Research in Economics and Management
ISSN 2470-4407 (Print) ISSN 2470-4393 (Online)
Vol. 9, No. 3, 2024
www.scholink.org/ojs/index.php/rem

Original Paper

Research on the Wealth Effect of Financial Assets on Household Consumption—Discussion Based on the Mechanism of the Real Income and Liquidity Constraint

LongHui Chen[1*]

[1] School of Economics and Management, Guangxi Normal University, Guangxi, China

[*] Corresponding author: LongHui Chen, School of Economics and Management, Guangxi Normal University, Guangxi, China

Received: June 3, 2024 Accepted: June 21, 2024 Online Published: July 12, 2024
doi:10.22158/rem.v9n3p1 URL: http://dx.doi.org/10.22158/rem.v9n3p1

Abstract

After using the data of China Household Finance Survey (CHFS) to explore the relationship between financial assets and household consumption, this paper found that there is a wealth effect between financial assets and household consumption, that is, the higher the level of financial assets held by households, the higher the consumption. Also, this conclusion is still robust even if we chose to add intertemporal variables to the empirical model to solve the potential endogenous problem. In addition, this paper tried to propose and verify two mechanisms in wealth effect, and mechanisms are the real income and the liquidity constraint respectively. Concretely speaking, on the one hand, households can increase property income by allocating financial assets, thereby promoting household consumption; on the other hand, households can affect flexible money, thus affecting consumption. Finally, in the further heterogeneity analysis, this paper found that compared with urban households, holding more financial assets has a stronger incentive to rural household consumption.

Keywords

Financial Assets, Household Consumption, Wealth Effect, Mechanism

1. Introduction

With the development of the times, consumption plays an increasingly important role in promoting the growth of country's economic. Taking China as an example, as of the first quarter of 2024, the contribution rate of final consumption to economic growth exceeds 50%, reaching more than 70%. The releasing of residents' consumption vitality is undoubtedly an important focus to promote economic development to every country. The residents' willingness to consume can be enhanced by stable and reasonable household income, then the higher consumption will also be met, and the consumption vitality will be released. The largest proportion of total household income is usually wage income, followed by property income. Similarly, taking China as an example, the income data of residents in 2024 shows that the proportion of property income in disposable income of Chinese residents was still low, and only 8.6%. At the same time, according to the data of the Assets and Liabilities of Urban Households of China in 2019 made by the People's Bank of China, the proportion of housing assets held by urban households in total household assets was 59.1%, while the proportion of financial assets was only 20.4%. It is not difficult to see that the asset structure of most Chinese households is still relatively simple from the above data, and the degree of participation in the financial market for Chinese household is still low, so the phenomenon of low property income to households is obvious. Based on this background, it is of great theoretical and practical significance to explore how the allocation of household financial asset stimulate household consumption vitality.

Now, the research related to the allocation of financial asset has gradually attracted the attention of scholars at home and abroad. On the one hand, the gradual increase in the development of financial market in recent years has enabled households to have more opportunities to contact different financial assets, and households can allocate more diversified financial assets. On the other hand, the income of the family can be affected by the allocation of household financial asset. The more reasonable the structure of financial assets held by households is, the higher the property income they can obtain. Thus, scholars have studied the allocation of financial assets from multiple perspectives. These researches focuses on the influencing factors and effectiveness of the allocation of financial asset, and the effect of financial asset on household economic activities. As an important part of the household economic activities, consumption will obviously be affected by financial assets. But many scholars focussed on the effect of housing assets on household consumption in the past, rather than the effect of financial assets on consumption, because the proportion of housing assets is largest among all the assets held by a family.

In this paper, we used the data of China Household Finance Survey data (CHFS) from 2017 to 2019 to complete the re-verification of the theory. Compared with the existing research, the main work of this paper is as follows. First, this paper sorted out the literature on the wealth effect of household financial assets on consumption, and tried to propose another solution to its potential endogenous problems. Second, this paper sorted out the mechanism of household financial asset on consumption, and combined empirical evidence to explain, and finally analyzed and discussed the effect of financial assets on household consumption between the urban and rural households.

2. Current Status of Research on Financial Asset and Household Consumption

In order to meet the living needs, every family must spend a certain amount of goods and services. This behavior is what we call 'consumption'. As a crucial part of household economic activities, scholars of the world have also carried out many studies in the field of consumption. In the current status of research, and scholars mainly focused on the discussion of the different factors that affect consumption. Keynes (1936) put forward a concept called ‘marginal propensity to consume’ (MPC). He chose to interpret the factors that affect household consumption from the perspective of income. He believed that a certain proportion of the current income will be converted into consumption of every family, which will gradually decrease with the increase of income. Since then, some scholars have proposed that individual consumption is mainly depended on ‘permanent income’, and the individual consumption will not be affected by the fluctuation of short-term income. Scholars have different views on the ability of income to affect consumption, and their views are not completely unified until now. But there is no doubt that many scholars including Keynes had made great contributions to the continuous improvement of consumption theory in the past. In addition, the structure of household, like the number of children and the elderly, is also an important factor affecting consumption. At the same time, the social environment of the country can also not be ignored because of the worldwide epidemics in the past few years. In addition to the above factors, there are many factors that can affect consumption, and the allocation of household asset is one of them.

In fact, scholars had also carried out relevant research on the effect of household assets on consumption for a long time. However, quite a lot of scholars focused on the effect of housing asset because of the poorly developed financial markets at the time (Campbell & Cocco, 2007). However, with the gradual development of the financial market, families can access and choose a richer variety of financial products to obtain a certain income, thus changing the household’s property income and wealth structure (Zhang & Xie, 2018), and finally affect household consumption (Zhou, 2021). Based on the background of the growing total household wealth, the research on the effect of financial assets on household consumption is of great significance.

The theoretical basis for analyzing the effect of household financial assets on consumption is the life cycle model proposed by Modigliani and Ando in 1963. Rational consumers will consider the expectation of lifetime income and use it as the basis for planning consumption in the future, so as to reasonably consume in each period of their lives. For each family, various incomes are the source and driver of consumption. In order to maximize the utility of the family, the family needs to allocate its disposable income to different consumption reasonably. And the property income available from the allocation of financial assets is also one of the important sources of household disposable income. Thus, the consumption at all stages of the life cycle will be affected by the expansion of household asset, and the household financial assets is even more so. Especially in the rapid development of financial markets in this time, the wealth effect of financial assets on household consumption will be more obvious and important. And it is worth mentioning that scholars sometimes ignore the endogenous problems in the process of studying the wealth effect between financial assets and household consumption, because the holding level of financial assets and household consumption are affected by the financial literacy and personal preferences of family members. In addition, the volatility in financial market, the inflation and other factors will also have an impact on the real value of financial assets allocated by households, which in turn affects household consumption decisions. According to the permanent income hypothesis of Friedman in 1957, in order to maximize their own utility, rational consumers will make each consumption decision based on the income that can be maintained in the long run, that is, the permanent income, rather than the current temporary income. Therefore, we can consider introducing the idea of intertemporal consumption into the framework of studying wealth effects in order to avoid the interference from endogenous variables on research, and then separate the effect of changes in the value of household financial assets on consumption in different periods. From the existing literature, some scholars also chose to analyze the wealth effect from the perspective between changes in asset value and household consumption. Dynan and Maki (2001) found that household consumption can be affected by the change in the value of stock assets through the liquidity of household wealth based on the United States Consumer Expenditure Survey (CE). Yu Ping and Wang Can (2019) proved that there is a significant wealth effect of financial assets on household consumption based on the China Household Finance Survey (CHFS).

3. Discussion on the Mechanism

In my opinion, the main mechanism of the wealth effect between financial assets and household consumption are the mechanism of the real income and the liquidity constraint.

First of all, from the perspective of the source of household income, before the imperfect construction of China’s financial market, wage income accounted for a very high proportion of total household income, so wage income is the main source of household consumption at this time. With the gradual development of financial market, families have more choices to allocate financial assets. And the household’s property income and total income will also increase with the increase of the income of the financial assets. There is also an increasing trend showed by household consumption. At the same time, the proportion of property income in the total household income is gradually increasing, and the influence of property income on household consumption can not be ignored. From the above analysis, households can obtain property income through the rational allocation of financial assets, so as to obtain more and actual disposable income, and finally promote families to increase consumption. The above is the mechanism of real income.

Secondly, from the perspective of liquidity constraints, in the existing research, some scholars chose to define the liquidity constraints of households from the perspective of credit constraints, and believe that households can obtain loan financing from financial institutions and non-financial institutions through the allocation of financial assets and the appreciation of financial assets as pledges, thus alleviating liquidity constraints and meeting household consumption needs (Yu & Wang, 2019). Some scholars also believe that there are differences between credit constraints and liquidity constraints. The liquidity constraints faced by households mainly refer to whether households can ease their financial constraints by quickly liquidating some of their assets to meet household consumption needs when their funds are insufficient to support consumer spending. However, considering the above two views, the reasons for the effect on household consumption are essentially related to the lack of flexible money available or prepared by households.

Therefore, this paper theoretically proposes two mechanisms that exist in the wealth effect of financial assets on household consumption, including the mechanism of the real income and the liquidity constraint, and tries to use empirical methods to verify them later.

4. Description of Variables and Empirical Models

4.1 Definition of Core Variables

The explained variable of this paper is household consumption, including total household consumption, survival consumption and development & enjoyment consumption. The measurement units of the above variables are all ten thousand yuan. Actually, according to the questionnaire setting in CHFS, the total household consumption is composed of food consumption, clothing consumption, housing consumption, transportation and communication consumption, household equipment and service consumption, education and entertainment consumption, health consumption and other consumption. In this paper, the first three types of consumption are merged into the necessity consumption required by the family to ensure the basic life, that is, the survival consumption, and the last five types of consumption are merged into the expenditure of the family for upgrading and improving the life, that is, the development & enjoyment consumption.

The explanatory variable is the holding level of household financial assets, and its unit is also ten thousand yuan. At the same time, this paper also chose some variables about the characteristics of family as the control variable, including gender, age, education, health and so on.

In addition, the mechanism variable of this paper are the property income and the household flexible money. The unit of variables is ten thousand yuan. It is worth mentioning that the property income of this paper includes deposit interest, stock income, bond income, fund income and housing asset rental or transfer income. And the household flexible money is the difference between financial assets with high household liquidity and total household liabilities. Specifically, financial assets with high household liquidity refer to liquid assets that can be quickly realized, including household current, term deposits and cash holdings.

4.2 Setting of Empirical Model

This paper first used the mixed regression model to verify the existence of the wealth effect again.

$$Consumption_{it} = \beta_1 + \beta_2 Asset_{it} + \beta_3 X_{it} + \mu_{it} \quad (1)$$

And then, the financial literacy and personal preferences of family members will not change immediately in the short term, and the value of financial assets will not change extremely due to market fluctuations in the short term. Considering the endogenous problems that are easily ignored in the test of wealth effect, this paper introduced the previous consumption variable into the model to separate the effect of changes in the value of financial assets on household consumption.

$$\text{Consumption}_{i,t} = \beta_1 + \beta_2\text{Consumption}_{i,t\text{-}1} + \beta_3\text{Asset}_{it} + \beta_4 X_{it} + \mu_{it} \quad (2)$$

In the above two models, Consumption_{it} means the consumption of the i^{th} family in the period of t, $\text{Consumption}_{i,t-1}$ means the consumption of the i^{th} family in the period of (t-1). Combined with the above analysis, the period of t and (t-1) represent 2019 and 2017 respectively. In addition, Asset_{it} means the holding level of household financial assets of the i^{th} family in the period of t, X_{it} means the control variables, and μ_{it} means the disturbance term.

5. Interpretation of Empirical Results

5.1 Descriptive Statistic of Core Variables

Table 1 is the descriptive statistical results of the core variables used in this paper. It can be seen from the table that the development & enjoyment consumption is more than the survival consumption on the whole, which is in line with the actual situation of China’s consumption structure upgrading. It is worth noting that there are still a few people holding more financial assets in the survey sample, and most people may not have or hold less financial assets. In addition, there are still some families with no property income or less flexible money. In the table 1, the mean value, minimum value and maximum value will all be retained at most three decimal places after the decimal point, and the reservations rule is round.

Table 1. The Descriptive Statistic of Core Variables

Variables	Number of samples	Mean	Min	Max
total_con	15650	7.434	0.688	46.436
sur_con	15650	3.603	0.397	19.980
de_con	15650	3.751	0.096	32.292
fin_asset	15650	10.193	0	655
prop_inc	15650	0.288	0	7.803
flexible_money	15650	-0.546	-100	76.700

5.2 Interpretation of Baseline Regression

Table 2 is the result of baseline regression about the wealth effect of financial asset on household consumption. The first to third columns of Table 2 show the regression results that the wealth effect of financial asset on household consumption is positive, because the coefficients of the holding level of financial assets are 0.039, 0.026 and 0.013 respectively, and also can be robust at the level of 1%. Also, combined with the above analysis, this paper added the variable of household consumption in 2017 into the empirical model to control the factors that are likely to cause endogenous problems. At this time, the regression coefficient can be understood as the effect of unexpected changes in the value of financial assets on household consumption. The results in the fourth to sixth columns of Table 2 show that under the condition of controlling the variable of household consumption in 2017, the coefficients of unexpected changes in the value of financial assets in 2019 can also be significantly positive at the level of 1%. Obviously, this result is also applicable to total household consumption, survival consumption and development & enjoyment consumption. In this part, this paper verified the existence of wealth effect again!

Table 2. Empirical Result of Baseline Regression

	(1)	(2)	(3)		(4)	(5)	(6)
	total_con	de_con	sur_con		total_con2019	de_con2019	sur_con2019
fin_asset	0.039***	0.026***	0.013***	fin_asset2019	0.040***	0.029***	0.012***
	(0.005)	(0.003)	(0.002)		(0.004)	(0.003)	(0.002)
				total_con2017	0.486***		
					(0.025)		
				de_con2017		0.455***	
						(0.028)	
				sur_con2017			0.363***
							(0.019)
Control	Yes	Yes	Yes	Control	Yes	Yes	Yes
N	15650	15650	15650	N	7825	7825	7825
R-Square	0.225	0.185	0.161	R-Square	0.285	0.236	0.205
Adj.R-Square	0.224	0.184	0.160	Adj.R-Square	0.284	0.235	0.204

5.3 Test of the Mechanism on the Wealth Effect

In order to verify whether the allocation of financial assets has an effect on household consumption through the mechanism of the real income and the liquidity constraint, this paper used the Sobel method to test whether the mediating effect is significant and the size of the mediating effect.

5.3.1 Test of the Mechanism of Real Income

The first column of Table 3 show that the regression coefficient between the holding level of household financial assets and property income is 0.013, and it is robust at the level of 1%. What we can learn from this result is that the increase of the holding level of household financial assets can promote the increase of property income. In the last three columns of the Table 3, the regression coefficients of property income to household consumption are 0.303, 0.203 and 0.082 respectively, which are significant at the level of 1%. Thus, there is a positive correlation between the rise of household property income and the increase of household consumption. Moreover, after the mechanism variable is added to the model, the regression coefficient of the holding level of household financial assets and property income is also significantly positive. At the same time, compared with the result of Table 2, it can be found that the regression coefficient of the holding level of household financial assets has decreased, indicating that the partial mediating effect of property income as a mechanism variable exists. In addition, the Sobel mediating effect test results show that the mediating effect of property income as a mediating variable is robust, and the mediating effects are 10.41 %, 10.34 % and 8.59 % respectively. The above results indicate that households can increase property income by allocating financial assets, thereby promoting household consumption.

Table 3. Empirical Result of the Test of the Mechanism of the Real Income

	(1)	(2)	(3)	(4)
	prop_inc	total_con	de_con	sur_con
fin_asset	0.013***	0.035***	0.024***	0.012***
	(0.000)	(0.002)	(0.001)	(0.001)
prop_inc		0.303***	0.203***	0.082***
		（0.047）	（0.033）	（0.021）
Control	Yes	Yes	Yes	Yes
N	15650	15650	15650	15650
R-Square	0.178	0.227	0.187	0.162
Adj.R-Square	0.177	0.227	0.186	0.161
Sobel mediating effect		robust/10.41%	robust/10.34%	robust/8.59%

5.3.2 Test of the Mechanism of Liquidity Constraint

Similarly, the first column of Table 4 show that the regression coefficient between the holding level of financial assets and flexible money is 0.260, and it is robust at the level of 1%. The rise of household flexible money can be driven by the improvement of the holding level of financial assets to a certain extent. It is worth mentioning that there is still a robust positive correlation between the holding level of financial assets and household consumption. However, the regression coefficients of flexible money to household consumption are -0.045, -0.029 and -0.014 respectively, which are robust at the level of 1%. Combined with the results of the test of Sobel mediating effect, the above results show that although the increase of the holding level of financial assets can promote the increase of household consumption, the increase of household flexible money will negatively inhibit consumption. For this phenomenon, this paper speculated that the reason is that the holding structure of household financial assets can be affected by the behavior of household allocation of financial assets, and the total amount of money that households can flexibly schedule will also be affected by the holding structure of household financial asset. The more flexible money the family can allocate, the more liquid financial assets the family will hold when the debt is established, that is, the family want to hold liquid assets that can be discounted to cash more quickly. This shows that the family will reduce the willingness to consume in a certain extent, thus inhibiting household consumption. The above results finally indicate that households can affect flexible money, thus affecting consumption.

Table 4. Empirical Result of the Test of the Mechanism of the Liquidity Constraint

	(1)	(2)	(3)	(4)
	flexible_money	total_con	de_con	sur_con
fin_asset	0.260***	0.051***	0.034***	0.016***
	(0.005)	(0.002)	(0.001)	(0.001)
flexible_money		-0.045***	-0.029***	-0.014***
		（0.003）	（0.002）	（0.001）
Control	Yes	Yes	Yes	Yes
N	15650	15650	15650	15650
R-Square	0.159	0.238	0.196	0.168
Adj.R-Square	0.158	0.237	0.195	0.167
Sobel mediating effect		robust/-30.02%	robust/-29.04%	robust/-28.15%

5.4 Further Discussion of Heterogeneity Analysis about Urban and Rural

In recent years, the gradual development of digital finance has made great contributions to narrowing the urban-rural consumption gap. However, it is undeniable that there are still some differences in the wealth, financial literacy and consumption habits between urban and rural households in each country. Therefore, this paper divides urban samples and rural samples to examine the relationship between financial assets and household consumption between urban and rural areas. Table 5 shows the regression results of heterogeneity analysis of urban samples and rural samples. The results show that the behavior of holding more financial assets is of great benefit to stimulate household consumption in both urban and rural samples, and the stimulating ability of rural households is greater than that of urban households. The possible reasons speculated in this paper are as follows. First, compared with urban households, the income and consumption of rural households are lower, so the marginal propensity to consume per unit of financial asset is higher. Second, the implementation of various financial policies and the widely used of the Internet and mobile phones have brought more options for online financial activities and consumption activities in rural areas, breaking through the limitations of previous physical conditions, reducing the cost of financial decision-making and consumption decision-making in rural households, and gradually releasing the consumption potential of rural households.

Table 5. Empirical Result of Heterogeneity Analysis about Urban and Rural

	(1)	(2)	(3)	(4)	(5)	(6)
		urban			rural	
	total_con	de_con	sur_con	total_con	de_con	sur_con
total_fin	0.035***	0.024***	0.011***	0.047***	0.031***	0.015***
	(0.004)	(0.003)	(0.002)	(0.011)	(0.006)	(0.006)
Control	Yes	Yes	Yes	Yes	Yes	Yes
N	6836	6836	6836	8814	8814	8814
R-Square	0.203	0.182	0.127	0.175	0.130	0.124
Adj.R-Square	0.201	0.181	0.126	0.174	0.129	0.123

6. Conclusions

This paper used the data of China Household Finance Survey in 2017 and 2019 to explore the wealth effect of household financial assets on consumption, and discussed the influence mechanism about wealth effect. The conclusion of this paper is that there is a wealth effect between financial asset and household consumption, that is, the higher the level of financial assets held by households, the higher the consumption. At the same time, after this paper chose to add intertemporal data to the model, the result showed that the wealth effect still exists. In addition, this paper proposed and verified two mechanisms that may exist in the wealth effect of financial assets on household consumption, including the mechanism of the real income and the liquidity constraint. Finally, the results of heterogeneity analysis show that the wealth effect of household financial assets on consumption is stronger in rural households than urban.

References

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

Campbell, J. Y., & Cocco, J. F. (2007). How Do House Prices Affect Consumption? Evidence from Micro Data. *Journal of Monetary Economics*, *54*(3), 591-621.

Zhang, Z., & Xie, J. (2018). An Empirical Study on the Income Effect of Rural Household Financial Asset Allocation. *Gansu Social Sciences*, *2*, 209-215.

Zhou, C. (2021). Life Cycle and Household Portfolio Effectiveness: Investment Experience Accumulation or Cognitive Decline? *South China Journal of Economics*, *6*, 101-118.

Modigliani, F., & Ando, A. (1963). The “Life Cycle” Hypothesis of Saving: Aggregate Implications and Tests. *American Economic Review*, *53*, 55-84.

Friedman, M. (1957). *A Theory of The Consumption Function*. Princeton University Press.

Dynan, K. E., & Maki, D. M. (2001). Does Stock Market Wealth Matter for Consumption? *Social Science Research Network Electronic Journal*, *No. 270190.*

Yu, P., & Wang, C. (2019). How the Allocation of Financial Assets Affects the Consumption of Urban and Rural Households in China. *Journal of Hebei University of Economics and Business*, *40*(6), 18-27.