Ekuilibrium: Jurnal Ilmiah Bidang Ilmu Ekonomi Vol. 17, No. 1 (2022): March, pp. 40-53
Economic Faculty, Universitas Muhammadiyah Ponorogo
p-ISSN1858-165X / e-ISSN 2528-7672

Household Saving Behavior on Formal Financial Institutions in Urban and Rural Areas

Muhammad Maftuhin [a,1,*], Deni Kusumawardani[b,2]

[a,b]Faculty of Economics and Business, Airlangga University, Jl. Airlangga 4-6 Surabaya, Surabaya City 60286, Indonesia
[1]m.maftuhin-2020@feb.unair.ac.id*; [2] deni.kusumawardani@feb.unair.ac.id
* corresponding author

ARTICLE INFO

Article history
Received: 07/10/2021
Revised: 25/02/2022
Accepted: 27/02/2022

Keywords
Saving
Bank
Social-Demography
Rural
Urban

ABSTRACT

This research aimed to examine the household saving behavior on formal financial institutions in urban and rural areas. The data sources of this research from the Central Bureau of Statistics (BPS), namely the 2018 Indonesia national socio-economic survey (SUSENAS) and the 2018 Indonesia village potential survey (PODES).The research sampleswere 126 539 households in urban and 168 562 households in rural spread over 34 provinces in Indonesia. The analytical method used logistic regression to determine the household behavior in the savings ownership in a formal bank institution.Several factors that affect savings ownership included socio-demographic and institutional factors. The estimation results showed that all socio-demographic factors affected savings ownership in urban, while institutional factors, namely government bank and private banks did not have a significant effect. Otherwise, institutional factors had a significant effect on savings ownership in rural, while socio-demographic factors (house ownership) did not havea significant effect. The findings were very important to improve saving behavior and provide alternative policies related to banking infrastructure development in Indonesia.

1. Introduction

The macroeconomic theory explains that saving is the rest of all income that is not consumed (Veritia et al., 2019). In this scope, savings as an important role, namely one of the sources of investment funds. From a micro perspective, savings have two very important roles in the household. The main rolesarebecoming a source of funding in the future and overcoming income uncertainty, especially when access to financial institutions is restricted (Pohan et al., 2014). Moreover, the position of savings in the household provides a financing reserve for the future, both predictable and urgent needs (Yuh & Hanna, 2010).

Saving behavior in householdswas studied in many kinds of literature. The saving motives were analyzed for the first time byKeynes (1936) including prevention, foresight, earning profits, increasing the standard of living, freedom of doing something, pride, and investmentmotives. In addition, Browning & Lusardi (1966) added another motive, namely down payment which means the motive to accumulate amount as payment for expensive and durable goods such as houses and other assets. The life cycle theory of Modigliani & Brumberg (1955) explained that providing for life in old agemotive is the main stimulant of someone to save. This theory also explains that saving is one of the someone motives to overcome the cutting in household income. The life cycle theory is expanded to add the precautionary motive as someone's strong motive for saving.

A factor that influences someone to save is socio-demographic factors including age, gender, education, marital status, employment status, and family members. When it is related to income, each increment of income will increaseconsumption and savings (Chamon et al., 2013). People in productive age tend to save up to accelerate their savings rate (Modigliani & Ando, 2009). The relationship between marital status and savings ownership was revealed by Knoll et al., (2012) who stated that young households and married couples save more than other statuses. Lower education will result in lower-income, so they are difficult to save (Hounmenou, 2011; Lusardi, 2008). Someone with employment status shows that hehas income so hecan save (Markos, 2015).

The impact of credit ownership, housing assets, and health insurance also play an important role in household savingsownership. Households that have health insurance can save their income because they do not require medical expenses in a precautionary motive (Fisher &Anong, 2013). Households with loans or binding credit have lower savings rates (Deaton, 1991). According to Rha et al., (2006), ownership of housing assets increases the probability of having savings. Another important aspect of someone's motive for saving is the availability of bank facilities as formal financial depository institutions, both state and private banks, and the distance to these financial institutions. An important determinant of savings is the availability of financial institutions in the area. The greater concentration of the banking industry is related to the greater access to savings and loan accounts in a region (Owen & Pereira, 2018). Meanwhile, according to Heckman & Hanna (2015), access to financial institutions is an important predictor of saving behavior.

Economic literature has long discussedthe gap between urban and rural conditions. Historically, rural areas were left behind urban areas in various social and economic welfare indicators (Rahman et al., 2011). Significant disparities between urban and rural communities can be seen in reality. One of the causes of disparity is economic access (Perz et al., 2013; Wu, 2010). The access includes physical access such as infrastructure that can trigger economic transactions. While non-physical access is information and economic systems that have a vital role in economic activity (Maherul, 2015). In addition, some difference characters of rural and urban areas are seen in cultural norms and the availability of institutional support services in those two regionals (Fassil& Mohammed, 2017). The main income of the community is an interesting characteristic between rural and urban life. Most rural communities have a livelihood from the agricultural sector, while the characteristics of urban communities are working from the non-agricultural sector (Wiggins & Proctor, 2001).

In previous studies, it has been conducted about the relationship between household observation units in Indonesia and socio-demographic factors as determinants of household saving. One of the studies was conducted by Ngasuko (2018). This research only considered socio-demographic factors to determine household decisions to save. In addition, research byHeckman & Hanna (2015) in the U.S. has added institutional factors to influence saving decisions, but it did not correlate with distance to the nearest financial institution. The gap research in this research not only considers socio-demographic factors in influencing saving decisions, but also the availability of banks and the distance to the nearest formal financial institution. In addition, this research separates villages and cities as the unit of analysis. It is because urban and urban has their uniqueness so it is very interesting to research (Pateman, 2011).

This research is very useful for the government as research of implementing policies to increase people's motivation to save and see the distribution and access to formal finance in Indonesia. The research problem is Indonesia has different characteristics, especially the differences in the rural-urban conditions which have their uniqueness so it is worth observing. The main objective of this research is to observe household characteristics and the availability of financial infrastructure in rural and urban areas regarding savings ownership informal financial institutions.

Based on the background above, this research focused on households in Indonesia. This research used two sources of microdata, namely the Indonesia National Socio-Economic Survey (SUSENAS) to observe household characteristics and theIndonesia Village Potential Survey (PODES) to observe the availability of facilities and infrastructure in rural/urban. The researchers analyzed the factors that influence the savings accounts ownership from the socio-demographic side of the household and the availability of infrastructure access to financial institutions both in the city and village through differences in the characteristics of villages - cities.

2. Literature Review

There are three theories as to the main basis for household saving behavior, namely Keynesian theory (1936), permanent income theory (1957), and life cycle theory (1963). Keynesian theory (1936) explains that saving is not determined by interest but the income level. A high-income level increases the household savings level.

The permanent incometheory was first formulated by Friedman (1957). This theory explains two components of income, namely fixed income and non-fixed income as a determinant of household savings. The main idea is someone will live a long time. Fixed income consists of the wealthresults, namely physical capital, and human capital. Friedman (1957) argues that someone can predict income over a lifetime and his or her consumption will be adjusted from income. Meanwhile, non-fixed income is income that cannot be predicted.

The life cycle hypothesis has been developed byModigliani & Brumberg (1955) regarding someone's habits during his or her life in shopping and saving. This theory explains that consumption is someone's main need in a constant amount of all anticipated living income. The life cycle hypothesis is divided into three levels, namely the young age, working-age, and retirement agestages Zwane et al (2016). According to this theory, savings will increase at a young and decrease again at retirement age.

According to Modigliani & Ando (2009), the life cycle hypothesis shows that demographic variables affect the saving rate. Wealth, income, and socio-demographic factors are important factors influencing household savings (Rha et al., 2006). In addition, anotherresearch has examined socio-demographic factors on household savings (Markos, 2015). The results revealed that there was a correlationbetween household savings, sources of income, and age. It is because the age structure and composition of income by primary income source change over time.

Nguyen & Doan (2020) concluded that the number of dependents, working household members, income, and education have a positive and significant effect on saving behavior in Vietnam. The results of Marie Theresa (2007) studyproven that the dominance of other factors besides income is the availability of informal savings institutions that contribute to the low savings ratio of poor households in the region. The availability of financial institutions is one of the important determinants of household saving behavior (Heckman & Hanna, 2015).

Research conducted by Rehman et al (2010) concluded that total household income and land ownership area affect household savings. In addition, the education of the household head, number of members, marital status, and house value affect household savings. Obayelu (2012) showed that land ownership has a major effect on improving the economy of farmers so it can increase the level of household savings.

Yuh & Hanna (2010) examined the households saving behavior in the USA. The results showed that education, income, wealth, home ownership, and health insurance can increase someone's savings. Ngasuko (2018) examined household determination in accessing formal financial institutions. This research proved that socio-demographic factors such as age, household members, number of dependents, education, occupation, employment sector, home location, and credit status are factors that influence household savings ownership. Previous research by Heckman & Hanna (2015) analysis the determinants of savings ownership not only socio-demographic factors but also institutional factors, specifically access, and facilities to financial institutions.

3. Research Methods

This researchwas a quantitative study that analyzes data using statistical methods. Inferential analysis used logistic regression analysis method because the dependent variable of this researchwasa dummy variable (having/not having a savings account). This research data was micro data in the form of a cross-section of the March 2018 Indonesia National Socio-Economic Survey (SUSENAS) and the 2018 Indonesia Village Potential Survey (PODES). The SUSENAS sample was 295101 households from 34 provinces in Indonesia. Both SUSENAS and PODES are sourced from Central Bureau of Statistics (BPS).

Table 1.Variable Operational Definition

Variable	Definition	Unit
Savings account	Savings account ownership by the household head	Dummy 1= Having account, 0= Not having account
Age	The age of household head as of March 2018	Year
Age squared	The age squared of the household head as of March 2018	Squared Year
Gender	Gender of the household head	Dummy 1= Male 0 = Female
Marital status	The marital status of the household head	Dummy 1= Married 0 = Single
Education	The household head’s school time is either still in school or not in school.	Year
Employment status	Employment status of the household head	Dummy 1 = Employment 0 = Unemployment

Business sector	Household head business sector	Dummy 1 = Farmer 0 = Other sectors
Family members	Number of family members	Person
Health insurance	Health insurance ownership from the government	Dummy 1= Having 0 =Not having
Credit ownership	Household head credit	Dummy 1= Having 0 =Not having
Home ownership	Household asset ownership	Dummy 1= Having 0 =Not having
Consumption	Food and non-food consumption log	logarithm
Government bank	Number of Government banks in the region	Unit
Private bank	Number of private banks in the region	Unit
Government bank distance	The nearest government bank from the district office	Km
Private bank distance	The nearest private bank from district office	Km

Source: Researchers, 2018.

Heckman & Hanna (2015) studied the determinants of household savings using microdata as a reference. According to Heckman & Hanna (2015), the determinants of household savings consist of socio-demographic and institutional factors. In this research, the researchers added to observe the determinants of household savings based on rural-urban locations that did not exist in previous studies. Logistic regression was used in the analytical method to determine household savings holdings in Indonesia. The research model was as follows:

$$y_i = ln\left(\frac{\hat{p}}{1-\hat{p}}\right) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_{16} x_{16} \quad \text{.....(3.1)}$$

In equation (1) above, y was the odd ratio value of savings ownership, $\hat{p}$ = has savings and $1 - \hat{p}$ = does not have savings, $\beta_0, \beta_1, \beta_2, \ldots \beta_{16}$was the slope coefficient of each variable. Variables were socio-demographic variables consisting of age, age squared, gender, maritalstatus, education, employment status, business sector, family members, health insuranceownership, credit ownership, homeownership, consumption. While the institutional variables consisted of the number of government banks and private banks in the area as well as the nearestgovernment and private banks from the district office.

4. Results and Discussion

Figure 1 showed the percentage of the household head who has savings in urban areas. 51% of household heads in urban areas had savings, while the 49% did not have savings. Different conditions were shown in rural areas, around 70% of household heads did not have savings. The head of household who had savings in the village was 30% (Figure 2).

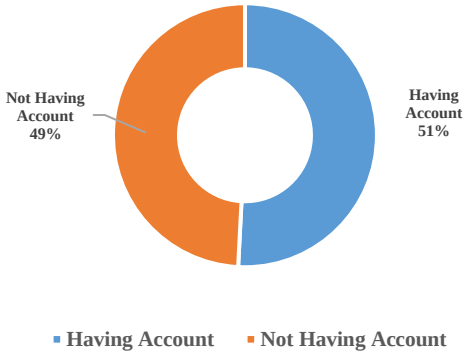

Figure 1. Percentage of household heads who have saving accounts in urban (%) Source: SUSENAS, 2018.

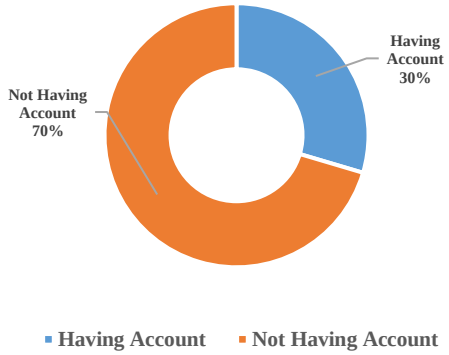

Figure 2. Percentage of household heads who have saving accounts in rural (%) Source: SUSENAS, 2018.

Table 2 showed a general socio-demographic illustration of household head savings ownership in rural and urban areas. Most of them in both urban and rural areas were 15-64 years old. Most of them who have savings in urban and rural areas had savings at the age of 15-64 years. Itwas very logical because this interval age was a productive age so there were savings for financial transactions. The gender of the household head in both urban and rural areas was mostly dominated by males than females. Male mostly dominated both from savings ownership or not. Their status who was married either had savings or did not dominate than their status who was single in both rural and urban areas.

Table 2.Descriptive Statistics of Social Demographics Ownership Savings Household Head in City and Villages (%)

Variable	Cities		Villages	
	Have Savings (%)	No Savings (%)	Have Savings (%)	No Savings (%)
Age				
15 – 64	91.52	83.79	92.79	84.14
> 65	8.48	16.21	7.21	15.86
Gender				
Male	84.89	81.50	88.06	84.59
Female	15.11	18.50	11.94	15.41
Marital status				
Married	80.82	75.92	87.37	80.21
Single	19.18	24.08	12.63	19.79
Education				
Did Not Pass Elementary School	6.20	20.77	12.58	30.75
Elementary School/equivalent	11.10	32.91	26.28	40.72
Junior High School/ equivalent	12.50	20.16	17.37	15.50
Senior High School / equivalent	44.21	24.13	29.76	12.07
D1/D2/D3	5.26	0.82	2.93	0.28

DIV/S1	17.96	1.16	10.28	0.67
S2/S3	2.78	0.04	0.79	0
Employment status				
Work	82.66	77.16	90.63	85.95
Unemployment	17.34	22.84	9.37	14.05
Business sector				
Farmer	2.47	8.73	17.28	30.60
Non-Farm	97.53	91.27	82.72	69.40
Family members				
0 – 2	43.40	45.47	40.79	45.76
> 2	56.60	54.53	59.21	54.24
Health Insurance				
Having	73.07	65.78	68.50	64.32
Not having	26.93	34.22	31.50	35.68
Credit ownership				
Having	34.31	24.89	41.34	18.19
Not having	65.69	75.11	58.66	81.81
Home ownership				
Having	71.43	74.24	86.56	90.36
Not having	28.57	25.76	13.44	9.64
Consumption				
quantile 1	7.36	27.46	18.28	38.11
quantile 2	15.48	29.84	23.28	30.00
quantile 3	24.92	24.53	32.19	23.95
quantile 4	52.24	18.18	26.25	7.94

Source: SUSENAS, 2018.

The large distribution (more than 947 units) and sufficient distribution (697-947 units) ofgovernment bank occurred in almost all of Java Island, Sumatra Island, and parts of Kalimantan and Sulawesi. The number of government bank in the Jakarta provinces, Central Java, West Java, and East Java was more than 947 units (figure 3). Itwas in contrast to the large number of government bank in almost all of Indonesia, except Papua, Maluku and North Kalimantan. The distribution of private banks with a large number was only in a few provinces on the Java Island, namely DKI, West Java, and East Java (figure 4). More than 947 private bank units were located in each of the three provinces. Central Java Province was the only province with the number of private banks between 697 and 947 units. Meanwhile, the North Sumatra, Banten and Bali provinces were in third place with the number of private banks between 198 and 697 units. It indicated that the distribution of private banks was not evenly distributed outside Java.

Figure 3. The Distribution of Government Banks inUrban Area 2018
Source: PODES, 2018.

Figure 4. The distribution of Private Banks in Rural Area2018
Source: PODES, 2018.

Table 3.The Percentage of Savings Ownership Based on The Nearest Bank in Village and City

Variable	Urban		Rural	
	Government Bank (%)	Private Bank (%)	Government Bank (%)	Private Bank (%)
Distance				
0 - 5 Km	62.10	39.27	20.60	1.73
6 - 15 Km	22.99	27.42	42.78	19.06
16 - 25 Km	6.42	8.41	17.32	14.37
> 25 km	8.48	24.91	19.29	64.84

Source: SUSENAS and PODES, 2018.

Table 3 showed a comparison of the percentage of savings ownership in urban and rural based on the nearest distance from the district office. 62.10% savings ownership of government bank accounts in urban areas was located in 0-5 Km. Itshowed that urban communities took advantage of the ease of access to save at the nearest government bank. Different conditions could be seen in rural areas, where 42.78% of savings ownership was located in 6-15 Km. Itwas indicated that most of the nearest government banks were located within 6-15 Km from the district. A very contrasting condition was shown in the percentage of private bank savings ownership in urban and rural areas 39.27% of private bank savings ownership in urban areas was located at 0-5 Km, while 64.85% of rural people had private bank savings accounts more than 25 Km. Inequality of infrastructure was the main reason for communities to consider savings at the nearest formal financial institution.

Table 4 showed the logit regression results estimation of savings account ownership in cities and villages. In general, there were different factors that affect savings ownership in rural and urban areas. These differences included age, homeownership, the number of government bank, and the number of private banksvariables. Meanwhile, other factors such as gender of the household head, marital status of the household head, education, employment status, business sector, number of dependents, health insurance ownership, credit ownership, total consumption, and distance between state and private banks had the same effect related to the household savings ownership in both urban and rural areas.

The estimation results showed that the increasing age of the household head in the city affects the decrease of the odd of savings ownership by 0.947 times. This result was similar to Yuh & Hanna (2010) which stated that younger households were more likely to save less than older households due to future assumptions and precautionary motives. This study also strengthened Blanc et al (2016) who showed that increasing age resulted in reduced saving behavior. Different conditions were shown by the household head in the village. Increasing the age of the household head increased the odds by 1,034 times. It was similar to Robin & Brenda (2016) who stated that the correlation between age and savings ownership was positive and significant. Households with an older household head would consume less and save more (Thi Minh et al., 2013).

The coefficient of the agesquare was positive for the household head in urban and rural areas. It showed that the desire to open an account will increase along with increasing age until a certain period namely retirement (Brounen et al., 2016). This result wasrelated to the life cycle theory which explains that someone will have a cycle to increase savings at a young age or productive age, but gradually decrease into retirement age.

Table 4.The Logit Regressi on Results of Socio-Demographic and Institutional Variables on Savings Account Ownership in Urban and Rural

Savings Ownership	Urban		Rural	
	Coefficient	Odds Ratio	Coefficient	Odds Ratio
Age	-0.0118***	0.947***	0.00300***	1.034***
		(0.00447)		(0.00458)

Age squared	9.68e-05***	1.000***	-2.33e-05***	1.000***
		(4.82e-05)		(4.50e-05)
Gender	-0.0807***	0.611***	-0.133***	0.431***
		(0.0243)		(0.0177)
Marital status	0.0203***	1.151***	0.0580***	1.515***
		(0.0419)		(0.0594)
Education	0.0368***	1.227***	0.0317***	1.196***
		(0.00342)		(0.00283)
Employment status	0.0322***	1.237***	0.0131***	1.107***
		(0.0362)		(0.0347)
Business sector	-0.0360***	0.788***	-0.0371***	0.802***
		(0.0362)		(0.0163)
Family members	-0.0407***	0.797***	-0.0280***	0.854***
		(0.00546)		(0.00519)
Health insurance	0.0443***	1.274***	0.0260***	1.154***
		(0.0261)		(0.0199)
Credit ownership	0.0594***	1.398***	0.142***	2.127***
		(0.0301)		(0.0382)
Home ownership	0.0120***	1.087***	-0.00260	0.998
		(0.0255)		(0.0258)
Consumption	0.222***	3.829***	0.168***	2.866***
		(0.0719)		(0.0486)
Government bank	-9.21e-05	1.000	0.000592***	1.004***
		(0.000340)		(0.000569)
Government bank distance	-0.00168***	0.988***	-0.00137***	0.991***
		(0.00207)		(0.000837)
Private bank	-1.03e-05	1.000	-0.00176***	0.989***
		(0.000335)		(0.00120)
Private bank distance	0.00141***	1.009***	0.000672***	1.004***
		(0.00104)		(0.000494)
Constant	-2.803***	1.59e-09***	-2.401***	1.28e-08***
		(4.46e-10)		(3.26e-09)
Observations		126,539		168,562
Pseudo -R^2		0.2689		0.1931

***P<0.01, **P<0.05, *P<0.1
Source: Data Processed, 2021.

The gender of the household head had a significant effect (1%) on the savings ownership informal institutions. The condition of the two research objects, both in rural and urban areas, showed a negative relationship between the gender of the household head and the savings ownership. It indicated that female household heads tend to have more savings in formal institutions than male household heads. These results were related to Nguyen & Doan (2020). The research was based on the fact that wives are younger than their husbands and the assumption that women will live longer than men. It implied that the wife had more advantages in saving until old age than her partner. Judging from the difference, female household heads had 1.636 times to save than male household heads. Meanwhile, female household heads in rural areas had 2.32 times higher than male household heads.

The marital status of the household had a positive and significant effect (1%) on the savings ownership in the city and village. It meant that household heads with status married were more

likely to have a savings account than those who were not married. The added value of the household head in the city was 1.15. It meant that married households heads in the city had savings accounts of 1.15 times that of single ones. Meanwhile, the added value of the savings ownership ratio in the village was 1.515. It meant that the household head with status married had 1.515 times thansingle in rural. It was related to Nguyen & Doan (2020) which showed that married couples would save more than other marital statuses. Married households will have a forward orientation so they save for the future.

Education had a positive and significant effect (1%) on savings ownership in rural and urban areas. The add ratio value of urban and rural areas was 1.227 and 1.196, respectively. It indicated an increase in the opportunity to have a savings account linear with the increase ineducation of the household head. This result strengthened several previous studies which state that the education level was proven to have a significant impact on the determination of savings ownership. Higher savings rates for higher-income and highly educated households (Markos, 2015). Educational attainment was related to the subjective level of time preference and highly educated individuals as to characteristics of more future-oriented individuals. It was evidence that education had a positive and significant effect on savings (Donkor &Anane, 2016; Hounmenou, 2011; Lusardi, 2008; Yuh & Hanna, 2010).

Employment status had a positive and significant correlation (1%) on savings ownership in rural and urban areas. Household heads in cities who work had an opportunity 1.237 times than households' heads who are unemployed. Meanwhile, the household head in the village had the opportunity to save 1.1 07 times than the household head who is unemployed. It was related to Markos (2015) which showed that income, income status of the household head, and the occupation of the household head were positively and significantly related. This research also strengthened Heckman & Hanna (2015) which concluded that work gave someone a reason to save and increase saving behavior even though the condition of the household was low.

The business sector had a negative and significant effect (1%) on the business sector of household heads in villages and cities. It meant that household heads who work in the agricultural sector had a smaller opportunity to have a savings account than households working in the non-agricultural sector. The probability of household heads working in the agricultural sector in urban areas was 0.788 times while in rural areas was 0.802 times. This study strengthened Obayelu (2012) which showed that agricultural activities had a negative effect on savings rates in rural areas. The low rate of return in the agricultural sector caused the low savings rate of households working in this sector.

The assumption that many children affect the amount of income does not directly correspond to reality in general. In fact, the family members had a negative and significant effect (1%) on savings ownership in rural and urban areas. It was because the number of family members and obligations to be paid will significantly reduce the household savings level (Rehman et al., 2010). Household size and the existence of children will influence household saving decisions (Hanna & Rha, 2000).

The correlation between health insurance ownership and savings ownership was positive and significant (1%) in both rural and urban areas. Households' heads in cities with health insurance were 1.274 times more likely to have a savings account than households without health insurance. Meanwhile, the households head in rural with health insurance had an opportunity of having a savings account 1.154 times than households without health insurance. The positive effect of health insurance could be seen from these research results (Fisher & Anong, 2013; Yuh & Hanna, 2010). Households with sick members would reduce the level of savings because there were losses. However, households that have health insurance would be guaranteed their health because it was covered by health insurance.

The correlation between credit ownership and savings ownership was positive and significant in both urban and rural areas. With an add ratio of 1.398,it meant that households with credit services in urban had the opportunity to have a savings account of 1.398 times than households without credit services. Meanwhile, households with credit services in villages were 2.127 times more likely to have savings account than households without credit services. This result was related to Ngasuko (2018) which stated that the correlation between credit ownership and savings ownership was positive and significant. One of the credit conditions was having a

savings account at a credit-giving bank. Itis intended so financial institutions can provide affordable sources of financing for the community Winarto & Rapini (2014).

Homeownership had different results from savings ownership in rural and urban areas. Homeownership had a positive and significant effect on the savings rate of the household head in an urban area. The add ratio value was 1.087. It indicated that the household head with a private house in an urban area was 1.087 times more likely to have a savings account than a household without a house. This result was related to (Rha et al., 2006; Yuh & Hanna, 2010) who stated that someone who owns a house will increase their saving behavior or total assets had a positive effect on increasing savings. By owning a house in the city, they saved the living cost so the household savings increase. Different results could be seen from the correlation between the two variables in the village. House ownership had no significant effect on savings account ownership in the village.

Total consumption was positively and significantly (1%) related to savings ownership in rural and urban areas. An increase in consumption or total spending would have the opportunity to increase by 3.829 times the household savings ownership in urban areas. Meanwhile, an increase of spending in the rural would have the opportunity to increase 2.87 times the savings ownership. These results strengthened (Haider et al., 2016; Ting & Kollamparambil, 2015) research that showed a positive and significant correlation between consumption and increased savings.

Government banks and private banks were two of the four institutional factors in this research. Government and private banks in urban areas had no effect on any significant level in this research. It showed that the number of government and private banks in urban areas had no effect on someone saving behavior. There were many alternatives for household heads in urban areas to save wealth, not only money but also investments, stocks, mutual funds, and many others. It made government and private banks not the only option to save the finances of urban communities. The results were different in the rural, the number of government and private banks has a positive and significant effect (1%) on the increase of someone's savings accounts. The availability of many private and government bank has proven to be successful in increasing the opportunity of having savings by 1,004 times. It was in line with (Heckman & Hanna, 2015) research which showed that one of the important determinants of saving income sources was the availability of savings institutions and organized capital markets.

The effect of the distance between government and private banks on savings ownership in urban and rural areas was negative and significant (1%). The distance between government and private banks from the district decreased the opportunity of public savings ownership by 0.988 times in urban and 0.991 times in rural. It indicated that infrastructure was the key to increasing someone's savings. It was different from the distance between private banks and savings ownership. The distance of private banks that are far from the district increased the opportunity of savings ownership in the urban by 1.009 times and in the rural by 1.004 times. Private bank services that satisfy the community-made distance are not an excuse and a choice for the community (Seiler et al., 2013). Institutional factors that have access to financial institutions were important predictors of saving behavior (Heckman & Hanna, 2015; Hounmenou, 2011). The distance was not a problem to determine the level of savings but service quality and customer satisfaction were the main keys (Dadzie et al., 2003).

5. Conclusion

The results indicate the effect of socio-demographic characteristics and institutional factors on savings ownership in urban and rural formal institutions. The logistic regression analysis method shows that there are differences in the influence of socio-demographic and institutional characteristics in increasing the interest of household heads in saving both in urban and rural areas. The age factor of the household head in the two objects is a factor that causes differences in influencing savings ownership. In addition, the availability of government bank has succeeded in increasing the savings ownership in the village. However, the high people mindset in urban areas causes government bank to have no significant effect on savings ownership. The people's mindset in urban areas saves money in formal financial institutions. In addition, there are other alternatives as an option to save money such as stocks, investments, and many others. Other factors show the same effect on household savings ownership in both urban and rural areas. The gender of the

household head, business sector, number of dependents, and distance from the government bank has a negative and significant effect. Meanwhile, the marital status, length of school time, employment status, health insuranceownership, credit ownership, household expenses, and distance from private banks have a positive and significant effect on savingsownership. The findings are expected to provide alternatives and policy recommendations for the government related to increasing people's motivation to save and equitable distribution of facilities for formal financial institutions in cities and villages.

References

Bernheim, B. D., & Garrett, D. M. (2003). The effects of financial education in the workplace: evidence from a survey of households. *Journal of Public Economics*, *87*(7–8). https://doi.org/10.1016/S0047-2727(01)00184-0

Blanc, J. le, Porpiglia, A., Teppa, F., Zhu, J., &Ziegelmeyer, M. (2016). Household Saving Behavior in the Euro Area. *International Journal of Central Banking*, *12*(2).

Brounen, D., Koedijk, K. G., &Pownall, R. A. J. (2016). Household financial planning and savings behavior. *Journal of International Money and Finance*, *69*. https://doi.org/10.1016/j.jimonfin.2016.06.011

Browning, M., & Lusardi, A. (1966). Household Saving: Micro Theories and Micro Facts. *Journal of Economic Literature*, *34*(4), 1797–1855.

Chamon, M., Liu, K., & Prasad, E. (2013). Income uncertainty and household savings in China. *Journal of Development Economics*, *105*, 164–177. https://doi.org/10.1016/j.jdeveco.2013.07.014

Dadzie, K. Q., Winston, E., & Afriyie, K. (2003). The effects of normative social belief systems and customer satisfaction on rural savings programs in Ghana. *Management Decision*, *41*(3), 233–240. https://doi.org/10.1108/00251740310469422

Deaton, A. (1991). Saving and Liquidity Constraints. *Econometrica*, *59*(5), 1221. https://doi.org/10.2307/2938366

Donkor, E., &Anane, E. (2016). Saving behaviour of citrus farmers in Ghana: implications for rural enterprise development. *Development in Practice*, *26*(8). https://doi.org/10.1080/09614524.2016.1225671

Engelhardt, G. v. (1996). House prices and home owner saving behavior. *Regional Science and Urban Economics*, *26*(3–4). https://doi.org/10.1016/0166-0462(95)02118-3

Fassil, E., & Mohammed, B. (2017). Dynamics and determinants of rural-urban migration in Southern Ethiopia. *Journal of Development and Agricultural Economics*, *9*(12). https://doi.org/10.5897/JDAE2017.0850

Fisher, P., &Anong, S. (2013). *Health status and household saving behavior*. *5*, 167–177.

Friedman, M. (1957). The Permanent Income Hypothesis. In *A Theory of the Consumption Function* (pp. 20–37). National Bureau of Economic Research, Inc. https://EconPapers.repec.org/RePEc:nbr:nberch:4405

Haider, M. Z., Hossain, T., & Siddiqui, O. I. (2016). Impact of remittance on consumption and savings behavior in rural areas of Bangladesh. *Journal of Business*, *1*(4), 25. https://doi.org/10.18533/job.v1i4.49

Hanna, S., &Rha, J.-Y. (2000). *The Effect of Household Size Changes on Credit Use An Expected Utility Approach*.

Heckman, S. J., & Hanna, S. D. (2015). Individual and Institutional Factors Related to Low-Income Household Saving Behavior. *Journal of Financial Counseling and Planning*, *26*(2), 187–199. https://doi.org/10.1891/1052-3073.26.2.187

Hefferan, C. (1982). Determinants and Patterns of Family Saving. *Home Economics Research Journal*, *11*(1). https://doi.org/10.1177/1077727X8201100109

Hounmenou, C. (2011). Striving to Save: Creating Policies for Financial Security of Low-Income Families, by Sherraden, M. S., & McBride, A. M., with Beverly, S. G. *Journal of Community Practice*, *19*(2). https://doi.org/10.1080/10705422.2011.569277

Keynes, J. M. (1936). *The General Theory of Employment, Interest, and Money*.

Kiiza, B. (2001). Household Financial Savings Mobilisation: Empirical Evidence from Uganda. *Journal of African Economics*, *10*(4), 390–409. https://doi.org/10.1093/jae/10.4.390

Knoll, M. A. Z., Tamborini, C. R., & Whitman, K. (2012). I Do … Want to Save: Marriage and Retirement Savings in Young Households. *Journal of Marriage and Family*, *74*(1), 86–100. https://doi.org/10.1111/j.1741-3737.2011.00877.x

Lusardi, A. (2008). *Household Saving Behavior: The Role of Financial Literacy, Information, and Financial Education Programs*. National Bureau of Economic Research. http://www.nber.org/papers/w13824.pdf

Maherul, S. A. (2015, August 10). DisparitasDesa Kota. *Sindonews*.

Marie theresa, N. (2007). *AN INVESTIGATIVE ANALYSIS INTO THE SAVING BEHAVIOUR OF POOR HOUSEHOLDS IN DEVELOPING COUNTRIES: with specific reference to South Africa*. http://hdl.handle.net/11394/2081

Markos, W. (2015). Determinants and Behaviour of Rural Household Saving: A Case of Dale Woreda, Sidama Zone. *INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY ADVANCED RESEARCH TRENDS*, *2*, 1–9.

Modigliani, F., & Ando, A. K. (2009). TESTS OF THE LIFE CYCLE HYPOTHESIS OF SAVINGS: COMMENTS AND SUGGESTIONS1: TESTS OF THE LIFE CYCLE HYPOTHESIS OF SAVINGS. *Bulletin of the Oxford University Institute of Economics & Statistics*, *19*(2), 99–124. https://doi.org/10.1111/j.1468-0084.1957.mp19002002.x

Modigliani, F., &brumberg, R. (1955). Utility analysis and the consumption function: An interpretation of cross-section data. *Post-Keynesian Economics*, 388–436.

Ngasuko, T. A. (2018). Determinant Factor For Household To Access Formal Financial Institution: The Study Case Susenas 2015. *Munich Personal RePEcArchieve*, *97995*. https://mpra.ub.uni-muenchen.de/97995/

Nguyen, V. T., & Doan, M. D. (2020). The Correlation between Financial Literacy and Personal Saving Behavior in Vietnam. *Asian Economic and Financial Review*, *10*(6), 590–603. https://doi.org/10.18488/journal.aefr.2020.106.590.603

Obayelu, O. A. (2012). Saving Behavior of Rural Households in Kwara State, Nigeria. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1999413

Owen, A. L., & Pereira, J. M. (2018). Bank concentration, competition, and financial inclusion. *Review of Development Finance*, *8*(1), 1–17. https://doi.org/10.1016/j.rdf.2018.05.001

Pateman, T. (2011). Rural and urban areas: comparing lives using rural/urban classifications. *Regional Trends*, *43*(1), 11–86. https://doi.org/10.1057/rt.2011.2

Perz, S. G., Shenkin, A., Rondon, X., &Qiu, Y. (2013). Infrastructure Upgrades and Rural–Urban Connectivity: Distance Disparities in a Tri-National Frontier in the Amazon. *The Professional Geographer*, *65*(1), 103–115. https://doi.org/10.1080/00330124.2011.639636

Pohan, H. L., Suroso, P. C., Pattiwel, J. F., & Fordian, D. (2014). *Perilaku Menabung Kelompok Masyarakat Berpenghasilan Rendah (MBR) di Perkotaan dan Perdesaan*.

Rahman, A. U., Hayat, Y., Habbib, Z., & Iqbal, J. (2011). Rural-Urban Disparities in Khyber Pakhtunkhwa Pakistan. *Sahad J Agric*, *27*(3), 2.

Rehman, H. ur, Faridi, M. Z., & Bashir, F. (2010). Households Saving Behaviour in Pakistan: A Case of Multan District. *Pakistan Journal of Social Sciences (PJSS)*, *30*(No. 1 (September 2010)), 17–29.

Rha, J.-Y., Montalto, C., & Hanna, S. (2006). The effect of self-control mechanisms on household saving behavior. *Journal of Financial Counseling and Planning*, *17*.

Robin, H., & Brenda, C. (2016). Financial Literacy and Long- and Short-Term Financial Behavior in Different Age Groups. *Journal of Financial Counseling and Planning*, *27*(1), 3–19.

Seiler, V., Rudolf, M., &Krume, T. (2013). The influence of socio-demographic variables on customer satisfaction and loyalty in the private banking industry. *International Journal of Bank Marketing*, *31*(4), 235–258. https://doi.org/10.1108/IJBM-10-2012-0101

Thi Minh, N., Hong Nhat, N., Trong Anh, T., Duc, P. M., & Son, L. T. (2013). emographics and Saving Behavior of Households in Rural Areas of Vietnam: An Empirical Analysis. *Journal of Economics and Development*, *15*(2), 5–18.

Ting, L., &Kollamparambil, U. (2015). Nature and determinants of household retirement savings behavior in South Africa. *Development Southern Africa*, *32*(6). https://doi.org/10.1080/0376835X.2015.1063987

Veritia, Lubis, I., Amas, P. I., & Susanto. (2019). *TeoriEkonomi Makro* (Vol. 1). Unpam Press.

Wiggins, S., & Proctor, S. (2001). How Special Are Rural Areas? The Economic Implications of Location for Rural Development. *Development Policy Review*, *19*(4), 427–436. https://doi.org/10.1111/1467-7679.00142

Winarto, A. R., & Rapini, T. (2014). Peran Lembaga Keuangan Informal TerhadapPemberdayaanKelompokusaha Informal. *JurnalEkulilibrium*, *12*(1).

Wu, W. (2010). Urban Infrastructure Financing and Economic Performance in China. *Urban Geography*, *31*(5), 648–667. https://doi.org/10.2747/0272-3638.31.5.648

Xiao, J., & Olson, G. I. (1993). Mental Accounting and Saving Behavior. *Home Economics Research Journal*, *22*(1). https://doi.org/10.1177/004677749302200105

Yuh, Y., & Hanna, S. D. (2010). Which Households Think They Save? *Journal of Consumer Affairs*, *44*(1), 70–97. https://doi.org/10.1111/j.1745-6606.2010.01158.x

Zwane, T., Greyling, L., &Maleka, M. (2016). The Determinants Of Household Savings In South Africa: A Panel Data Approach. *International Business & Economics Research Journal (IBER)*, *15*(4). https://doi.org/10.19030/iber.v15i4.9758