Do Long Term Savings Motives Foster Household Participation and Contribution to Savings Mechanisms in Rural Vietnam?

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Abstract

The paper aims to investigate the impacts of long-term savings motives on fostering household participation and contribution to savings mechanisms in rural Vietnam. The paper is organized in five parts: introduction, data description, methodology, empirical results, and conclusion. The quantitative methodology is employed and three simultaneous estimation methods, including instrumental variable model, two-step model, and Heckman model are used to test these impacts as well as the robustness of results. In each model, the paper examines the impacts of independent factors on both household participation and household contribution to savings mechanisms. Two sets of independent variables: long-term savings motives (profit-making investment, accumulation for big expenditure, providing for old age, and cost of educations) and control variables (dependency rate, number of people in household, and household wealth) are in each model. A set of dataset of 2,314 households for analysis is obtained from household survey in rural Vietnam. Robust statistical findings indicate that profit-making investment emerged to be the strongest motive fostering household participation to savings mechanisms while other long-term savings motives have little or no impact on fostering household participation to savings mechanisms. In addition, education investment encourages household contribution to savings mechanisms in rural Vietnam.

Keywords: Savings Motive, Savings Mechanism, Households, Vietnam.

JEL Classification Code: O12, O16, G21.

1. Introduction

Household savings is an important source of investment (Bellone, 2008; Ang, 2009; Brahmasrene & Jiranyakul, 2009; Herwartz & Xu, 2009; Esso & Keho, 2010; Steinert, Zenker, Filipiak, Movsisyan, Cluver, & Shenderovich, 2018) and financial systems help promote circulating capital by connecting supply side (savings) and demand side of capital (investment). Besides formal finance, an informal financial mechanism is recognized as an important channel to accumulate savings for investments through locally capital mobilization, to improve the welfare of participants as well as to fulfil the needs for and safety of household savings (Kimuyu, 1999; Gugerty, 2007; Kedir & Ibrahim, 2011;

Pellegrina, 2011; Munyegera & Matsumoto, 2016). The advantage of utilizing informal mechanisms, such as Rotating Savings and Credit Associations (ROSCAs) or private moneylenders is more obvious in developing economies, especially in rural areas, where the formal finance remains weak and has a limited access to in terms of geographical locations.

The limited capability of capital prevents formal financial institutions from their establishment in various rural communes in order to provide adequate technical infrastructures and services like those in urban areas. Moreover, informal financial systems do not require a substantial amount of capital to start with as well as sophisticated operation systems including offices, labours, computers, or accounting computer systems. Another advantage of the informal system is the distribution of information, which may lead to a lower cost of transaction and borrowers may take less time to successfully get a loan. People engaged in one informal financial group are often in the same commune and are shared the same information with another within the same group. So, individuals can reduce the risk of asymmetric information, including adverse

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selection, moral hazard, evaluation, monitoring, controlling, and repayment while increasing trusts and social capitals (Carpenter & Jensen, 2002; Etang, Fielding, & Knowles, 2011; Kedir & Ibrahim, 2011; Loubere & Zhang, 2015; Calluzzo & Dong, 2015). However, the informal financial mechanism cannot completely substitute for the formal mechanism because of its nature.

Localized characteristics cannot allow the informal financial sector to support economies at a large-scale or enlarge its scope in a wide area. Informal finance is also sensitive to the domino-effect due to the problem of unverified information in local areas. Various disadvantages of the informal financial sector, such as no legal practices and a lack of government support, can create more severe impacts on borrowers and other involved stakeholders. Although the negative effects are clear, the informal financial sector still exists as a complementary channel for the formal finance and plays an important role for developing countries in transforming the economies.

In the last three decades, Vietnam has experienced as one of the fastest growing economies. As a result, the demand for capital increases and in return, a more active role of financial system is required. The financial system in rural areas has dramatically changed in both quantity and quality. Like other middle-income countries, rural households in Vietnam offer a variety of savings mechanisms. Rural individuals can save their money in the formal financial institutions, such as banks, and other credit organizations. Furthermore, many can select informal channels, for example ROSCAs, private money lenders/borrowers, or their relatives while others opt for keeping their savings at home.

When an economy lacks capital, money under the pillows can be considered as a waste of resources. During 2008, when the market interest rate was very high, this reflected a high demand of capital in its economy. At the peak, the deposit interest rate in some financial institutions reached the point of 19% per year in mid-2008 (SBV, 2008). That fact indicated that there was a shortage of money in the economy and how to push household monetary savings into the formal financial system with a faster rate of capital circulation became an urgent concern of policymakers. In rural areas, where the formal finance is not well developed, most savings in financial intermediaries come from long-term savings rather than short-term savings. This may result in a relatively larger role of long-term savings motives (Ang, 2009).

In the literature, there is only one study by Carpenter and Jensen (2002) related to the participation of Pakistan households into formal and informal savings mechanisms, while of the majorities of studies concentrated on microcredit in rural finance (Pham & Izumida, 2002;

Barslund & Tarp, 2008; Gine, 2011; Pellegrina, 2011; Akotey & Adjasi, 2016), the role of informal financial intermediations is not underlined (Levenson & Besley, 1996; Calomiris & Rajaraman, 1998; Kovsted & Lyk-Jensen, 1999; Kedir & Ibrahim, 2011; Pham & Pham, 2017; Bilau & St-Pierre, 2018; Fiala, 2018) or the participation of households into ROSCAs and the ROSCAs structures has not studied (or the same types as ROSCAs) (Handa & Kirton, 1999; Levenson & Besley, 1996; Kimuyu, 1999; Anderson & Baland, 2002; Gugerty, 2007; Anderson, Baland, & Moene, 2009; Donoso, Altunbas, & Kara, 2011; Etang et al., 2011; Kedir &Ibrahim, 2011; El-Gama, El-Komi, Karlan, & Osman, 2014).

In order to fill the gaps in the literature, this study focuses on the role of different long-term savings motives in savings mechanisms in rural Vietnam while fostering household participation. Comparing with the work of Carpenter and Jensen (2002), this study endeavors not only on rural savers but also investigates a broader composition of savings mechanisms (such as banks, postal savings, and credit organizations for formal mechanisms, or ROSCAs, private lenders/borrowers for informal mechanisms). Moreover, the household participation in and contribution towards long term savings within savings mechanisms are identified. It also goes further in the methodology by controlling for the endogeneity problem as well as using Heckman procedure for estimations.

In the paper, to differentiate the role of long-term savings motives in affecting the participation probability and contribution of rural households to savings mechanisms, instrumental variable (IV) model, the two-part model, and Heckman model are employed. These three models could be used to further test of robust results.

2. Data Description

The data used for the study is collected from a household survey of rural Vietnam, namely Vietnam Access to Resources Household Survey: Characteristics of the Vietnamese Rural Economy, 2016 Survey (VARHS16). This survey was financially supported by Danida and conducted by the Central Institute for Economic Management (CIEM), in cooperation with a consortium, namely the University of Copenhagen, the Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD), and the Institute for Labor Science and Social Affairs (ILSSA). A total sample of 2669 households was surveyed in this year. The survey questionnaires comprise a wide range of households and characteristics household members, including household demographics, land use, agricultural production, household assets, occupation and income,

training, savings, credits, economic shocks, and social network. The survey was distributed to households across the country, from North to South of Vietnam. Base on the geographical criteria, these households are classified into four regions: Northern Midlands, North Central, Central Highlands, and Mekong River Delta. Selected households shared the same characteristics, focusing on types of monetary savings. In the final step of data analysis, a sample of 2314 observations is used for the study.

Table 1 provides the description of variables used the study. The majority of the heads of households are male (82%), and only 10% of whom possess a junior diploma or above. Most of heads of households are self-employed while 20% of households' heads are employed by other households or individuals. There are only 10% employed by the public sector and enterprises. The size of households in rural Vietnam is relatively large (on average of 4.7) in comparison to those in China (Loubere & Zhang, 2015; GSO, 2017). Most households in the survey are from Kinh ethnicity which is the largest ethnic group in Vietnam and has the highest number of households located in Northern Midlands (38%) while the smallest amount of households Mekong River Delta, at about 11%.

Table 2 provides the percentage of households taking part in each savings motive. There is a big gap between keeping monetary savings at homes and in financial institutions. This demonstrates by the figures that 85.97% households keep their money in homes (non-participants), and 14.03% of savers deposit their savings to a financial mechanism (participants, including both formal participants of formal financial institutions and informal participants of informal financial mechanisms). However, subsets of financial formal and informal mechanisms have a similar proportion, at 6.23% and 7.80%, respectively. The numbers are consistent with those in urban Pakistan (Carpenter & Jensen, 2002). For short-term motive, the substantial number of savings (44.21% of 48.67%) is kept at home whereas 4.45% is deposited in financial mechanisms. Long-term savings motives amongst households save 9.58% in financial mechanisms.

The questionnaires cover questions related to household savings motives. In all, a large share of household monetary savings (27.99%) is used for large expenditures while this motive amongst non-participants and participants is responsible for 23.16% and 4.83% respectively. From the extant literature, this motive is one of the most important motives for savings (Kedir & Ibrahim, 2011). The following the percentage of savings for long-term motives used for education and old age security are accountable for 10.39% and 9.73% respectively.

Table 1: Variable descriptions and statistics

Variables	Description	Mean	S.D.
Characteristics' Heads of Households			
Male	Household whose head is male (yes = 1)	.82	.34
Diploma	Household whose head has vocational training, or professional high school or junior diploma (yes = 1)	.08	.17
Tertiary	Household whose head has tertiary education (yes = 1)	.02	.08
Government	Household whose head works for the Government	.06	.14
Firm	Household whose head works for firms/enterprises	.02	.07
Private	Household whose head works for private households/individuals	.20	.23
Age	Age of household head, the natural logarithm	1.55	0.87
Household Characteristics			
Wealth	The total value of all household assets, the natural logarithm	8.56	6.24
Person	Number of family members	4.70	1.82
Dependency rate	The ratio of a number of people under 16 and people over 60 to a total number of household members (percent)	.34	.26
Distance	Distance from households to all-weather roads (km)	.52	.46
Ethnicity	Households in Kinh ethnic group (yes = 1)	.70	.41
Northern Midlands	Households in Northern Midlands areas (yes = 1)	.38	.24
North Central	Households in North Central area (yes = 1)	.23	.38
Central Highland	Households in Central Highland (yes = 1)	.28	.17
Obs.		2314	

Table 2: Savings motives

Motive	% of households				
	All households	Non-participants	Participants		
			Sub-total	Formal	Informal
Short-term motives	**48.67**	**45.21**	**4.45**	**2.00**	**2.45**
Protecting against bad harvest and natural disasters	7.72	6.68	1.04	0.52	0.52
Health care expenses	22.64	20.79	1.86	1.04	0.82
Buying agricultural inputs	13.73	12.92	0.82	0.22	0.59
Others	5.57	4.83	0.74	0.22	0.52
Long-term motives	**50.33**	**40.76**	**9.58**	**4.23**	**5.35**
Savings for large expenditures	27.99	23.16	4.83	1.48	3.34
Old age securities	9.73	7.72	2.00	1.19	0.82
Profit-making investments	2.23	0.89	1.34	0.59	0.74
Education investments	10.39	8.98	1.41	0.97	0.35
Total	**100**	**85.97**	**14.03**	**6.23**	**7.80**

3. Methodology

The study focuses on investigating the role of different long-term savings motives from the perspective of fostering household participation in and its contribution to a savings mechanism. In terms of household participation, a dummy dependent variable is used to measure the existence of household savings in formal or informal mechanisms. If a household has savings in savings mechanism, the dummy receives 1 otherwise 0. In the perspective of contribution, the amount of money that household deposit in savings mechanisms is regarded as household contribution and this savings amount is measured by the natural logarithm.

Three estimation methods are simultaneously deployed, including the IV (probit and linear) model, the two-part model comprising a binary outcome model (first part) and a linear model (second part), and the Heckman model to additionally test the robustness of the results of estimation. While the problem of endogeneity is controlled in the IV model, the dependence between the participation and contribution of household is controlled in the Heckman model. To identify this probability, the IV probit, the first part of the two-part model and the second part of Heckman model are estimated. In the IV probit model, the potential endogeneity of long-term savings motives is tested. Instrumented variables included in the models are age, ethnicity of head of household, household, and distance from household to all-weathered road.

Three estimations including IV linear, the second part of the two-part model and the first part of Heckman model are employed. The endogeneity of long-term savings motives is also controlled in the IV estimation. The excluded instruments are also the same as above. To eliminate the problem of weak instruments, the IV LIML model is used in this case. The Heckman model will take ethnicity and age of head of household as the exclusion restrictions.

4. Empirical Results

Table 3 gives the estimation results of household participation in savings mechanism. In general, the results are robust across different estimation methods while results from the IV Probit model are lightly less statistically significant.

The results show that participants who are the heads of households and are employed by the public sector are more likely to participate in the savings mechanism. This finding shows a similar trend in comparison to the study by Carpenter and Jensen (2002), where respondents participated in bank and *bisi* in Pakistan. This indicates that a stable job, such as an employment in a public sector may increase the demands of participation in saving mechanisms, and may increase the confidence of households and reduce the precaution of a future cash flow. This leads to an increase in the demands of participating in savings mechanisms for profitability. Individuals involved in the public sector also have better access to savings mechanisms since they have opportunities to access to various information channels (access to internet, newspapers, and other documents), to the supervision of colleagues, and a high level of familiarity with bureaucratic procedures in formal and informal institutions.

With regard to the rate of people who are not in labor force, the dependency rate has a negative impact on household participation. The effect remains strong in informal savings mechanism, which contains a higher risk for participants. The elderly, who tend to look at their future in a dimension where there is a high level of outflow of consumption, but a low inflow of income, may hesitate to put their savings in informal savings mechanisms. The insignificant effect in formal savings mechanisms may imply that there is no different behavior of households regardless of the rate of dependency in participating in formal savings

mechanism. Household wealth significantly affects household decisions to join a savings mechanism. Wealthier households have a higher probability to take part in savings mechanisms, especially formal savings mechanisms. This may indicate that wealthier households are likely to opt for formal savings mechanisms rather than savings at home, partially or fully.

To identify the role of long-term savings motives in fostering household participation in savings mechanism, this

study uses the short-term motive – as the base category. First, accumulating savings for large expenditures and education investments are statistically insignificant (p-value > 0.05). This can be interpreted that when participants make savings for either large expenditures or education investments, this has no impact on their decision of selecting savings mechanisms or keeping their money at home.

Table 3: Household participation in savings mechanisms

	IV Model			Two-step Model			Heckman Model		
	Savings mechanisms	Formal savings mechanisms	Informal savings mechanisms	Savings mechanisms	Formal savings mechanisms	Informal savings mechanisms	Savings mechanisms	Formal savings mechanisms	Informal savings mechanisms
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Constant	- 4.58***	- 7.07***	- 4.80	- 3.55***	- 5.54***	- 3.09**	- 1.20	- 5.71***	- 2.80**
	(1.08)	(1.41)	(3.94)	(0.98)	(1.12)	(1.62)	(0.98)	(0.41)	(1.55)
Household head's characteristics									
Male	- 0.10	0.06	0.42	1.21**	- 0.12	0.42	0.15	- 0.18	- 0.51
	(0.20)	(0.27)	(0.68)	(0.70)	(0.34)	(0.68)	(1.12)	(0.32)	(0.70)
Diploma	0.16	0.57	- 0.21	0.45	0.76	- 0.21	0.60	1.12	0.83
	(0.31)	(0.42)	(1.14)	(0.55)	(0.64)	(1.14)	(0.84)	(2.02)	(1.14)
Tertiary	- 0.14	0.37	- 1.89	- 0.56	- 0.33	- 1.89	- 0.05	- 0.88	- 1.14
	(0.56)	(0.74)	(1.75)	(0.40)	(0.54)	(1.75)	(0.87)	(0.79)	(1.81)
Gov.	0.79**	0.80	2.19	1.24**	0.57	- 2.81	0.37	1.34	- 2.42
	(0.35)	(0.52)	(1.74)	(0.65)	(0.42)	(2.48)	(0.34)	(1.41)	(2.87)
Firm	0.10	0.74	- 0.44	0.32	0.45	- 0.11	0.05	1.48	- 0.17
	(0.47)	(0.61)	(1.23)	(0.54)	(0.84)	(0.74)	(0.87)	(1.60)	(0.33)
Private	0.35	0.17	1.03	0.12	0.78	0.83	1.31	1.07	0.87
	(0.25)	(0.33)	(1.18)	(0.11)	(1.01)	(1.18)	(1.05)	(2.00)	(1.45)
Household's characteristics									
Dependency rate	- 0.65**	- 0.55	- 0.96	- 1.14**	- 1.22	- 0.11	- 0.40*	- 0.45	- 1.10
	(0.33)	(0.45)	(1.17)	(0.61)	(0.98)	(1.20)	(0.21)	(0.56)	(1.84)
Person	- 0.05	- 0.06	0.25	- 0.11	- 0.10	- 0.05	- 0.07	- 0.10	0.32
	(0.05)	(0.07)	(0.26)	(0.21)	(0.30)	(0.12)	(0.17)	(0.31)	(0.46)
Wealth	0.27***	0.41***	0.11	0.15**	0.09***	- 0.21*	0.27***	0.42***	- 0.38*
	(0.09)	(0.12)	(0.29)	(0.08)	(0.27)	(0.12)	(0.09)	(0.12)	(0.22)
Endogenous variables									
Accumulating for big expenditure	0.19	0.00	5.87	- 0.08	0.01	3.01	0.32	0.01	4.70
	(0.88)	(1.10)	(4.54)	(0.12)	(0.21)	(2.89)	(0.47)	(1.20)	(6.64)
Providing for old age	0.96	2.56**	8.96	1.07	1.89**	2.02	0.84	6.46***	8.21
	(0.94)	(1.31)	(8.67)	(1.28)	(0.98)	(5.04)	(0.91)	(2.11)	(7.89)
Profit-making investment	15.12***	19.93***	42.02***	10.87***	14.15***	20.34***	14.01***	22.23***	52.13***
	(4.09)	(6.61)	(16.14)	(3.12)	(3.11)	(6.44)	(5.14)	(7.58)	(20.61)
Cost of education	- 1.23	- 0.49	- 2.16	- 0.44	0.34	- 0.21	- 2.88	- 1.50	- 3.53
	(1.81)	(2.45)	(8.76)	(0.61)	(1.22)	(4.11)	(1.43)	(2.01)	(7.71)
Observations	2314	2134	2170	2314	2314	2314	2314	2314	2314

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Excluded instruments include Age, Ethnicity, Distance, Northern Midlands, North Central and Central Highland

On a different front, savings for old age security have positive impacts on the household choice to join formal savings mechanisms. This could imply that there is a trust in formal savings mechanisms when household participants make decision on savings for their old age. In a long-term perspective, formal savings mechanism is more accredited than those of the informal financial sector in developing economies, including Vietnam, where the market economy is on its first steps of maturity.

Profit-making investment motive increases the participating probability of rural households in Vietnam in participate savings mechanisms. With a less developed background of financial infrastructures, households in rural Vietnam have limited knowledge and receive little opportunities to join financial markets, such as stocks, enterprise bonds, and other financial assets. One of the prominent methods of profit investment is investing in real estate, gold, or foreign currencies with a hope of rising prices while avoiding the depreciation of the domestic currency. Both formal and informal savings mechanisms can supply credits for households to stock real estate or to provide interests of their deposits. Investments in creating and nurturing private businesses could be a reason for household savings. In business, the owner's capital is always considered as an important source while credits may be a subordinate one. Creditors always demand a certain amount of reciprocal capital from investors, and

subsequently, the profit of private business can be partly transferred to the creditors as the interest. The mutually beneficial relationship between the investors and financial mechanisms can become a motive for household participation in savings mechanisms.

The results in Table 4 show the household contribution in savings mechanisms in rural Vietnam. Three regressions presented are LIML IV, OLS, and Heckman for each household group. The LIML IV model is employed for the case of weak instruments and the OLS model or the second part in the two-part model is used with the control of heteroskedasticity. In the Heckman model, exclusion restrictions are imposed on robust identification (Cameron & Trivedi, 2011). The Heckman kit is used for the selection process with two excluded variables: ethnicity and dependency rate. The exclusion restrictions assume that ethnicity has substantial effects on the possibility of participation of rural areas but it is not necessary to affect the contribution size of households into savings mechanisms. The justification of the first part of the assumption may be traced back in the previous part when the determinants of household participation are analyzed. The second part of the assumption for ethnicity may be explained as those of Kedir and Ibrahim (2011). The likelihood-ratio is used to estimate the correlation between the errors of the two parts or to test the independence of the two parts of the Heckman kit.

Table 4: Household contribution in savings mechanisms

	IV Model			Two-step Model			Heckman Model		
	Savings mechanisms	Formal savings mechanisms	Informal savings mechanisms	Savings mechanisms	Formal savings mechanisms	Informal savings mechanisms	Savings mechanisms	Formal savings mechanisms	Informal savings mechanisms
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Constant	- 4.11	0.79	- 5.18	- 1.45	1.01	- 4.87	- 2.00	0.50	- 6.62
	(8.06)	(2.77)	(20.90)	(4.11)	(1.89)	(8.15)	(7.71)	(1.11)	(22.30)
Household head's characteristics									
Male	0.82	0.38	- 0.05	1.74	- 0.05	- 0.12	0.77	- 0.80	- 0.01
	(0.80)	(0.40)	(1.59)	(1.98)	(0.65)	(0.64)	(0.92)	(0.77)	(0.08)
Diploma	0.15	- 0.22	- 0.92	0.47	0.07	- 1.14	0.04	0.33	- 1.14
	(0.96)	(0.44)	(3.65)	(0.81)	(0.24)	(2.64)	(0.78)	(0.64)	(4.34)
Tertiary	- 1.33	- 0.43	4.18	- 0.45	- 1.12	- 3.74	- 1.77	- 0.08	- 0.61
	(1.86)	(0.89)	(9.14)	(1.41)	(0.98)	(8.69)	(1.92)	(1.74)	(7.44)
Gov.	- 1.00	- 0.53	3.10	- 2.21	- 0.87	- 0.47	- 0.78	- 0.42	2.04
	(1.22)	(0.68)	(4.57)	(2.14)	(1.01)	(2.18)	(1.34)	(0.56)	(3.84)
Firm	- 0.02	0.32	- 1.83	- 0.11	1.07	- 0.74	- 0.01	- 0.05	- 1.07
	(1.72)	(0.97)	(3.53)	(1.45)	(1.32)	(2.51)	(0.56)	(0.84)	(4.21)
Private	- 2.24*	0.29	- 4.84	- 1.59*	0.07	- 5.21	- 1.38	- 0.07	- 5.65
	(1.36)	(0.56)	(6.17)	(0.97)	(0.86)	(7.73)	(1.77)	(1.14)	(7.70)

Household's characteristics									
Dependency rate	1.31	0.31	5.57	0.87	1.22	4.46	1.91	0.07	2.81
	(1.48)	(0.79)	(8.29)	(1.12)	(1.78)	(7.43)	(1.87)	(0.90)	(4.48)
Person	0.01	- 0.03	0.04	0.02	0.05	0.07	0.01	- 0.06	0.01
	(0.30)	(0.13)	(0.53)	(0.47)	(0.18)	(0.78)	(0.14)	(0.41)	(0.09)
Wealth	0.86*	0.69***	0.73	1.36**	0.50***	1.55*	1.23**	0.45***	1.66*
	(0.48)	(0.23)	(1.20)	(0.74)	(0.14)	(0.87)	(0.67)	(0.09)	(0.98)
Endogenous variables									
Accumulating for big expenditure	3.43	0.55	7.78	5.11	0.14	6.14	1.17	0.78	9.22
	(3.52)	(0.92)	(10.35)	(6.47)	(0.54)	(8.21)	(2.48)	(0.84)	(13.12)
Providing for old age	2.35	0.47	- 2.17	1.11	0.68	- 1.02	3.43	0.26	- 2.75
	(2.96)	(1.13)	(4.59)	(1.85)	(2.03)	(3.87)	(4.80)	(1.47)	(3.10)
Profit-making investment	- 4.95	- 1.09	- 0.58	- 2.41	- 1.74	- 1.58	- 5.54	- 0.84	- 0.21
	(7.65)	(1.74)	(4.58)	(5.65)	(1.86)	(3.41)	(5.98)	(1.07)	(2.22)
Cost of education	9.71**	2.56**	21.96	8.01**	2.94**	15.47	9.92**	1.72**	24.45
	(4.81)	(1.15)	(18.97)	(3.97)	(1.47)	(21.11)	(5.01)	(0.87)	(25.14)
Observations	324	144	180	324	324	324	324	324	324

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Excluded instruments include Age, Ethnicity, Distance, Northern Midlands, North Central and Central Highland

The results indicate that, for control variables, participants who are the heads of households and engage in either enterprises or private households have less enthusiastic to deposit savings in informal savings mechanisms. Household wealth promotes household contribution to savings mechanisms. In other words, wealthier households will deposit more in savings mechanisms, especially in formal savings mechanisms.

The significant finding for savings motives is that there is no statistical different among other savings motives that affect the household contribution to savings mechanism except the education investment motive. This means households who save for education purposes will put more deposits in savings mechanisms rather than keeping deposits at home. It may imply the long-term household expense while the education investment is on the rise in Vietnam. Noticeably, savings for education investments are only higher in formal savings mechanisms than in informal savings mechanisms. Hence, the initial conclusion can be drawn that formal savings mechanisms are selected by households in rural Vietnam.

5. Conclusions

The paper investigates the role of long-term savings motives in household participation and household contribution to savings mechanisms in rural Vietnam. Using existing data set and employing three distinct methods for, namely the instrumental regression, the two-part model, and the Heckman model, different roles of long-term savings motives in both formal and informal savings mechanisms are identified.

The findings show that the motive for profit-making investment promotes rural Vietnamese households to take part in savings mechanisms rather than savings at home. Other long-term savings motives, such as accumulative motive towards large expenditures, old age security, and education investment appeared to have no impact on household involvement in savings mechanisms. From the household contribution to savings mechanisms, education investment foster households save more in formal savings mechanisms while no effect was found with regard to other long-term savings motives.

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