Research on the Structural Characteristics and Consumption Effects of Urban Household Debt--Evidence from CFPS

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Abstract

Consumption is the primary driving force of economic growth. However, since 2017, my country's household consumption has continued to decline, especially for urban households. At the same time, household debt has risen rapidly. Therefore, is it because the growth of household debt is constraining household consumption? This article first sorts out the theoretical mechanism of household debt affecting consumption. Secondly, it divides consumption and debt into different categories, examines the consumption effect of household debt at different income levels, and then explores the effect of urban household debt structure on consumption, and finally proposes to optimize household debt Scale, promote residents’ consumption, and control the risk of residents’ debt.

Keywords

Urban Household Debt; Income Hierarchy; Debt Structure; Consumption Effect.

1. Introduction

Consumption is the backbone of the smooth operation of my country's economy and one of the "troikas" driving economic growth. Since my country's economy has entered a new normal, the economic development model driven by high investment and high exports has become increasingly unsustainable, and boosting consumption has become an effective measure to curb the further decline in economic growth. For this reason, the report of the 19th National Congress of the Communist Party of China clearly pointed out the need to "improve the system and mechanism for promoting consumption." In theory, residents' income growth not only directly affects consumption, but also indirectly affects consumption through asset allocation. However, existing research pays more attention to the direct effects of income growth on consumption, and less attention to its indirect effects, and does not explore the mechanism of residents' income indirectly affecting consumption under a unified framework, and this mechanism can solve the "mystery of weak consumption". Increasing consumption is crucial to the fundamental role of economic development.

The research on the relationship between household consumption and asset allocation can be traced back to the permanent income hypothesis of Friedman (1957) and the life cycle theory of Modigliani (1963). The two classic theories have in common that household assets have a consumption smoothing effect. With the improvement of the financial market and the acceleration of financial innovation, the allocation of household assets has become increasingly diversified, and the research on the effects of household asset allocation has become more and more in-depth. Existing research has achieved fruitful results in the investigation of the linkage relationship between household consumption and asset allocation. According to existing literature research, the marginal effect of increasing housing assets and financial assets of the same value on household consumption stimulus is somewhat different, but the impact mechanism is not yet clear. However, the asset structure allocation of Chinese residents accounts for too high a proportion of housing assets, but is relatively small in the financial
market. Therefore, improving household asset allocation and promoting consumption quality and upgrading have very positive guiding significance.

2. Literature review

Family finance focuses on household assets and liabilities decision-making (Campbell, 2006). Early research focused on household asset allocation. Related theories are scattered in Keynes (1936), Markowitz (1952), Modigliani (1957) and Morton (1971, 1973) investment and consumption theory. Campbell (2006) pointed out that household finance is an independent branch of finance and pioneered the systematic study of household finance. The outbreak of the subprime mortgage crisis in 2008 prompted a climax of household debt research in academic circles, focusing on the availability of household debt and the scale and effect of household debt that are closely related to it.

The availability of household debt is a prerequisite that affects the size of household debt. The existing literature examines the macro and micro factors that affect the availability of household debt. On the macro level, studies have concluded that government behavior, financial systems, and market structure have severely affected the availability of household debt. Li Jianjun and Han Xun (2017) pointed out that in cities with a low proportion of rural population, high education level, and high per capita income, households have more convenient access to financial services. At the micro level, the existing literature believes that factors such as household income, household head education level, and population size are positively related to the availability of household debt, but factors such as employment status and land area have no significant impact on household debt (Zhang Xueyong and Jia Chen, 2010; Chen Binkai and Li Tao, 2011; Liu Xiaoxin and Zhou Hong, 2012, etc.). Recent research is more detailed. Yin Zhichao et al. (2015, 2017) classified the nature of credit and found that an increase in financial knowledge will increase the formal credit needs of households and encourage households to apply for loans.

Since consumption is an important criterion for measuring the welfare of residents, existing studies have carefully examined the consumption effect of debt growth based on the scale of household debt, but have drawn very different conclusions. Some scholars (Zhou Xiaochuan, 2016; Zhang Xiaoqing, 2018; Wu Ge et al., 2018; Gan Li, 2019) based on micro-data investigations, believe that the level of Chinese household debt is not high, and continuing to increase debt has a positive effect. However, another part of scholars believes that China’s household sector debt is growing too fast, and continuing to increase debt will curb household consumption (Tian Guoqiang, 2018; Zhang Xiaoqing et al., 2018; Zhuang Yumin, 2019). Although some scholars did not make a judgment on the scale of household debt, they pointed out that the consumption effect of household debt is uncertain (Cecchetti et al., 2016; Lombardi et al., 2017) or whether the consumption effect of household debt is of maturity or structure.. Pan Min and Liu Zhiqi (2018) based on the data of CFPS, the research shows that although households increase leverage can help subsistence consumption, but inhibit enjoyment consumption, the overall effect on consumption is not significant.

In summary, existing research not only examines the factors that affect the scale of household debt, but also reveals the effect of household debt. However, there is very little analysis of the characteristics of household debt structure, let alone the effect of structural characteristics of household debt on consumption. Therefore, this article first sorts out the theoretical mechanism of household debt affecting consumption. Secondly, it divides consumption into different categories according to the content. At the same time, it divides household debt into housing debt and non-housing debt, examines the characteristics of urban household debt, and then explores urban residents. Household debt structure affects the effect of consumption, and finally put forward reasonable suggestions to optimize the scale of household debt, promote household consumption, and control household debt risk.
3. Theoretical mechanism of household debt structure affecting consumption

Household debt is a "double-edged sword". A moderately large household debt can improve household welfare by smoothing consumption. However, an excessively large debt will not only curb household consumption and hinder economic growth, but also endanger financial stability (Reinhart and Rogoff, 2009; Marco Lombardi, Madhusudan Mohanty and Ilhyock Shim, 2017; IMF, 2018; Zhuang Yumin, 2019). There are multiple relationships between household debt and household consumption. In fact, the marginal propensity to consume of different income groups are obviously different, and the debt source structure of different income groups is different, and the debt investment structure is different.

According to life cycle consumption theory (Franco Modigliani, 1953), lasting income consumption theory (Milton Frifman, 1957), liquidity constraint theory (Flavin, 1973; Tobin, 1971) and long-term research, we conclude that the main impact of household debt on consumption in two aspects: On the one hand, the expansion of household debt may ease budget constraints in the current period, increase the actual disposable income of the current period, and have an impact on consumer spending; on the other hand, excessive household debt may cause "crowding" in consumption. Effect. As the current debt scale is too high, considering future repayment, households will reduce consumption in the current period. At the same time, households can use the increase in consumer credit to ease current budget constraints, make up for the gap between current consumption and income, and increase current disposable income, which will increase consumption in the current period and possibly bring about consumption structure. The adjustment to optimize consumption expenditure, but in the long run, it will have the effect of restraining consumption and consumption structure.

3.1. The wealth effect of household debt scale

The consumption effect of household debt on household consumption is manifested in the fact that households use consumer credit to break through the limitation of insufficient current income, increase current consumption, and realize intertemporal consumption. The consumption effect table of household debt is the increase of household consumption level and the expansion of household debt scale. Then, taking advantage of the positive impact of household debt on consumption and improving domestic consumption can be achieved by adjusting relevant credit policies, with a view to achieving the goal of China's economic restructuring and achieving high-quality economic development.

In the early days, the impact of changes in the scale of household debt on consumption and expenditure was mostly based on the analysis of macro data, and the conclusions reached were not the same. According to existing research, the wealth effect of household debt has direct and indirect effects on consumption. The wealth effect of household debt on consumption is directly manifested in three aspects: First, when the household's current income cannot bear the current optimal consumption decision, according to the theory of liquidity constraints, households can use consumer credit to slow down their liquidity and increase the current period. Expenditure; secondly, according to the theory of preventive savings, households that need to assume consumer credit will reduce preventive savings to increase the share of consumer spending; in the current social consumption environment, the purchase of real estate accounts for a large share of household consumer credit. With the increase in housing prices leading to the increase in the value of housing assets, households have a great motivation to further expand household consumption expenditures due to the appreciation effect of wealth assets. The indirect effect of wealth is affected by the direct effect. Because the expansion of household consumption expenditure will lead to economic growth, which will increase the income level of residents, household consumption will expand further.
3.2. The crowding-out effect of household debt

Appropriate household debt will stimulate consumption, but excessive household debt may have a "crowding out effect" on consumption. The crowding-out effect of household debt on consumption means that when households receive credit support for certain consumer goods, the consumption behavior of other types of consumer goods will therefore be reduced. This is due to households considering the uncertainty of the future. According to existing research, household debt has a negative impact on consumption and expenditure behavior (Dynan and Edelberg, 2013). Excessive household leverage will reduce the availability of household credit, thereby restricting household consumption expenditure; in addition, when household debt is higher than household debt expectations, households may choose to reduce consumption expenditure to repay consumer credit. With regard to the crowding-out path of household debt, similar to the wealth effect, there are also two types of direct and indirect. Take housing credit as an example: Resident families will first raise the housing down payment by increasing savings, and the remaining part realized through housing loans will be allocated to residents’ monthly expenditures, which will directly crowd out other credit consumption. In addition, when residents’ housing loan pressure is too high, the residents’ long-term purchasing power will decrease, the uncertainty about the future will increase, the precautionary savings motive will increase, and the marginal propensity to consume will decrease, that is, indirectly crowding out household consumption.

4. Empirical analysis

4.1. Variable selection

The data in this article comes from the National Household Finance Survey (CHFS) conducted by Southwestern University of Finance and Economics in 2011, 2013, and 2015. The data has good representativeness and high quality, and a total of 2,053 urban households have been obtained. This article calculates the value of urban household consumption, liabilities, related assets, and income on related issues. And referring to the practice of Li Xiaonan and Li Rui (2013), consumption is divided into subsistence consumption, development consumption and residential consumption. Divide household debts into housing debts and non-housing debts, and examine the impact of debt structure on changes in urban household consumption.

4.1.1. Explained variable

The explained variable in this article is the change in total household consumption in the current period. According to different consumption content, this article divides food, clothing and daily necessities into subsistence consumption, and divides education, culture, entertainment, medical care, transportation and communication, etc. Consumption is divided into development consumption. Divide housing decoration, maintenance, and expansion expenditures into residential consumption.

4.1.2. Explanatory variables

The core explanatory variables of this article are the logarithm of the household debt scale of the lagging period, the debt-to-asset ratio of the lagging period and their interaction terms. These variables include changes in household income in the current period, changes in the value of current housing assets, current value of financial assets in the current period, family size, whether it is subject to liquidity constraints, and household heads’ expectations for the economy. Among them, financial assets include bank deposits, stocks, funds, etc. Family debts include all housing arrears, education arrears, and medical arrears that have not been paid off during the survey period.
4.2. Model setting

In order to study the impact of household debt and its structure on consumption changes of urban households in my country, this article takes the current household consumption changes as the explanatory variable, and uses the one-period lagging household debt scale, debt-to-asset ratio and the interaction terms between the two as the core explanation variable. In this paper, the changes in the value of the family's current housing assets and the financial assets held by the family in the current period are added to the model's control variables. Family and demographic characteristics are also factors that affect consumption. According to the usual practices in the existing literature, this article will include the age, gender, education level, health level, old-age dependency ratio, child dependency ratio, medical insurance coverage rate, social security coverage rate, and marital status of the head of the household. Wait to add relevant control variables. The empirical analysis is carried out based on the samples of urban households in the follow-up survey of CHFS in 2011, 2013 and 2015, and the model is established as follows:

$$
\Delta \log c_{it} = \alpha + \beta_1 \log d_{i,t-1} + \beta_2 \log daratio_{i,t-1} + \beta_3 \log d \ast daratio_{i,t-1} + \beta_4 \Delta \log c_{i,t-1} + \beta_5 \Delta \log h v_{i,t} + \beta_6 \log f i n a s_{i,t} + \beta_7 \log year + X_{it} \delta + \epsilon_{it}
$$

Among them, $\Delta \log c_{it}$ represents the consumption changes of urban households in period $t$; $\log d_{i,t-1}$ is the logarithm of the balance of household non-operating liabilities in period $t-1$; $\log daratio_{i,t-1}$ is the interaction term between the logarithm of family debt and debt-to-asset ratio in period $t-1$, and $\Delta \log c_{i,t-1}$ is the change in household income in period $t$. $\Delta \log h v_{i,t}$ is the change in the value of family housing assets in period $t$; $\log f i n a s_{i,t}$ is the logarithmic value of household financial assets in period $t$; $X_{it}$ is Other control variables for period $t$ include family characteristics such as the gender and age of the head of the household. In order to further analyze the impact of household debt and its structure on different types of household consumption, this article divides household debt into housing debt and non-housing debt, referring to the practice of Li Xiaonan and Li Rui (2013) to subdivide total household consumption into three categories as Dependent variables, empirically study the impact of household debt and structure on changes in consumption of different categories.

4.3. Empirical analysis

4.3.1. The impact of household debt on consumption changes of different types of urban households

In order to study the impact of the scale of urban household debt on the changes in different types of consumption, this article divides consumption into subsistence consumption, development consumption and residential consumption. The empirical results are shown in Table 1:

The empirical results show that the debt balance of the previous period has no significant impact on the subsistence consumption of urban households. However, under a certain scale of household debt, the debt-to-asset ratio of the previous period has a significant negative impact on the household’s current subsistence consumption at the 10% confidence level. The debt-to-asset ratio in the previous period has a significant inhibitory effect on the current development consumption at the 5% confidence level, that is, urban households will choose to compress subsistence consumption expenditure and development consumption expenditure because of excessive leverage. The debt scale of households in the previous period has a significant negative impact on development consumption at the 1% confidence level. For every 1% increase in household debt scale in the previous period, the current development consumption expenditure level will decrease by 0.012%. Household debt has a significant inhibitory effect on residential consumption at the 5% confidence level, that is, for every 1% increase in the scale
of household debt, the current residential consumption level will drop by 0.013%. The inhibitory effect of urban household debt on household consumption is manifested in the reduction of development consumption and residential consumption, which verifies the previous conjecture. All in all, under the condition of a certain debt scale in the previous period, households with high debt leverage will tend to reduce the current subsistence consumption expenditure and development consumption expenditure. Since subsistence consumption is a necessary expenditure of the family, the impact is limited. It is precisely because of the necessity of subsistence consumption expenditure that the inhibitory effect of the scale of household debt in the previous period on urban household consumption mainly affects development consumption and residential consumption.

4.3.2. The impact of household debt structure on consumption changes of different types of urban households

By dividing household debts into housing debts and non-housing debts, we examine the impacts on the consumption changes of three different categories of household consumption, development consumption and residential consumption. The empirical results are shown in Table 2:

Table 1. The impact of household debt on consumption changes of different types of urban households

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>1) Survival consumption changes</th>
<th>2) Development consumption changes</th>
<th>3) Changes in residential consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>The logarithm of the lagging debt scale</td>
<td>0.003</td>
<td>-0.012***</td>
<td>-0.013**</td>
</tr>
<tr>
<td>Lagged debt-to-asset ratio</td>
<td>0.056*</td>
<td>0.284**</td>
<td>0.156</td>
</tr>
<tr>
<td>Lagged debt scale x debt-to-asset ratio</td>
<td>-0.005*</td>
<td>-0.025**</td>
<td>-0.014</td>
</tr>
<tr>
<td>Control variable</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Constant</td>
<td>161.3***</td>
<td>143.3</td>
<td>400.1***</td>
</tr>
<tr>
<td>Observations</td>
<td>3699</td>
<td>3699</td>
<td>3699</td>
</tr>
</tbody>
</table>

Note: *** p<0.01, ** p<0.05, * p<0.1

Table 2. The impact of household debt structure on consumption changes of different types of urban households

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>4) Survival consumption changes</th>
<th>5) Development consumption changes</th>
<th>6) Changes in residential consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logarithm of lagging housing liabilities</td>
<td>0.002</td>
<td>-0.009</td>
<td>-0.027***</td>
</tr>
<tr>
<td>Logarithm of lagging non-housing liabilities</td>
<td>0.007</td>
<td>-0.021***</td>
<td>0.001</td>
</tr>
<tr>
<td>Control variable</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Constant</td>
<td>169.0***</td>
<td>181.1**</td>
<td>4544.1***</td>
</tr>
<tr>
<td>Observations</td>
<td>3451</td>
<td>3451</td>
<td>3451</td>
</tr>
</tbody>
</table>

Note: *** p<0.01, ** p<0.05, * p<0.1
The empirical results show that the housing debt of the previous period has a significant inhibitory effect on the current housing consumption of urban households at the 1% confidence level. For every 1% increase in the scale of housing debt in the previous period, the current housing consumption expenditure will decrease by 0.027%. The non-housing liabilities of the previous period had a significant inhibitory effect on the current development consumption of urban households at the 1% confidence level. For every 1% increase in the scale of non-housing liabilities in the previous period, development consumer spending will decrease by 0.021%. That is to say, the restraining effect of the previous debt balance of urban households on consumption is mainly reflected in development consumption and residential consumption. The inhibitory effect of the previous period’s housing debt is mainly used to smooth the previous period’s residential consumption, and the available housing credit resources in the current period are limited, and the current residential consumption will definitely decrease. In the same way, since subsistence consumption is a household’s necessary expenditure and there is little room for compression, the non-housing liabilities in the previous period are mainly used to smooth the development consumption in the previous period, and the available non-housing consumer credit resources in the current period are limited. In the current period, the developmental consumption of urban households has also been significantly inhibited. Therefore, we must focus on the later impact of borrowing to form debt on consumption. Guide households in the rational use of consumer credit, optimize their own debt structure, and avoid having a greater impact on household consumption expenditures in the later period, leading to insufficient motivation for consumption development in my country.

5. Conclusion and enlightenment

5.1. Conclusion

Consumption is the primary driving force of economic growth. Starting from theoretical analysis, this paper finds that household debt can not only increase the level of consumption expenditure by alleviating liquidity constraints, reducing precautionary savings motives and gaining income from investment assets, but also squeezing later consumption due to the reduction of credit availability due to solvency pressure. That is, there is uncertainty. Then, using the CFPS data samples in 2011, 2013 and 2015, we empirically studied the impact of household debt scale and structure on consumption changes of urban households. According to the research in this article, we get the following conclusions. First, in the full sample, urban households with debts in the previous period tend to increase current consumption because borrowing smoothed current consumption. The larger the balance of household non-business debt in the previous period, the more significant the crowding out effect on the current consumption of urban households, which validates the intertemporal theory of consumption. Although a certain degree of debt leverage is conducive to the moderate expansion of current consumption by urban households, when the debt scale is determined in the previous period, urban households with a high debt-to-asset ratio can cope with repayment pressure, while households with lower debt leverage are more inclined to reduce Current consumption expenditure. Similar to existing research results, when urban households have a stable and progressive economic expectation, they will effectively boost consumption; secondly, households with a higher proportion of housing debt have a significant inhibitory effect on changes in total consumption. The study found that households with higher housing debts will significantly reduce current consumption expenditures, while non-housing debts do not have a significant impact. Constructing housing debt-to-income ratio and non-housing debt-to-income ratio as an explanatory variable of interest The study found that housing debt-to-income ratio has a significant negative effect on household consumption expenditure at the 10% confidence level. Furthermore, this article divides the total household consumption into three types of
consumption according to the content of consumption and performs regression estimation. The results show that with a certain debt scale, households with high debt leverage will be more inclined to reduce the current subsistence consumption expenditure and consumption. Development consumption expenditure. The impact on subsistence consumption is not significant, and the inhibitory effect of household debt on urban household consumption mainly affects development consumption and residential consumption.

5.2. Enlightenment

At present, most of the views believe that in order to change the phenomenon of low household consumption and insufficient domestic demand in our country, the income level of residents must be increased. It is true that the income level of residents has an obvious effect on household consumption and is of great significance. However, this article starts from the perspective of household debt, and through theoretical and empirical analysis, it is found that changes in household debt also have a significant positive effect on consumer spending. Therefore, given that consumer credit can increase household consumption levels but excessive debt can lead to consumption crowding out, the government should relax unnecessary credit control to a certain extent, establish a sound financial market system, and actively take measures to prevent systemic financial risks and non-compliance. Systemic financial risks create a good policy environment for the development of consumer finance. At the same time, relevant government departments should actively popularize relevant financial knowledge, encourage and urge financial institutions to establish and develop inclusive finance business units, increase opportunities for ordinary households to contact and use consumer credit, ease liquidity constraints, and participate in consumer finance to a greater degree. It is also necessary to encourage innovation in the consumer financial market, enrich the types of consumer financial products, and meet the diverse and personalized financial service needs of the people. In addition, the risk of my country's overall housing debt should not be underestimated, and we should pay close attention to the systemic and non-systematic risks in the housing credit market. Strictly abide by the basic threshold of housing credit, and control the uncoordinated development of housing credit and non-housing credit. It is not only conducive to the stable development of the real estate market, but also helps to improve the overall national consumption level. Continue to deepen the reform of the real estate market, implement the fundamental idea of housing housing and not speculation, and guide the healthy development of the real estate market through the three-pronged approach of purchase restrictions, loan restrictions, and sales restrictions. Supplemented by measures such as property tax and monetary policy to stabilize housing prices, so as to optimize household debt structure, and guide households to use debt leverage in a reasonable and effective manner.

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References


