Factors Associated to Rural Households' Demand for Financial Services in Lombok, Indonesia

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Abstract

This paper analyses factors associated with rural households' demand for financial services in Lombok, using a survey data of 180 households randomly selected from 6 villages and 3 districts in Lombok, Indonesia. The data collection was carried out from January-June 2007. Factor associations were tested using Chi-square, Correlation and/or t-test, whichever is appropriate, depending on data measurement.

It was found that the households' demand for formal savings was significantly associated with the households' socio-economic and banking characteristics reflecting their saving capacity (income, income sufficiency and number of earners) and preference (financial institution type, interest rate and total saving amount).

The households' demand for formal credits was also associated with their socio-economic characteristics and banking characteristics, reflecting their credit needs and preferences toward credit sources along the financial institutions' preferences toward borrowers' capacity to repay and risks. The faktors included: government employee possession, tertiary education possession, education, income, land assets, banking confidence, financial institution type, interest rate, credit maturity (terms), and borrower transaction costs.

Key words: factors associated to rural households demand for financial services, Lombok Indonesia

Abstrak

Paper ini menganalisa faktor-faktor yang berasosiasi dengan permintaan ruamah tangga pedesaan terhadap layanan jasa keuangan di Lombok, menggunakan data hasil survai terhadap 180 rumah tangga yang dipilih secara acak dari 6 desa dan 3 kabupaten di Lombok yang dilakukan pada bulan Januari-Juni tahun 2007. Keberartian asosiasi antar faktor-faktor yang diteliti diuji menggunakan Chi-square, Korelasi atau t-test sesuai dengan jenis datanya.

Ditemukan bahwa permintaan rumah tangga akan layanan tabungan berasosiasi dengan karakteristik sosial ekonomi dan perilaku menabung-meminjam rumah tangga pendapatan, dan jumlah pencari nafkah dalam keluarga) dan preferensi menabung mereka (jenis lembaga keuangan, tingkat bunga dan jumlah tabungan).

Permintaan rumah tangga akan layanan jasa kredit juga berasosiasi dengan karakteristik sosial ekonomi dan perilaku menabung-meminjam rumah tangga yang

menggambarkan kebutuhan kredit mereka dan preferensi mereka pada sumber-sumber layanan kredit bersama dengan preferensi lembaga keuangan terhadap kapasitas pengembalian kredit dan resiko kredit rumah tangga. Faktor-faktor tersebut adalah: kepemilikan anggota rumah tangga pegawai negeri, kepemilikan anggota rumah tangga berpendidikan perguruan tinggi, tingkat pendidikan kepala rumah tangga, pendapatan, aset tanah, rasa percaya diri kepala rumah tangga berurusan dengan bank, jenis lembaga keuangan, tingkat bunga, jangka waktu kredit dan biaya transaksi bagi peminjam.

Kata kunci: faktor-faktor berasosiasi dengan permintaan rumah tangga pedesaan pada layanan jasa keuangan, Lombok Indonesia.

Introduction

This paper analyses factors associated with rural households' demand for financial services in Lombok, within the context of improved rural financial market incorporating larger number of rural financial institutions resulting from liberalisation.

The data used are mainly based on a survey of 180 households using a structured questionnaire. The household sample was randomly selected from six villages, representing six sub-districts, and three districts in Lombok. The data collection was carried out simultaneously with the RFI survey (January-June 2007).

The association between the dependent and the independent variables is tested in pair using Chi-square, Correlation and/or t-test, whichever is appropriate, depending on data measurement. Chi-square is to test association between categorical variables, correlation is to test association between continous variables, and t-test is to test association (mean difference) between categorical and continous variables.

The chapter begins with introduction section, followed by an outlook of the households' socio-economic characteristics in Section 2. The households' demand for financial services is disducced in Section 3. Factors associated with the households' demand for financial services are discussed in Section 4. Section 5 concludes discussions in the preceeding sections.

Socio-Economic Characteristics of the Rural Households

The Socio-Economic characteristics of the households are summarized in Table 1. It shows that the majority of the households are Moslem, male headed, small in size, having land assets, having two earners, and living in a relatively close distance to the nearest office of financial institutions. Agriculture is the principal

occupation[1] of most the households, followed by small entrepreneur, formal employee, and other category. There are up to five earners per household, two income earners in average. Slightly less than one half of the households have specific skill possession for (off-farm) income generating activities. Small traders, such as: market vendors, small shops and processed-food sellers, are dominant among the specific skills owned by the households. The household heads are generally in their productive ages (50 years old or less), but with no university training. A few of the households have government employee and tertiary (university) education possession, 15 and 10 percents. The average household income is IR 5.52 Millions per household per year.

Table1. Selected Socio-Economic Characteristics of the Households

Household Characteristics	Brief description
Religion	90 percents are Moslem, 10 % are Hindhus and Christians
Gender of household head	10 percents are female, 90% are male
Age of household head	22-70 years, average 41 years, and 85 percents are 50 years or less
Education of household head	0-18 years, average 7 years, and 96 % have 12 years or less
Household size	2-9 persons, average 4 persons and 90 percents have 3 persons or more per household
Household income	IR 175,000-IR 42 millions, average IR 5.52 millions, and 63% IR 5 millions or less
Occupation of household head	44% agriculture; 27% small enterprise; 18% formal employee and 13% other
Number of earners	1-3 earners, average 2 earners, and 93 % with 1-2 earners
Specific skill possession	49 percents with specific skill possession; trading & small enterprises 75%, and technical 25%
Land assets	IR 0-388 millions, average IR 25 millions, and 71% have less than IR 21 millions
G. Employee possession	15% with government employee possession, 85 % without
T. Education possession	10% with tertiary education possession, 90 % without
Distance	.001-17 kilometres, average 1.64 kilometres, and 66% live at distance 1 kilometre or less from the closest financial institution
Banking confident	70% feel confident in banking matters

[1] Since the rural households generally diversify their incomes involving various income activities (e.g., farming, migrant labouring, and small enterprise), the occupation, here, refers to the occupation considered by the respondents as the major source of the household incomes.

head	

Source: Household Survey
Notes: G = government; and T = tertiary

Households' Demand for Financial Services

The financial services are broadly differentiated into two, savings and credits. Savings and credits are two key strategies of the households to manage their economic portfolios in order to achieve their purposes, such as: survival (or consumption smoothing), and economic expansion.

Against recurrent livelihood risks, households generally adopt various precautionary or insurance strategies, such as: diversification, savings, and social investments in reciprocal systems among households (Chen, 1991; Huss-Ashmore, Curry, & Hitchcock, 1988.; Shipton, 1990). For example, to smooth their income-expenditure gaps, households generally build up inventories (savings) during peak seasons, which they can draw upon during slack seasons (Chambers, Longhurst, & Pacey, 1981). In the portfolio management, the households vary one another, depending on the resource available, the household activities and the risks they face (Chen & Dunn, 1996).

The households' demand for saving services and credit services are summarized in Tables 2 and 3.

Table 2. The Household Demand for Saving Services

Type	Saving Amounts		Household		Average
	IR 000	%	Number	%	(IR000/hhs)
Formal System					
BRI-unit	88972	29	47	30	1893
BPR	10482	3	10	6	1048
LKP	5417	2	7	4	774
KSP	0	0	0	0	0
USP	0	0	0	0	0
Others [1)]	72310	24	30	19	2410
Subtotal	177181	57	94	60	1885
Informal System					
Produce	61760	20	34	22	1816
Livestock	22190	7	10	6	2219
Cash	2695	1	5	3	539
Land	26700	9	3	2	8900
Combination [2)]	20055	6	11	7	1823
Subtotal	133400	43	63	40	2117
Total	190521	100	157	100	1978

Source: the household survey
Notes: 1) Includes commercial banks in the cities and a combination of two or more financial institutions; and 2) Includes a combination of two or more types of informal savings

Table 3. The Household Demand for Credit Services

Sources	Credit Amounts		Household		Average
	IR 000	%	Number	%	(IR000/hhs)
		Formal System			
BRI-unit	102700	42	32	19	3209
BPR	3300	1	9	5	367
LKP	10300	4	8	5	1288
KSP	1700	1	4	2	425
USP	1210	0	3	2	403
Others [1)]	83573	34	26	15	3214
Subtotal	202783	84	82	49	2473
		Informal System			
Friend/relative	19880	8	39	23	510
Moneylender	7150	3	17	10	421
Trader	1618	1	12	7	135
Landlord	4400	2	7	4	629
Association	1600	1	5	3	320
Combination	4600	2	4	2	1150
Subtotal	39248	16	84	51	467
Total	242031	100	166	100	1458

Source: the household survey

Notes: 1) Includes commercial banks in the cities and a combination of two or more financial institutions

Possession of Savings and Credits

Most (75%) of the 180 households have saving possession. There are substantially more households with formal savings (52%) than informal savings (35%). More than a half (54%) of the 94 formal savers with formal saving possession save frequently while the rest save occasionally. Nevertheless, several forms of informal savings, such as: produce and livestock informal savings remain important for the rural households. In support to this, there are households (12%) that continue using the informal system, despite having formal savings.

The relative frequency of the households that have credit possession is also high. Most (77%) of the households are credit borrowers, or having outstanding credits during the interviews. Including those borrowing from both sources, the households that borrow from the formal sources are nearly identical with those borrow from the informal system, 46 and 47 percent, respectively.

Roles of Formal and Informal Sources

The formal system plays a bigger role in the structure of the household demand for financial services, with respect to total saving amounts, number of savers, and credit amounts. Their roles are about equal in terms of borrowers (Tables 2 and 3). The more important role of the formal system in the households' demand for financial services is due to the increase in the supply of financial services to rural

households resulting from improvements in the banking system, and the economy, among others.[2] There are relatively more diverse saving and credit options available to the rural households to choose from as more rural financial institutions are in operation, after liberalisation. As a result, the demand of the rural households for financial services is largely met.

Further, the average interest rate charged on informal credits is more than twice as large as the average interest rate charged on formal credits, 106 and 39 percents, respectively. Thus, given access to loan services of the financial insittutions, the rural households may not borrow from informal sources with such high interest rate. Additionally, the study finds that the amounts of credits demanded by the households are negatively and significantly correlated to the annual real interest rate (Pearson's rho = -0.276, p 0.01.

Nonetheless, the role of the informal system on the households' demand for financial services is less likely to be fully replaced by the formal system because of the following reasons. One explanation of the continuing importance of the informal credit sources is that the new formal sources need some times (for learning by doing) before they can gain reputation and the market share (Lapenu, 1996). Another explanation is that informal lenders generally allow contract renegotiation (flexible contract) in a case of liquidity shortage on the borrower side while formal lenders (banks) generally do not (Masciandaro, 2002). The flexible contracts of the informal credits appear to better suit the seasonal pattern of many the rural households than the rigid contracts of the formal credits, despite lower interest rate.

Several forms of informal savings remain important to the rural households since they have several advantages over the formal savings. For example, saving in a produce form (such as raw rice) can serve as a food stock to the households and give economic benefits, since the value of the saved produce increases as its price increases. Saving in an animal form (such as a Cow) serves as a land tiling labour (draft animal) beside an added value resulting from the animal growth. Similarly, several arrangements of informal credits have no substitutes in the formal system. For example, informal credits that involve credit repayments in produce forms, which are commonly practiced by farmers and traders, seem too difficult to be met by the services of the existing financial institutions. Another example is that interest free credits (from friend and relatives) are impossible to be available from the formal system.

The continuing importance of the informal system is also because the informal lenders do bear parts of the clients' investment risks, such as: in the green borrowing or *Ijon* and land pawning or *Gadai*, (Steinwand, 2001). Based on his survey in Bantul, Java Island Indonesia, Soegiarto (1993: p.149), as quoted in Steinwand (2001), claims that: "The widespread image of moneylenders as economic parasites or 'loan sharks' … has to be reconsidered. … Moneylenders are an

[2] Traditionally, only informal services were available to them. As the development goes on, formal financial services become more available to the rural households. It began with the services of BRI-unit in 1970s, then, added with LKP in mid 1980s, and rural banks and cooperatives following the liberalization of the rural banking system in late 1980s.

indispensable source of both starting and additional capital for small and large scale traders." (p.194)."

In addition to borrowing, a large proportion of the households also lend out some amounts of money to other people, such as: friends and relatives, referred as helping friends or relatives. This informal borrowing and lending relationship among the households (for help purposes) is what Chen and Dunn (1996) refers to as social investments in a reciprocal system.

Roles of Different Financial Institutions

The rural households save their funds not only in the nearby financial institutions, which are located and operated in rural areas (BRI-unit, BPR and LKP), but also in commercial banks in the district or provincial cities (referred to as other banks). None of the household respondents save in the credit cooperatives[3] (USP and KSP) because they do not offer voluntary saving services to the clients.

Roles of BPR, LKP, KSP, and USP which enter the rural financial market following the liberalization (beginning in 1990s) on the households' demand for financial services are relatively small, compared to the commercial banks (BRI-unit and other banks). Their roles remain small, even when the demand for small credits only is concerned, less than IR 500 thousands and compared to the role of the moneylenders. Together, BPR, KSP, and USP account for slightly more than two percents and 12 percent of the total credit amounts and borrowers. In contrast, the moneylenders account for three percents and 10 percents of the total credit amounts, and borrowers. This is because of a mismatch between the amounts of the credits offered by the new financial institutions and the amounts of the credits needed by a large proportion of the households.

In several respects, BRI Unit is the most popular financial institution to the rural households for savings and borrowings. The popularity of BRI Units, for savings, is because the households generally opt for the safety of their funds in deciding the financial institutions in which they save rather than the convenient of the services given by many rural banks, the officers visiting the clients to take their deposits. It is widely believed that saving in national government banks, such as BRI Unit, is safer than in the private ones since the government will guarantee the funds deposited in the banks. In addition to this, the wide office network of BRI Units (up to sub-district level) also contribute to their popularity over the other financial institutions, which generally have a few offices or service posts in selected sub-districts.

As the source of formal credits, the popularity of BRI Units is because of at least four reasons, as follows:

- First, they charge the lowest interest rate on credit among the financial institutions residing in rural areas of Lombok (Budastra 2003). Although few households have access to credits with slightly lower interest rate from commercial banks in the cities but many do not. In addition, the transaction

[3]Compulsory savings are not considered as saving by borrowers but as reserves for a couple of loan installments.

costs of borrowing from commercial banks in the cities will be higher than from BRI-units.

- Second, the sizes of formal credits asked by most the households (83%) are IR 500,000 or larger, which are larger than the sizes that are generally offered by the rural banks and credit cooperatives.
- Thirdly, since the sizes of formal credits asked by most the households are within the category that requires physical collateral (IR 500,000 or larger), the households may feel safer to log their physical collateral in a government owned bank with office nearby, such as: BRI Units.
- Lastly, as to the savings, the wide office network of BRI Units (up to sub-district level) also contribute to their popularity over the other financial institutions, which generally have a few offices or service posts in selected sub-districts.

Roles of Different Informal Souces

For informal savings, the rural households save in forms of produce, livestock, cash, or land. Produce includes agriculture produces. Livestock includes only big animals, such as: cows. Cash includes traditional ways of people saved their money, keeping money or cash in their houses, such as: inside a bamboo, a coconut skeleton, a drawer, a cupboard, a wooden/metal box, or under the bad. Land includes residential and agricultural lands. Of these, produce is the most popular type of informal savings for rural the households (Table 2).

The popularity of produce is, as noted above, because the households can use the saved produces to secure their future food consumption and, as well as, to get better future prices. In addition to better price, the popularity of livestock (Cow) is also because the households can use it as draft animal. This source of labour is important for farmers since the use of tractors is very limited, in rural Lombok. The proportion of respondents saving in forms of land is relatively small, less than five percents. This is because land is very expensive in comparison to the other types of informal savings.

On the other hand, Friend and Relative, Moneylenders, and Traders are dominant among the six sources of informal credits (Table 3). Popularity of friends and relatives as sources of informal credits, which accounts for nearly a half of the respondents, is because people see the loans as helps from friends and relatives. The rural households in the study areas share the view that one helps her/his relatives or friends when they are in difficulties, including financial difficulties. Furthermore, the loans from these sources are often interest free, and the contracts are generally spoken, flexible (negotiable), and no fines for breaking promises.

As it can be inferred from the borrowing squence of a farmer (Box 7.4), the relative popularity of moneylenders relates to their fund availability. The moneylenders always have loanable funds available to meet the urgent needs of the borrowers for cash since lending is their profession (or income earning activity). On the other hand, the other informal sources such as landlords and traders, do not necessarily have loanable funds at hands when the borrowers ask for loans. For instance, a village rice trader may not be able to meet immediately the cash loans urgently demanded by farmers since the trader has to obtain the loanable funds from

his/her boss first. However, this is not hold in the case of the trader lenders (nearby small shops) from which they can get some of their daily needs, such as: sweet, tee, copy, sugar, cigarette, and instant noodle, in advance.

Box 7.4.

The Sequence of Borrowing of a Farmer in Lombok

"Firstly I will go to relatives to obtain a loan under *Ijon* system (*selling produce before harvest*), if fail I will go to friends, if still fail I will go to either the moneylender or the officer (*of rural banks or cooperatives)*, depending on the amounts of loans I need. The officer (of KSP) can only lend small amount to me, IR 100,000 at most. So, when I need larger amounts I will go to the moneylender."
Source: Informal interview

Factors Associated with Households' Demand for Financial Services

This section attempts to identify factors associated with the households' demand for and access to formal financial services. As noted in Section 4.4.4, the households' demand for and access to formal financial services is reprented by four variables, namely:

- Households' demand for formal savings – measured as their formal saving amounts
- Households' access to formal savings – measured as their formal saving possession
- Households' demand for formal credits – measured as their formal credit amounts
- Households' access to formal credits – measured as their formal credit possession

The factors whose associations are tested with these dependent variables include selected socio-economic characteristics of the households, banking characteristics and features of availed financial services (including the four variables, above), and the market environment (listed in Table 4.9 of Chapter 4). The data of these selected variables are given in Appendix 7.1. The association between these variables is tested in pair using Chi-square, Correlation and/or t-test, whichever is appropriate, depending on data measurement. Chi-square is to test association between categorical variables, correlation is to test association between continous variables, and t-test is to test association (mean difference) between categorical and continous variables. The results of the analysis are orderly discussed, below.

Factors Associated with the Households' Demand for Formal Savings

The households' demand for formal savings (amounts of formal savings) are associated with four factors of their socio-economic characteristics (income, number of earners, income sufficiency and land assets) and three factors of banking characteristics (financial institution type, interest rate and total saving amount). Their demand for formal savings is insignificant between the market environment (see Table 7.9).

The socio-economic characteristics of the households clearly point to the importance of their saving capacity in determining their demand for formal savings (formal saving amounts). Households with larger income, sufficient income, more earners and larger land assets generally have larger saving capacity. As their capacity to save is larger, their demand for formal savings (formal saving amount) is larger. In line to this, households with larger total saving amounts tend to access the formal system for saving.

Table 7.9.Factors Associated with the Households' Demand for Formal Savings

Factors	Sig	Description
Socio-Economic Characteristics of the Households		
Income	r*	R=0.254
Number of earners	r*	R=0.229
Income sufficiency	t**	Households with sufficient income have larger average formal saving balance (IR 2,707,740) than those without (IR 821,240)
Land assets	r*	R=0.231
Banking Characteristics		
Financial institution type	t *	Households saving with rural banks have smaller average saving balance (IR 924,050) than those with commercial banks (IR 2,123,760)
Interest rate on formal savings	r**	r=0.817
Total saving amount	r**	r=0.794

Source: Own calculation based on the household survey data
Notes: * significant at p 5%, and ** significant at p 1%.

On the other hand, the households' banking characteristics (financial institution type, interest rate and total saving amount) significantly associated with their demand for formal savings reflect their preference (behavior) toward formal saving services (options) available to them. Recall that the household data represent the condition after financial liberalisation where larger number of small rural financial institutions

(RFIs) serves the rural households.[4] For number of RFIs in the studied sub-districts see Table 4.1 of Chapter 4).

The positive relationship between interest rate on formal savings and their demand for formal savings is straight forward, where the higher the interest rate on formal savings the larger is the amount the household savers save in the formal system. This saving behavior is as expected because ones generally attempt to maximise earnings on their savings, by choosing saving options that give higher interest rate on savings (given the capacity and opportunity to save). Since a commercial bank generally offers a higher interest rate on savings and is regarded as a safer financial institution to place their funds relative to a rural bank (see Section 6.1.4.1 of Chapter 6), the household savers place larger amounts of formal savings at commercial banks (see Section 7.3.4.2).

Thus, the households' demand for formal savings is associated with the households' socio-economic and banking characteristics reflecting their saving capacity (income, income sufficiency and number of earners) and preference (financial institution type, interest rate and total saving amount). The saving capacity-preference argument applies for the factors insignificantly associated with the households' demand for formal savings. For example, the households' income, number of earners and land assets are insignifantly different (t-test at p 5 percent) between the market environments.

The factors associated with the households' access to formal savings (formal saving possession) are discussed, below.

Factors Associated with the Households' Demand for Formal Credits

The households' demand for formal credits is significantly associated with factors representing the socio-economic and banking characteristics of the households but the market environment (Table 7.11). It shows that households with government employee, tertiary education, education, income, land asset, banking confident head, commercial bank credit, lower interest rate, lower transaction costs, longer credit maturity, and larger total credit amount tend to borrow larger formal credits.

Table 7.11.Factors Associated with the Households' Demand for Formal Credits

Factors	Significance	Description
Socio-economic Characteristics of the Households		
Government employee possession	t*	Households with government employee possession tend to have large formal credits (IR 3,604,000) than those without (IR 2,031,000)
Tertiary education possession	t*	Households with tertiary education possession tend to have larger formal credits

		(IR 4,245,000) than those without (IR 2,198,000)
Education	r**	r=0.348
Income	r**	r=0.325
Land assets	r*	r=0.246
Banking Characteristics of the Households		
Banking confidence	t*	Households with banking confident heads tend to have larger formal credits (IR 2,703,000) than those without (IR 610,000)
Financial institution type	t**	Households that avail credits from commercial banks tend to borrow larger credits (IR 3,313,000) than those avail from rural banks and credit cooperatives (IR 938,000)
Interest rate on formal credits	r**	r=-0.504
Formal credit maturity	r**	r=0.621
Formal credit transaction costs	r**	r=-0.515
Total credit amount	r**	r=0.988

Notes: t= tested using t-test; r= correlation test; * significant at p 5%; and ** significant at p 1%.

Conceptualy, the factors associated the households' demand to formal credits should reflect the households' repayment capacity and risks (or the lenders' preference for particular borrowers), and the borrowers' preference for particular lenders. The former is because financial institutions generally screen credit applicants based on particular criteria reflecting their repayment capacity and risks. The latter is because, as noted above, there are multiple financial institutions (along with informal lenders) in the study areas.

Based on their experiences in the business (learning by doing), financial institutions identify several characteristics of good borrowers (who repay their credits as they promise), to whom they should or should not lend. In general, the financial institutions concern with the households' estimated ability to repay and risks (as reflected by incomes, assets, and occupation) *vis a vis* to the amount of credits they ask for (See Section 6.1.4 of Chapter 6). On the other hand, given the opportunity, households generally consider the suitability of available credit services to their credit needs and purposes. Service convenient (with respect to credit application and repayments), costs (interest and transaction costs), amounts and safety of their collateral are among the aspects of credit service considered.

The socio-economic characteristics significantly associated with the households' demand for formal credits (income, land assets, education, tertiary education possession and government employee possession) points to importance of the households' credit need, repayment capacity and risks in determining their demand for (and access to) formal credits. Households with high education and government

employee are generally richer than those without. Further, households with higher education are most likely better able managing larger resources, including finance. Hence, when in need of credit, they generally demand for larger credits. As the households' capacity to repay is higher and non-repayment risk is lower, they are awarded larger credits by the financial institutions.

Likewise, households with banking confidence tend to demand for larger formal credits since their income and land assets are larger (reflecting higher repayment capacity and lower risks), relative to those without. The association between the households' demand for formal credits and their other banking characteristics (financial institution type, total credit amount, interest rate, credit maturity, and borrower transaction costs) can be explained by making reference to the features of finaancial services of the existing financial institutions.

As discussed in Section 6.1.4.2 (Chapter 6), commercial banks (BRI-units) generally offer larger credits with lower interest rates while the rural banks and credit cooperatives offer small credits with higher interest rate. Since the sizes of the credits awarded by commercial banks are larger, the transaction costs (as percent of the principal) are smaller.[5]

The positive relationship between the households' demand for formal credits and credit maturity is because commercial banks generally extend credits in longer terms (with monthly repayments) than that of small credits extended by rural banks (with daily/weekly repayments).

Since larger credits require physical collateral (land assets), whose values exceed the amounts of the credits, the larger the values of the borrowers' land assets the larger the amounts of credits they can obtain from the formal sources. In line to this, most of the households (83%) borrow formal credits within the category that requires physical collateral (IR 500,000 or larger). Further, land is the most preferred collateral by finaancial institutions (banks). The importance of households' assets in determining their demand for credits was identified in a previous study in Sudan (Elhiraika, 1999).

Thus, the households' demand for formal credits is associated with the socio-economic characteristics and banking characteristics of the households. The former include government employee possession, tertiary education possession, education, income and land assets while the latter include banking confidence, financial institution type, interest rate, credit maturity (terms), and borrower transaction costs. These factors essentially reflect the households' credit need and preference toward credit sources and also the financial institutions' preference toward borrowers with respect to capacity to repay, and risks.

Conclusion

- The households' demand for formal savings is significantly associated with the households' socio-economic and banking characteristics reflecting their saving capacity (income, income sufficiency and number of earners) and preference (financial institution type, interest rate and total saving amount).

[5] In nominal terms, borrower transaction costs of commercial banks are substantially larger than that of rural banks and positively correlated to the households' demand for formal credits.

- The households' demand for formal credits is associated with their socio-economic characteristics and banking characteristics. The former includes government employee possession, tertiary education possession, education, income, and land assets while the latter includes banking confidence, financial institution type, interest rate, credit maturity (terms), and borrower transaction costs. These factors reflect the households' credit need and preference toward credit sources along with the financial institutions' preference toward borrowers with respect to capacity to repay, and risks.

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