bank where the problem of collateral has been offset, people seem to be reluctant in using the formal credit. The financial awareness or literacy can play a major role in acquainting people about new and innovative financial products and schemes. The public-private partnership of financial institutions needs to be explored more for providing better credit facilities in slums.

The main concern is the fact that no single strategy is enough to support the proper utilization of credit by poor residing in urban slum dwellings. As, this study is restricted to one city i.e. Mumbai, therefore the outcomes of the study should be considered only as pointers in determining the factors influencing the borrowing behaviour. For generalization of the results, it is important if we check such relationships in the other urban parts of the country.

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