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Real estate wealth effect of Chinese households: an empirical study based on micro survey data

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ABSTRACT

This paper, based on the China Household Finance Survey (CHFS), discusses the impact of house values on overall household consumption. The research shows that there is a significant influence on the overall consumption of the family by the availability of home ownership and the value of housing. Specifically, the total wealth effect of real estate is larger, and the effect of housing value on household durable goods consumption is less than that of non-durable goods. At the same time, the results show that the wealth effects of younger, lower-income families are more pronounced.

1. Introduction

Over the past 20 years, China's house prices have been rising channel, has experienced several rounds of rising, the current prices have reached a new high and in stabilizing and under the guidance of the central policy, China's rapid rise in housing prices directly led to the residents of the real estate wealth in the whole family all accounts for a larger proportion. According to the survey of Chinese family finance, according to data from China's urban residents home ownership rate has reached 87%, far more than Japan and South Korea, Germany, the United States and other countries, also higher than that of developing countries, including India, Mexico, Croatia. Are so high rates of home ownership, the main reason is that Chinese citizens to buy property in addition to used to live in, and for the benefit of investment demand, expect to achieve the purpose of asset appreciation value. We can see from the life cycle hypothesis and the persistent income theory that, in addition to income, property also has an impact on consumption. So how does housing affect household consumption? Based on this question, this paper analyzes the relationship between domestic real estate and Household consumption in detail by using the micro Survey data provided by China Household Finance Survey (CHFS).

The results show that the value of the property has great influence on the consumption of residents.

The arrangement of the rest of this article is as follows: the second part is literature review, in the third part is to study data and the method of simple introduction, and then the fourth part is the empirical result analysis, the fifth part gives a conclusion of research.

2. Literature Review

In academia, there has been constant discussion about the relationship between housing and consumption. In this case, we will make a brief introduction to the research situation at home and abroad.

First, in the study of the relationship between value and consumption of single asset, real estate wealth effect is basically confirmed. Skinner (1989) found that real estate wealth had a significant impact on consumption, and Skinner (1996) thought that the increase of real estate wealth would increase consumption of young families, but it would not affect the consumption of elderly households [1]. Engelhardt said (1996) by Income dynamic Panel data PSID (a Panel Study of Income Dynamics) for housing has the family consumption and the price relations are studied, found

housing capital gains in the marginal propensity to consume is 0.03, but family behavior reaction exists asymmetry, capital appreciation when household consumption, capital consumption reduced [2] when the impairment. Campbell & Cocco (2007) from the aspect of micro data analysis of the UK housing price changes impact on household consumption, think that the owner of the house price changes on the old home ownership plays a significant role in consumption, and on the young renters [3] is significantly influenced by the consumer behavior does not exist.

These studies have been conducted from the macro level, the regional or national data and time series methods, and also the micro-level studies based on the survey data. It is important to note that in recent years, many scholars pointed out that the macro data analysis does not accurately identify whether the change of consumption by family wealth changes, can't control the family's demographic and economic characteristics, so more inclined to adopt information rich micro survey data for analysis. Specific to our country, because restricted by such factors as lack of micro data, from the micro level analysis of household wealth will affect consumer behavior research is less, more analysis is based on the macro data layer. Such as Locke tussah inflammation (2007) with the aid of annual data of urban residents, from the perspective of liquidity, using cointegration analysis compares the financial assets in China during 1985-2005 and the wealth effect of housing assets that the wealth effect of housing assets [4] slightly larger than financial assets. Cui guangcan (2009), using data from 31 provinces and cities in China, found that changes in real estate prices have a significant effect on total consumption, and there is a housing wealth effect [5]. Tian qing (2011) in estimating the residents since 2001, on the basis of physical assets, analyzes its impact on consumption effect, found that has assets of residents' consumption has a positive role, the stimulating effect of the physical assets of strong [6]. In the study of this paper, we hope to do some complementary research on the micro level with the help of the first detailed household financial survey data in China.

3. Data Introduction and Research Design

3.1 Sample and Data Profile

The study used data from the China Household Finance Survey (CHFS). CHFS is dedicated to my whole family in the financial sector, and the system of household survey, collection including housing assets, debt and credit constraints and financial wealth, income, consumption, social security and insurance, population characteristics, such as family

microscopic levels of relevant information. Chinese family financial center was completed in 2011 household survey for the first time, the sample distribution covering 25 provinces (autonomous regions and municipalities directly under the central government), 80 counties (area, city), 320 village (house) committee, a total of more than 8400 families. Although only a year household survey data, but as a result of the data pointed strong, has various financial assets of residents in our country family information in detail, from the micro layer and to investigate the relationship between the household wealth and consumption in China has important value.

In the data consolidation, we eliminated some families with outliers and incomplete data.

The income of some low-income families is limited to the subsidy income, which is not widely representative, so the article excludes the 5 percent of households with the lowest income.

At the same time, in order to avoid the heterogeneity consumption problem caused by employment and retirement, according to the practice of literature (Bastic et al. 2009), we limit the age of the head of the household to 20 to 65 years old. The final effective sample size was 4305, of which 375 were not owned, and 3,930 families owned their own homes. In table 1, we give a descriptive statistics of the key indicators used in this article.

Table 1 Descriptive statistics of key indicators

Variables	Mean	standard deviation	Min value	Max value
nondurable goods	31163	30574	568.7	449090
durable goods	832.95	3424	0.00	90000
total consumption	31996	31592	568.7	449090
labour income	21735	43582	0.00	1325000
gross household income	35484	56423	1000	1530000
Whether they own the house	0.913	0.283	0.00	1.00
The number of their house	1.067	0.557	0.00	15.00
the total value of their house	371465	741352	0.00	1.00E+07
the size of the family	3.514	1.416	1	12
the age of the head of household	45.33	10.82	20	65

3.2 Model Setting and Description

If there is a significant real estate wealth effect found in the literature, there should be some differences in consumption between home ownership and households with no home ownership. To test this hypothesis, we set up a model (1) to test it.

$$\ln C = \alpha_0 + \alpha_1 \ln Y + \alpha_2 \text{Dum_house} + \sum \alpha_{3i} X_i + \varepsilon. \quad (1)$$

C stands for family annual consumption, Y is the disposable income of the family, and Dum_house is the virtual variable that represents whether or not the family owns its own home, which is equal to 1, which has its own home, otherwise it is zero. W on behalf of the family of housing wealth, X as demographic characteristics, such as control variables, including age, gender, nationality, marital status, head of the household political and appearance, nature of work, education, household type (whether it is rural registered permanent residence) and family size, region and so on.

On the basis of model (1), this paper further investigates the influence of housing wealth on household consumption, and its empirical model can be expressed by equation (2):

$$\ln C = f(\ln Y, \ln W', X). \quad (2)$$

W' stands for all kinds of wealth owned by the family, including financial, housing, non-housing physical assets, etc.

In addition, in this paper we have point out that, in theory, the influence of different types of assets on household consumption behavior may vary, so according to the classification of different assets, (2) we will model are further broken down into the following form:

$$\ln C = \alpha + \beta_1 \ln Y + \beta_2 \ln W_{\text{house}} + \beta_3 \ln W_{\text{nonhouse}} + \sum \beta_{4i} X_i + \varepsilon. \quad (3)$$

The model (3) considers dividing the household assets into two types: housing and non-housing, and focuses on the property wealth effect size

4. Analysis

4.1 The wealth effect of household wealth is tested

According to the equation (1) set to household consumption as the dependent variable, to income, whether owner-occupied housing

(Dum_house) as the independent variables and control household demographic characteristics, first of all have and don't have their own housing consumption behavior analysis of the family. The results are shown in table 2.

Table 2 The effects of housing on household consumption are estimated

independent variables	total consumption		nondurable goods	durable goods
dependent variables	modal(1)	Modal(2)	modal(3)	
C	6.7529 *** (28.99)	7.2391 *** (44.02)	7.2578 *** (43.92)	-2.0815 *** (-2.64)
lnY	0.1231 *** (9.02)	0.1244 *** (9.10)	0.1272 *** (9.26)	0.0364 (0.55)
Dum_house	0.0778 * (1.82)	0.0794 * (1.86)	0.0698 * (1.63)	0.5263 *** (2.55)
Age	0.0436 *** (5.22)			
Age square	-0.0006 *** (-6.40)			
Age20_35		0.2175 *** (5.99)	0.2180 *** (5.97)	0.0752 (0.43)
Age36_50		0.2471 *** (9.09)	0.2469 *** (9.05)	0.0901 (0.69)
Family size	0.0895 *** (10.28)	0.0922 *** (10.60)	0.0961 *** (10.99)	-0.0608 (-1.47)
Sex	-0.0317 (-1.18)	-0.0353 (-1.31)	-0.0417 (-1.54)	0.2570 *** (1.97)
Politics	0.0320 (0.94)	0.0286 (0.84)	0.0352 (1.03)	-0.3531 *** (-2.14)
Marriage	0.0572 (1.34)	0.0744 (1.78)	0.0786 (1.87)	0.0585 (0.29)
Job3	-0.1924 *** (-3.75)	-0.2026 *** (-3.75)	-0.2109 *** (-4.09)	-0.1849 (-0.75)
College	0.0642 (1.63)	0.0615 (1.57)	0.0628 (1.59)	0.1818 (0.95)
Junior_middle	-0.1323 *** (-4.28)	-0.1417 *** (-4.58)	-0.1444 *** (-4.64)	-0.1581 (-1.05)
Hukou	-0.1126 *** (-3.56)	-0.1152 *** (-3.65)	-0.1203 *** (-3.79)	0.3172 *** (2.07)
Obs	3432	3432	3435	3558
R ²	0.5051	0.5035	0.5009	0.0507
Adj. R ²	0.4991	0.4975	0.4949	0.0397

Dum_house from model (1) the regression coefficient and significance we can found, other conditions being the same, the consumption level of owner-occupied housing family is no ownership of the family, that have significant implications for family consumption of housing.

The impact coefficient of income on consumption is 0.1232, indicating that every 1% increase in household income will increase by about 0.12%. Household consumption has a significant impact on household consumption, such as household age, educational background and family size, and household income is significantly lower than that of non-rural household households.

In the model (2), we change the age of the household head and the age square into three virtual variables of different ages, and the other independent variables remain the same. In the following model (3), the influence of family housing on household durable goods and non-durable goods was investigated respectively. Family has high rates of home ownership, in our country in recent years the process of rapidly rising real estate prices through round this background, this paper further to have ownership of the family as the research object, on the basis of equation (2) set in several different forms, discusses the real estate wealth effect on consumption.

First of all, the wealth effect of total household assets is tested, and it is found that the total assets of the family have a significant impact on consumption and far outweigh the income elasticity coefficient. The family wealth in model (2) is divided into two types: real estate and non-real estate. The elastic coefficient of the two is 0.0961 and 0.1475 respectively, which confirms the significant influence of real estate wealth on consumption. The total value of the housing has a significant impact on household non-durable consumption, with a coefficient of 0.0884, and the impact on durables consumption is not significant.

4.2 analysis on the difference of wealth effect of family assets

Depending on the age of the household and the family income, we further grouped the families with home ownership in the effective sample. In general, middle-aged householder family income and expenditure are relatively stable, and the uncertainty of the smaller, thus maximum income elasticity coefficient is reasonable; and more than 50 years old and near retirement, the head of the household of the expected future income decrease and a series of problems, have a tendency to raise household savings. In view of the young family income elasticity of consumption is lower the head of the household as a result, we think that is likely to be associated with at present our country is still in a stage of transition economy. Zhou Shaojie (2009) has pointed out, such as in the process of transformation, such as housing, education, health care reform to each group is different, the influence of young group of family incomes and

spending are more susceptible to the future uncertainty.[7]

5. Conclusion

This paper analyzes the influence of real estate wealth on household consumption by means of the first detailed domestic financial survey data. Research shows that household real estate wealth has a significant effect on consumption. The consumption level of the former is significantly higher than that of the two families owning and not owning the home. The results of the analysis of the scale of real estate wealth of two kinds of families show that the coefficient of elasticity of real estate is significantly greater than that of no home ownership. In addition, the consumption level of consumption is found to be significantly higher than that of households with no home ownership, but the difference is not related to the value of the home. In the non-durable consumption, the value of home ownership significantly affects household consumption level.

In the analysis of this article, of course, there are more inadequate and defective, such as limited by sections and the data, not on price change to analyze the influence of family wealth effect, failed to distinguish from the housing investment in the room, unable to effectively control some impact on consumer behavior exists, but does not change with time of some individual characteristics. It is hoped that in the follow-up study, with the improvement of tracking survey data, it can be further discussed in this paper.

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