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Original Paper

Research on the Effect of Financial Asset Allocation on Household Consumption:Based on the Perspective of Wealth Effect

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Abstract

Based on the perspective of wealth effect, this paper uses the data of China Household Finance Survey to explore the effect of household financial asset allocation on consumption.This paper found that there is a wealth effect between household financial asset allocation and consumption,that is,household financial assets have an impact on consumption through the change of holding level.And when we used the instrumental variable to deal with the endogenous problem of variables, the above conclusion is still valid.Similarly,After replacing the empirical model and database,the empirical results are also robust and significant.This paper is of great significance to promote households to allocate more financial assets and release consumption vitality.

Keywords

financial asset allocation, household consumption, wealth effect

1. Introduction

Consumption is the key point to make economic development successfully for each country, and it is also an important force to further promote economic growth. Taking China as an example, as of the first quarter of 2024, the contribution rate of China's final consumption to economic growth has reached 73.7%. In the past few years, under the influence of the worldwide epidemic, the economies of various countries have been impacted to varying degrees. And now, further releasing the vitality of residents' consumption vitality is an important focus of restoring national economic development. In addition, with the development of financial markets in countries around the world, the allocation of financial assets for every family is more diversified, and residents can realize the appreciation of

household wealth through rational allocation of financial assets, so as to meet higher consumption demand. Based on this background, it is of great theoretical and practical significance to explore the allocation behavior of household financial assets to stimulate household consumption vitality and promote economic development.

In recent years, scholars around the world have also explored the allocation of household financial assets from different perspectives. Some studies focus on the influencing factors and the effectiveness of household financial asset allocation (Guiso, 1996; Wu et al., 2021), and others pay more attention to the effect of financial asset allocation on the economic activities of household residents (Bostic, 2009). Consumption is also an indispensable part of the economic activities of household residents, and some scholars have explored the different factors that affect consumption, including population age structure,housing price fluctuations and so on (Li et al., 2008). However, in the current research on the effect of asset allocation on household consumption, a considerable number of studies chose to explore its impact on consumption from the perspective of housing assets, and the literature on the effect of household financial asset allocation on consumption is still relatively lacking.

Therefore, we chose to use the data of China Household Finance Survey data (CHFS) from 2017 to 2019 released by the Southwest University of Finance and Economics to explore the effect of household financial asset allocation on consumption. The following parts of this paper are arranged as follows. In the second part, we review and summarize the relevant literature, then carry out theoretical analysis and propose the the question discussed in this paper. The variables and empirical model used in this paper will be introduced in the third part, and the empirical results will be interpreted in the fourth part. Finally, we will summarize the full paper in the fifth part.

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

Consumption is a necessary expenditure of goods and services to meet the needs of every family, and it is an important part of family economic activities. The existing literature related to consumption mainly focuses on the discussion of different factors that can affect consumption. These literature pointed out that a certain proportion of the family 's current income will be used for consumption, and this proportion will gradually decrease with the increase of income (Keynes, 1936). In addition, the high-level consumption for education and entertainment is more sensitive to price changes, while the consumption for survival necessity is less sensitive to price changes (Selvanathan, 2003). It is also worth mentioning that changes in the number of children and the elderly can have an impact on household consumption (Li et al., 2008), and consumption habits are also an important factor affecting household consumption. With the rapid development of digital economy, the innovation and development of mobile payment technology has further stimulated the healthy consumption of families. Meanwhile,scholars from various countries have also carried out relevant research on the effect of household asset allocation on consumption. Now, a considerable part of the research focuses on the impact of housing asset factors (Campbell & Cocco, 2007). But it cannot be ignored that families have

more choices of financial assets because of the development of the financial market. And the household consumption will be affected directly by the available income from financial asset allocation (Zhang et al., 2015).

Actually, the life cycle model proposed by Modigliani and Ando in 1963 provides a basic theoretical framework for analyzing the effect of household financial asset allocation on consumption. They put forward a point of view:rational consumers can use income in a reasonable way to maximize their own utility, and they will consider the expectation of lifetime income and use it as the basis for planning consumer spending, so as to determine the consumption of each period of life. Based on the framework of the life cycle model,the holding level of various types of assets and the related income are the key sources of household property income, and they are also an important factor affecting household consumption.In order to realize the intertemporal optimal allocation of consumption, the optimal choice for families should be to 'smoothly' allocate their disposable income to each period of consumption.The holding level of household asset is closely related to disposable income, and it is obvious that the expansion of holding level of household asset can affect the consumption at all stages of the life cycle (Li & Chen, 2014). When we review the past literature, it is not difficult to find that the effect of household assets on consumption has not been much controversial in theoretical and empirical research: there is a wealth effect between household asset allocation and consumption. It is noteworthy that the different effect of financial assets with different risk levels on consumption has been proved by past research (Zhang & Cao, 2012). So we can shift the research perspective to household financial assets instead of household assets, and try to explore a question: is there also a wealth effect between household financial asset allocation and consumption, that is, can household financial assets have an impact on consumption through the change of holding level?

3. The Variables and Empirical Model

3.1 The Definition of Core Variables

The explained variable of this paper is household consumption,which is measured by total household consumption, survival consumption and development & enjoyment consumption. According to the questions from CHFS, total household consumption consists of survival consumption and development&enjoyment consumption. The explanatory variable is the holding level of household financial assets.The unit of variables is ten thousand yuan.

In addition, we also chose some variables about the characteristics of family as the control variable, such as gender, age, education, health and so on. After data pre-processing, including screening samples of household heads, deleting missing values and extreme values,etc., we finally obtained 7825 valid samples for each of the two years.

3.2 The Setting of Empirical Model

In order to explore the existence of the effect of household financial asset allocation on consumption, we try to use the mixed regression model to examine the asset effect, that is, the effect of household

financial asset holding level on consumption:

$$Consumption_{it} = \beta_1 + \beta_2 Asset_{it} + \beta_3 X_{it} + \mu_{it}$$

In this model, $Consumption_{it}$ means the consumption of the i^{th} family in the period of t,$Asset_{it}$ 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.

4. The Interpretation of Empirical Results

4.1 The 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 household consumption and the holding level of financial asset shows an upward trend. The following data are in line with the economic development trend in real life.

Table 1. The Descriptive Statistic of Core Variables

Variables	Number of samples	2017				2019			
		Mean	Sd	Min	Max	Mean	Sd	Min	Max
total_con	7825	6.364	5.380	0.688	32.090	8.504	7.666	0.922	46.436
sur_con	7825	3.383	2.610	0.397	16.020	3.822	3.105	0.462	19.980
de_con	7825	2.918	3.496	0.096	21.370	4.584	5.492	0.185	32.292
fin_asset	7825	9.297	25.807	0	576.881	11.088	30.502	0	655

Among them, the mean value, standard deviation, minimum value and maximum value will all be retained at most three decimal places after the decimal point, and the reservations rule is round.

4.2 The Interpretation of Baseline Regression

Table 2 is the result of baseline regression about the effect of financial asset allocation on household consumption. The first to third columns of Table 2 show the regression results that the effect of the holding level of household financial asset on consumption is positive, because the coefficients of household financial assets are 0.039, 0.026 and 0.013 respectively, and also can be robust at the level of 1%. Therefore, the higher level of financial assets held by households, the higher consumption households will have. The wealth effect exists!

Table 2. The Empirical Result of Baseline Regression

	(1)	(2)	(3)
	total_con	de_con	sur_con
fin_asset	0.039***	0.026***	0.013***
	(0.005)	(0.003)	(0.002)
Control	Yes	Yes	Yes

N	15650	15650	15650
R-Square	0.225	0.185	0.161
Adj.R-Square	0.224	0.184	0.160

As for the Table, the following rules will be used. First, ***, ** and * means that the result of regression will be robust at 1%, 5% and 10% levels respectively, so is the follow-up table. Second, the number in the brackets is the robust standard deviation,so is the follow-up table. Third, all data in the table will be retained at most three decimal places after the decimal point, and the retention rule is rounded, so is the follow-up table.

4.3 A Potential Endogenous Problem about Explanatory Variable

But we conjectured that there may be a endogenous problem about explanatory variable in Table 2. On the one hand, household financial asset allocation is a typical family self-selection behavior which will be affected by the financial literacy or personal preferences of family members. When we set up the empirical model, we may miss some important variables. On the other hand, investment decision-making of risky financial assets may be affected by consumer decision-makings, and household financial asset allocation will also be affected. There may be a reverse causality between the household financial asset allocation and consumption. Considering this potential endogenous problem, we used the instrumental variable method to assist the proof on the basis of the empirical model of asset effect. We chose the mean level of the holding level of financial assets of other families living in the same community with the interviewed families and with the same income level as the instrumental variable. This instrumental variable basically satisfies the two conditions of correlation and exogeneity. First, this instrumental variable directly represents the mean level of the holding level of financial assets of all families interviewed in the community,and other families in the same community can have an impact on the household financial asset allocation of the surveyed families through certain social interactions, which in turn affects the financial asset holding level of the surveyed families. So this instrumental variable is “correlation”. Second, the holding level of financial assets of other households is not directly related to the consumption behavior and decision-making of the interviewed households. So this instrumental variable is “exogeneity”.

Table 3 is the empirical results using the instrumental variable. In order to avoid the problems caused by weak instrumental variables as much as possible, we chose to use the limited information maximum likelihood method (LIML) which is more insensitive to weak instrumental variables for empirical regression. Similarly, the first to third columns of Table 3 show the regression results that the effect of the holding level of household financial asset on consumption is still positive. The coefficients of household financial assets are 0.144,0.083 and 0.061 respectively, and also can be robust at the level of 1%. This result is consistent with the results in Table 2. The above results further show that there is indeed a positive correlation between the holding level of financial assets and household consumption.The wealth effect still exists!In addition, table 3 also shows the results of the Hausman

test and the regression results of the first stage of the instrumental variable. According to the result of Hausman test, we can reject the hypothesis that all variables in the model are exogenous. From the regression results of the first stage of instrumental variables in table 3, it can be clearly seen that the mean level of the holding level of financial assets of other families living in the same community with the interviewed family is significantly positively correlated with the original endogenous explanatory variables, and the F statistic of the first stage is much larger than 10. The instrumental variable is also proved by the above data that it is not a weak instrumental variable.

Table 3. The Empirical Results Using the Instrumental Variable

	(1)	(2)	(3)
	total_con	de_con	sur_con
fin_asset	0.144***	0.083***	0.061***
	(0.027)	(0.018)	(0.012)
Control	Yes	Yes	Yes
N	15650	15650	15650
R-Square	0.067	0.089	0.000
	Hausman Test		
chi2(1)	92.13	53.17	97.02
Prob > chi2	0.0000	0.0000	0.0000
	The regression results of the first stage of the instrumental variable		
The mean level of the holding level of financial assets of other families living in the same community		0.254***	
		(0.046)	
The F statistic of the first stage		452.559	

4.4 The Robustness Test

In order to ensure the reliability of the research conclusions, the following robustness tests are carried out in this paper.First, we used the mixed regression model on panel data in the test about the asset effect. However, there is some extra requirements for the mixed regression that each survey sample should have the same regression equation, and some unobservable or omitted heterogeneity characteristics that may exist between different survey samples also will not be added to the mixed regression model. It is worth noting that the heterogeneity characteristics through different intercept terms will be added and considered by the fixed effect model. So we used the fixed effect model instead of the mixed regression model to finish the robustness test. The first to third columns of Table 4 show the regression results that the effect of the holding level of household financial asset on

consumption is still positive. The coefficients of household financial assets are 0.015, 0.011 and 0.005 respectively,and also can be robust.Second, considering the potential differences between different databases, we also chose to use the data from China Family Panel Studies (CFPS) for the robustness test. The fourth to fifth columns of Table 4 show the regression results that the effect of financial asset allocation on household consumption in the mixed regression model and the fixed effect model. The conclusion is consistent with the above.

Table 4. The Empirical Results of Robustness Tests

	(1)	(2)	(3)	(4)	(5)
	FE	FE	FE	Mixed	FE
	total_con	de_con	sur_con	total_con	total_con
fin_asset	0.015***	0.011***	0.005**	0.051***	0.014*
	(0.005)	(0.004)	(0.002)	(0.010)	(0.008)
Control	Yes	Yes	Yes	Yes	Yes
N	15650	15650	15650	7400	7400
R-Square	0.118	0.124	0.033	0.256	0.041
Adj.R-Square	0.117	0.123	0.032	0.255	0.039

5. Conclusions

Based on the existing research, this paper used the data of CHFS and CFPS from China in 2017 and 2019 to research the wealth effect of household financial asset allocation on consumption. The conclusion of this paper is that there is a wealth effect between household financial asset allocation and consumption, that is, household financial assets can have an positive impact on consumption through the change of holding level. After using other empirical methods to test whether the empirical result is robust, we finally found that there is indeed a positive correlation between the holding level of financial assets and household consumption, that is, the wealth effect exists.

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