MIGRATION
LETTERS

Credit Constraints and Rural Migration: Evidence from Six Villages in Uttar Pradesh | Ruchi Singh [±]

Abstract

Rural economies in developing countries are often characterized by credit constraints. Although few attempts have been made to understand the trends and patterns of male out-migration from Uttar Pradesh (UP), there is dearth of literature on the linkage between credit accessibility and male migration in rural Uttar Pradesh. The present study tries to fill this gap. The objective of this study is to assess the role of credit accessibility in determining rural male migration. A primary survey of 370 households was conducted in six villages of Jaunpur district in Uttar Pradesh. Simple statistical tools and a binary logistic regression model were used for analyzing the data. The result of the empirical analysis shows that various sources of credit and accessibility to them play a very important role in male migration in rural Uttar Pradesh. The study also found that the relationship between credit constraints and migration varies across various social groups in UP.

Keywords: credit constraints; out-migration; males; rural; households; poor; informal.

Introduction

Financial constraints are one of the major characteristics of developing economies (Berg 2013; Mahendra, 2014). Suboptimal choices made by households are often an outcome of credit constraints (Rossi and Trucchi, 2012). While some attempts have been made to understand credit constraints in developing countries, attempts to understand the role of credit constraints in determining migration decisions in rural Uttar Pradesh are negligible despite the fact that rural Uttar Pradesh accounts for a very large share of the male exodus in the country. Thus, the major objective of the paper is to analyze the role of credit accessibility in migration decisions.

Migration is the most frequently adopted strategy by rural households in developing countries to cope with risks and uncertainties (Stark and Bloom, 1985; Taylor, 1999; de Haas, 2010) and insecurities (Cohen and Sirkeci, 2011). Literature also highlights that non-farm activities such as migration are a coping strategy rather than an income maximization strategy (Kerr 2005; Orr et al. 2009; Michaelowa et al. 2010). There is a simple underlying logic for this: farmers in developing and poor countries have very small land holdings and limited liquid assets and lack easy access to credit. These financial constraints restrict migration from very poor households. Lack of collateral, weak credit

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contract enforcement, and underdevelopment of insurance services discourage formal sources from serving this market segment (Ghosh et al., 2000).

Migration is not new a phenomenon in rural Uttar Pradesh, but rather an age-old phenomenon. Poor infrastructure, a stagnant agricultural economy, fragmentation of land due to huge population pressure, lack of credit sources, poverty, lack of non-farm opportunities, etc., are inherent characteristics of the state. A large proportion of the population resides in rural areas with agriculture as the primary occupation. A few studies have been done to analyze the characteristics, patterns and determinants of male out-migration from Uttar Pradesh (Khan, 1986; Singh, 2014), but there is dearth of literature on migration and credit constraints in the context of Uttar Pradesh. This article makes an attempt to fill this void and tries to throw light on the role played by credit constraints in fueling male out-migration from rural UP. The study makes a comparative analysis of the sources and accessibility to credit for both migrant and non-migrant households[1]. The first part of the article contains the introduction, and discusses the objectives, data and methodology adopted, and justification and limitations of the study. The following part discusses the exhaustive literature on credit constraints and migration. The third part presents the results and discussion based on a case study of six sample villages in Jaunpur district. Final part concludes and offers some policy suggestions. To reiterate, this article aimed i) to comparatively analyze accessibility to credit and the sources of credit of migrant and non-migrants households and ii) to assess the role of credit accessibility in determining rural male migration.

Data and Methodology

An extensive literature review was done to explore the existing work on migration and credit accessibility. To meet the objectives of the study and to support theoretical findings and understand role of credit accessibility in migration decisions, a primary survey was carried out covering 370 households in six villages of Jaunpur district, namely Chitkon, Jarasi, Rampur Soiri, Asbaranpur, Manecha and Yonouspur in three blocks -- Dhobi, Jalalpur and Shahganj. The simple random sampling technique was used for selection of the sample villages and households. Fifteen percent of the total number of households was selected for the survey in each village. As villages in UP are segmented based on caste, an attempt has been made to include households from all castes in order to get a better understanding of credit accessibility and migration. A structured questionnaire along with focused group discussions, in-depth interviews, and the key informant method were used for collecting data regarding credit accessibility and migration. The collected data were tabulated and analyzed using simple statistical techniques. Wealth scores for households

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[1] A migrant household refers to a household with at least one male out-migrant; a non-migrant household is one that does not have a male out-migrant.

have been calculated on 20 items/assets using principal component analysis. A logistic regression model was used to analyze the role of credit constraints as a determinant of migration.

Justification of the Study

UP is one of the states with the highest number of male out-migrants in India (NSSO). Jaunpur was selected for study as it has second highest number of male out-migrants among all 75 districts of UP after Azamgarh (NSSO). As mentioned in the beginning of the paper studies on relationship between credit constraints and migration in rural Uttar Pradesh are negligible. While a few studies have been done on determinants, characteristics and patterns of male out-migration from rural UP, literature on the relationship between credit constraints and male out-migration in rural UP has attracted little attention.

Limitations and future direction

As the study focuses only on linkages between credit constraints and migration from rural Uttar Pradesh, it has regional limitations. Moreover, the study is confined to male migration, as female usually migrate only as a result of marriage. The study focuses only on credit constraints as the determinant of migration decisions. However, a more interesting study and wider analysis would be possible by investigating the impact of remittances via migration on the credit accessibility of households as well.

Review of Literature

This section discusses existing studies on the role of credit constraints and accessibility in migration decisions. Fink et al (2014) found that off-farm labour is not the result of optimal labour allocation, but instead, is the result of households' inability to meet short-term needs with savings or credit. Rossi and Serena (2014) found that credit constraints facilitate women's participation in labour, whereas credit constraints have no significant effect on male labour supply. Tran et al (2014) found that credit constraints have a negative impact on per capita household consumption expenditure and that informal credit can act as a substitute to mitigate the negative influence of formal credit constraints. Abramitzky et al (2013) found that wealth discourages migration. Angelucci (2012) in his study found that credit constraints often restrict migration. Delpierre (2012) showed that migration is indeed an investment that is subject to cash constraints. Dromel et al (2009) found that credit market imperfections increase the persistence of unemployment. Stampini and Davis (2009) found that nonagricultural labor income relaxes credit constraints to farming. Credit constraints play very crucial role in self-selection in migration (Chiquiar and Hanson, 2005; Borjas, 1987). Temporary migration and other income smoothening strategies are adopted as a means of alleviating credit market imperfections by rural households in developing countries (Stark & Levhari,

1982; Stark & Bloom 1985; Morduch, 1995; Besley, 1995; Carroll, 2001; Rapoport, 2002; Mesnard, 2004). Many studies have found that credit constraints may generate an inverse U-shaped relationship between income and migration (Faini and Venturini 1993; 1994; Massey, 1988; Hatton and Williamson, 1998; 2002). Halliday (2006) mentioned migration as ex-post strategy and found that wealthier households have less credit constraints and are thus better able to finance migration.

Results and Discussions: Findings from Field

This section deals with the analysis and discussion of findings from the field. The next section comparatively analyzes accessibility to and sources of credit between migrant and non-migrant households. The following section empirically analyzes the same.

Credit Constraints and Rural Male Migration: Comparative analysis of migrants and non-migrant households

This section deals with a comparative analysis of credit sources and accessibility to credit in sample villages of Jaunpur district as per their migration status. The comparative analysis of migrant and non-migrant households provides insights on the role played by credit constraints in the migration decision. It can be seen that 72.4 percent of sample households in rural UP reported that their household income is insufficient. In non-migrant households, the number of households reporting insufficient income is high in comparison to the migrant groups. Migration via remittances diversifies resources and could be one of the reasons for the comparatively low number of households reporting insufficient income in the sample villages. Moreover, the tabulation is done on the post-migration scenario, and the income sufficiency situation for migrant households might be different prior to migration. The percentage of households without easy access to credit is high among the non-migrant households. Intra-group comparison of migrant and non-migrant households shows that the share of households without easy access to credit is higher.

It can be seen that, for both migrant and non-migrant households, the major source of credit is informal and that the majority of households do not have easy access to credit.

Table 2 shows differences in accessibility to credit across various social groups. Socially upward caste groups have easy access to credit and also get credit from formal sources whereas the majority of the households in the SC and OBC group do not have easy access to credit and rely mainly on informal sources of credit.

Table 1. Source and Access to Credit of Sample Households according to their Migration Status

Variable	Migrants	Non-Migrants	Total
HH Income sufficient			
Yes	83(33.6)	19(15.5)	102(27.6)
No	164(66.4)	104(84.6)	268(72.4)
Easy access to credit			
Yes	121(48.9)	42(34.2)	163(44.1)
No	126(51.1)	81(65.8)	207(55.9)
Prefer formal or informal			
Formal	105(42.5)	23(18.7)	128(34.6)
Informal	142(57.5)	100(81.3)	242(65.4)
Usually get credit from			
Formal	100(40.5)	23(18.7)	123(33.2)
Informal	147(59.5)	100(81.3)	247(66.8)
Types of credit agencies			
Formal			
Cooperative societies	0(0.00)	0(0.00)	0(0.00)
Commercial banks	99(40.1)	23(18.7)	122(33.0)
Others	0(0.00)	0(0.00)	0(0.00)
Informal			
Landlord	0(0.00)	0(0.00)	0(0.00)
Agricultural money lender	67(27.1)	60(48.8)	127(34.3)
Professional money lenders	1(1.0)	1(0.8)	2(1.0)
Traders	0(0.0)	0(0.0)	119(32.2)
Relatives/friends	80(32.4)	39(31.7)	117(35.1)
Do you have Crop insurance?			
Yes	19(7.7)	6(6.2)	25(6.8)
No	208(84.2)	91(93.8)	299(80.8)
No Land	20(8.1)	26(21.1)	46(12.4)
Total	247	123	370

Source: Field Survey 2016. Figures in parenthesis represent percent to total

It can be seen that for both migrant and non-migrant households, informal sources are the major source of credit. While the major problem faced by sample households in accessing credit from formal sources is time-consuming documentation, the exorbitant rates of interest charged by the moneylenders are the main hurdle when it comes to informal sources of credit. Moreover, sometimes getting credit in hour of need may not be easy because of non-repayment of previous debts. Another major problem associated with informal sources of credit is that, on non-repayment of their debts, members of poor households have to work in the farms of the moneylenders during the peak season and they do not receive any wages for this.

Table 2. Source and Access to Credit of Sample Households according to their Migration Status

Variable	SC		OBC		Upward Caste	
	Migrants	Non-Migrants	Migrants	Non-Migrants	Migrants	Non-Migrants
HH Income sufficient						
Yes	3(6.5)	4(7.1)	17(16.5)	0(0.0)	63(64.3)	15(42.9)
No	43(93.5)	52(92.9)	86(83.5)	32(100.0)	35(35.7)	20(57.1)
Easy access to credit						
Yes	4(8.7)	12(21.4)	30(29.1)	6(18.8)	87(88.8)	24(68.6)
No	42(91.3)	44(78.6)	73(70.9)	26(81.3)	11(11.2)	11(31.4)
Usually get credit from						
Formal	4(8.7)	6(10.7)	17(16.5)	0(0.00)	79(80.6)	17(48.6)
Informal	42(91.3)	50(89.3)	86(83.5)	32(100.0)	19(19.4)	18(51.4)
Total	46	56	103	32	98	35

Source: Field Survey 2016. Figures in parenthesis represent percent to total

Empirical Analysis: Logistic Regression

This section empirically analyzes the role of credit constraints in determining migration decisions.

$P(Y=1) = \beta_0 + \beta_1$ (Primary source of income) $+ \beta_2$ (Wealth score) $+ \beta_3$(Social group) $+ \beta_4$ (Income sufficiency) $+ \beta_5$ (Crop insurance) $+ \beta_6$ (Source of credit) $+ \beta_7$ (Easy access to credit) $+ \beta_8$(Total monthly household income with remittances) $+ u_i$... *Equation –1*

$P (Y=1) = \beta_0 + \beta_1$ (Primary source of income) $+ \beta_2$ (Wealth score) $+ \beta_3$(Social group) $+ \beta_4$ (Income sufficiency) $+ \beta_5$ (Crop insurance) $+ \beta_6$ (Source of credit) $+ \beta_7$ (Easy access to credit) $+ \beta_8$ (Total monthly household income without remittances) $+ u_i$... *Equation –II*

Where Y is the dependent variable and signifies the decision as to whether to out-migrate or not by rural males in Jaunpur district. It has binary values, whether male out-migration takes place, i.e., to out-migrate=1 and no male out-migration, i.e., not to out-migrate=0. The set of independent or explanatory variables are the primary source of income, wealth score, social group, income sufficiency, crop insurance, source of credit, easy access to credit, and total monthly household income with and without remittances, and u_i *is the* random or stochastic error term.

The findings of the logistic regression model show that covariates such as social group OBC, easy accessibility to credit, and total monthly income with and without remittances is highly significant in both models. Socially upward caste group and cultivation as the primary source of income is significant in model I and wealth score is significant in model II. Logit results show that households, which have easy access to credit, have less chances of male out-migration in comparison to households that do not have easy access to credit. The OBC

social group is highly significant in both models. Total monthly income with and without remittances is highly significant. The source of credit is not significant. Model II shows that as wealth increases migration increases, there is positive relationship between migration and the wealth score.

Table: Logistic Regression Model: Migration as risk and income diversification strategy

Dependent Variable: Male Out-Migration=1, No Male Out-Migration=0		
Statistical Method: Logit		
Model	I	II
No. of Observations	370	370
Log Likelihood	-158.00111	-197.3610
Prob (Chi²)	0.0000	0.0000
Pseudo R²	0.3285	0.1612
Explanatory Variables	Coefficients (p value)	Coefficients (p value)
Primary source of income		
Others®		
Cultivation	-.6496(0.090)*	-.4421(0.178)
Wealth score²	-.1466(0.201)	.2437(0.007)***
Social Group		
SC®		
OBC	.8950(0.008)***	1.3845(0.000)***
Upward caste	.9716(0.037)**	.3543(0.376)
Income sufficient		
No®		
Yes	-.8845(0.144)	-.1949(0.683)
Crop Insurance		
No®		
Yes	0.8910(0.311)	.0616(0.912)
Source of credit		
Formal®		
Informal	0.6705(0.199)	-.5121(0.212)
Easy access to credit		
No®		
Yes	-2.5388(0.000) ***	-1.0803(0.006)***
Total monthly income (With-Without remittances)	0.00018(0.000)***	.0000(0.002)***
® Reference category, ***p<0.01, **p<0.05, *p<0.1 level of significance		

Source: Field Survey 2016

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² Wealth Scores have been computed using 20 Households Assets/Items using principal component analysis.

Concluding remarks and suggestions

The results and analysis show that access to credit is a significant factor in migration decisions. Despite the fact that there are huge wage differences associated with migration, credit constraints prevent the poorest households, especially the SC households, from reaping the benefits of migration. The poorest households have neither collateral nor savings to finance out-migration, and for the same reason, are often denied formal sources of credit. Comparatively better-off households, such as the OBC households in our study, opt for migration as a strategy to diversify income and risks associated with agriculture and imperfections in credit markets. Richer sections of society have easy access to credit and also opt for formal sources. Therefore, their migration decisions are unaffected by credit accessibility. Although informal sources of credit are comparatively more easily accessible than formal sources for poor households, the exorbitant rates of interest charged by moneylenders lead the poor households to often adopt migration as a risk and income diversification strategy. Although there are various ongoing schemes on financial inclusion for rural households, the latter may lack awareness about them. Moreover, these schemes lack proper implementation and are often out of the reach of the needy households. Due to these reasons, poor households opt for informal sources and become vulnerable to various kinds of exploitation by local moneylenders. Thus, more financial inclusion should be encouraged and facilitated in rural households and attempts should be made to ensure that poor rural households have easy access to credit in the hour of need.

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Appendix: Definition and Descriptive statistics of used Variables

Variable name & definition	No of observations	Mean	Std dev.	Min	Max
d_outmigrate: dummy (if outmigrated=1,if not outmigrated =0)	370	.6676	.4717	0	1
Primary source of income					
Others®					
Cultivation	370	.2702	.4447	0	1
Wealth score	370	-0.0000	2.6302	-3.583601	5.208136
Social Group					
SC®					
OBC	370	.3648	.4820	0	1
Upward caste	370	.3594	.4804	0	1
Income sufficiency					
No®					
Yes	370	.2757	.4475	0	1
Crop Insurance					
No®					
Yes	370	.0676	.2513	0	1
Source of credit					
Formal®					
Informal	370	.6676	.4717	0	1
Easy access to credit					
No®					
Yes	370	.4405	.4971		
Total monthly household income with remittances	370	28537.84	29148.88	1000	100000
Total monthly household income without remittances	370	22215.27	25578	0	100000
d_Dummy Variables and ® Reference Category Notes:for dummy variable the means give the number of positive values Std dev, Standard deviation					