The Impact of Financial Literacy on Household Consumption

-- Empirical Analysis Based on the CHFS

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Abstract: In this paper, the relationship between financial literacy and household consumption is empirically analyzed by using The Chinese Family Micro Database (CHFS), and the consumption structure of Chinese households is subdivided into survival consumption, development consumption and enjoyment consumption, respectively, to study the impact of financial literacy on different consumption structures. The mediating effect of credit constraint factors is studied and the moderating effect of digital finance is explored. The results show that: financial literacy has a significant impact on household consumption behavior, and financial literacy has a significant positive impact on different structures of household consumption behavior. Credit constraint plays an obvious mediating role between financial literacy and household consumption. Digital finance has a direct mediating effect between financial literacy and credit constraint and between credit constraint and household consumption, and has a significant moderating effect on them. Therefore, it provides reference opinions for promoting consumption from the perspectives of improving the financial literacy of residents and increasing the development of digital finance.

Keywords: Financial literacy, Credit constraint, Household consumption, Digital financial, Mechanism.

1. Introduction

The 14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Long-term Goals for 2035 clearly proposes to comprehensively promote consumption and enhance the fundamental role of consumption in economic development. Consumption is the final demand, and in recent years, the government has been committed to expanding consumer demand and promoting economic growth. As shown in Figure 1, the household consumption rate in China is generally low in recent years, continuously falling from the peak of 45.72% in 2001, and reaching the lowest trough of 34.63% in 2010. Since then, it has been relatively stable without significant growth. At present, China's economy is transforming from high-speed growth to high-quality development. It is clear that the sluggish household consumption rate will shake the solid role of consumption in high-quality economic development.

Figure 1. Trend chart of China's household consumption rate from 2001 to 2021
It is crucial to explore the causes of the low consumption rate in Chinese households. Studies have been conducted mainly ranging from demographic changes[1], habituation[2], competitive savings motivation[3] and other many aspects are discussed. However, there are very few studies on the decision-making process of household consumption. Under the premise of rational people, the classical inter-period selection theory holds that people's consumption needs and savings plans are different in different periods, which requires consumers to have high financial literacy to make decisions. However, according to the consumer financial literacy index released by the People's Bank of China in 2019, the level of financial literacy of Chinese consumers is at a relatively low level. Therefore, it is particularly important to explore the influence process and channels of financial literacy on household consumption based on the current background of household consumption, expand residents' consumption and stimulate economic growth.

In addition, the exploration of the mechanism and path of the influence of financial literacy on household consumption is also an urgent key issue in the academic circles. For now, credit constraints play an important role. Credit constraints are mainly caused by the cognition and behavior deviation caused by the loan demanders' not understanding of the loan policies and procedures of financial institutions[4][5][6]. The improvement of financial literacy will significantly reduce individuals' cognitive and behavioral bias, thus improving the availability of families to obtain credit[7]. Our families are facing very serious credit constraints[8][9][10]. Credit constraints are also one of the reasons affecting the growth of the household savings rate, which is bound to reduce the household consumption rate.

Meng Hongwei and Wu Weixing all believe that the improvement of financial literacy can drive household consumption[11][12]. By combing the existing literature, it is found that first, most studies only analyze the impact of financial knowledge on consumption expenditure from the whole of consumption, and do not comprehensively consider the consumption structure comprehensively, and lack a more comprehensive comparative study. Therefore, it is very necessary to study the overall impact of financial literacy on residents' consumption. Second, there are very few studies on the intermediary effect of financial literacy on family consumption, and only some literature analyzes the intermediary effect of family insurance and wealth accumulation from the perspective of financial knowledge. Third, there are few documents to further explore whether there is any regulation in the process of credit constraint mediation under the background of the development of digital finance. To sum up, this paper will use Chinese family micro financial database to study the influence of financial knowledge on consumption, analyze the intermediary effect of credit constraints, on the one hand, help relevant departments to better understand the characteristics of our household consumption demand and existing problems, on the other hand to further promote the Chinese consumption growth provides more reliable ideas, is conducive to the relevant departments to improve the residents' financial literacy, increase the development of digital finance targeted policies and measures, to provide reference opinions for decision-making.

2. The Theoretical Framework

2.1. Financial Literacy and Household Consumption

Financial literacy includes financial knowledge, financial skills, financial behavior and financial attitude, which refers to the knowledge and ability of consumers to effectively manage their financial resources for their lifetime financial well-being[13]. Wu Kun and others have also subdivided financial literacy into primary financial literacy and senior financial literacy, which have a significant positive impact on the total household consumption and consumption structure, respectively [14]. The outbreak of the financial crisis in 2008 is directly related to the lack of consumer financial literacy. With the increase of residents' income, more and more consumers participate in the financial market, but the products and tools of the financial market are increasingly complex, which requires consumers to have certain cognitive ability and practical experience, to make correct decisions. On the other hand, the number of population is rising, and the aging population is becoming more and more severe. In recent years, the state has also encouraged commercial endowment insurance to become the main undertaker of individual and family pension security plans, so consumers need to fully understand the related services of financial products. Yang Liu and others have also pointed out that consumers with high financial literacy are more willing to hold commercial health insurance and commercial life insurance, rather than they are not willing to hold commercial property insurance[15].

The lack of household consumption demand has become an important factor restricting China's economic growth. The study of family consumption is inseparable from the family consumption decision-making process. The formulation of consumption decisions requires comprehensive information from various aspects, and requires consumers to calculate and analyze, and make consumption decisions accordingly[16]. Whether the consumption decision is reasonable or not directly affects the level of family consumption. Obviously, the more reasonable and more effective the consumption decisions are made, the higher the impact on household consumption. The higher the financial literacy of consumers, the higher the ability to synthesize information and computational analysis, so the more reasonable and effective the consumption decisions will be. Thus, we propose the hypothesis of 1.

Hypothesis 1: Financial literacy helps to promote household consumption.

2.2. Credit Constraints

Financial literacy plays an important role in alleviating the impact of credit constraints on household consumption. The study found that the behavior of credit-bound families was different from that of uncredited-bound families. Personal credit level and financial literacy into a positive relationship. The higher the financial literacy of families, the number of household consumption decisions will also increase, which will have a positive effect on reducing credit constraints. The higher the financial literacy level of consumers, their credit level is also at a high level, so it is easy to pass the qualification examination of bank loans, and the less likely they are to be constrained by formal credit[17]. Wang and others pointed out that families with high financial literacy
can keep savings liquidity and control credit risks[13]. Liquidity risk and credit constraints are inseparable and related, and the two are closely linked and interact.

Credit constraints significantly inhibit household consumption, making their actual household consumption lower than the theoretical optimal household consumption[18][19]. Families with higher credit constraints have a negative impact on the choice of all kinds of family assets[20]. Consumer credit is an effective way to solve epidemic constraints, which can promote consumption by easing liquidity constraints[21]. And credit constraints clearly curb liquidity, and inhibiting household consumption. Thus, we propose the hypothesis of 2.

Hypothesis 2: Credit constraint plays an intermediary role in the process of financial literacy affecting household consumption.

2.3. Digital Finance

With the rapid development of the Internet, digital finance has entered the attention of more and more consumers. The threshold of digital financial services is far lower than that of traditional financial services, enabling the originally excluded consumers to also enjoy the convenience brought by digital financial services[22]. For micro, small and medium-sized enterprises and vulnerable groups, there are serious credit constraints, and the traditional financial services are often concentrated in large enterprises and state-owned enterprises. The emergence of new digital finance has enhanced the availability of financial services[23]. To reduce the financial transaction costs of residents and small and medium-sized weak enterprises, and thus reduce the credit constraints of residents, Wan Jiayu and others also pointed out that the development of digital finance can significantly alleviate the financing constraints of enterprises, and empirically test the intermediary effect of financing constraints in digital finance and enterprise innovation[24].

Digital finance plays an important role in household consumption. On the one hand, digital finance can affect household consumption by easing liquidity constraints[25]; Liquidity constraints and credit constraints are also closely linked. On the other hand, digital finance can also affect household consumption by enhancing customers' experience of convenient consumption. When consumers make online shopping and Internet consumption, the convenient and fast payment experience can obviously increase the desire for consumption. To sum up, digital finance can reduce the credit constraints of residents, and it can also have a positive effect on household consumption. Thus, we propose the hypothesis of 3.

Hypothesis 3: Digital finance has a regulatory effect in the intermediary effect of credit constraints.

3. Description of the Data Sources and The Variables

3.1. Data Source and Description

The data used in this paper are derived from the China Family Finance Survey (CHFS) conducted by the China Family Finance Survey and Research Center of Southwestern University of Finance and Economics. The CHFS aims to collect relevant information on the micro-level of family finance in China. In 2011, the project officially began the baseline survey until 2017, when the survey covered 29 provinces (autonomous regions and municipalities directly under the Central Government), 355 districts and counties, and 1,428 village (residential) committees. The 2017 data are selected, because the head of household is not explicitly marked in the CHFS, using the first person as the proxy variable for the head of household.

3.2. Variable Setting and Description

(1) The measure of financial literacy variables

The main controlling variable in this paper is financial literacy. Referring to the previous literature, this paper divides the financial literacy level into three levels: financial knowledge, financial attitude and financial skills. Referring to the factor analysis method used by Meng Hongwei et al., Yin Zhichao et al. in constructing financial literacy indicators[26]. However, compared with financial knowledge indicators, financial literacy indicators involve a wider range and are more comprehensive. The financial literacy indicators listed in this article are shown in Table 1.

Table 1 describes the extraction process of the financial literacy indicators. The "calculation of interest rate problem", "inflation explanation" and "investment risk choice" are used to reflect respondents' understanding of financial knowledge, thus depicting financial knowledge factors; reflect their financial attitude with "focus on financial information", "investment project selection", "risk preference degree"; and "financial product holding", "fund holding" and "financial product holding", and extract financial skill factors.

It can be seen from Table 1 that the respondents have a good understanding of the risk degree of financial knowledge, nearly half of the respondents can clearly identify the risk degree of the investment risk problem. However, the basic knowledge of financial knowledge, such as the interest rate calculation question, only less than a third of the respondents answered correctly, nearly a second of the respondents can not calculate, with the deepening of the problem, only less than 1 / 6 of the respondents can understand the understanding of inflation. In terms of financial attitudes, only 1 / 10 of the respondents paid attention to financial information above the general level, and more than 1 / 2 of the respondents never paid attention to financial information. For the choice of investment projects, more than a second of the respondents still chose a low-risk project, or even unwilling to take any risk of the projects. In terms of financial skills, only 1 / 10 of the respondents held shares, and less than 1 / 20 of the respondents held funds and wealth management products. To sum up, residents have a certain understanding of the risk degree of financial knowledge, but the basic calculation problem of financial knowledge still needs to be improved. And there are still many shortcomings in financial attitude and financial skills, and there is still great room for improvement.
Table 1. Financial Literacy factor extraction process

| order number | variable | Correct / compliant / have / good / high-risk (%) | Error / nonconforming / no / poor / medium risk (%) | Not aware / not calculated / other / low risk (%) | Factor extraction process |
|--------------|----------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|--------------------------|
| 1            | Interest rate problem calculation | 28.5 | 22.7 | 48.8 | Financial knowledge factor |
| 2            | Inflation interpretation | 16.1 | 37.3 | 46.6 |
| 3            | Investment risk selection | 49.8 | 4.6 | 45.6 |
| 4            | Focus on financial information | 10.3 | 47.5 | 42.2 | Financial attitude factor |
| 5            | Investment project selection | 9.6 | 34.6 | 55.8 |
| 6            | Degree of risk appetite | 21.7 | 68.0 | 10.3 |
| 7            | Stock holdings | 10.3 | 67.1 | 22.6 | Financial skills factor |
| 8            | Fund holding | 3.6 | 70.6 | 25.8 |
| 9            | Financial products hold | 4.7 | 94.7 | 0.6 |

Using Lusardi, Rooij, Yin Zhichao and other methods to construct narrow financial knowledge indicators[26][27]And Yu Wenjian, Meng Hongwei and the People's Bank of China to build the consumer financial literacy index method[28]. This paper uses the principal component analysis method from the factor analysis method when extracting three factors: financial knowledge factor, financial attitude factor and financial skill factor. Secondly, after the factor principal component analysis, the factor is rotated, and the variance contribution rate after the rotation will be taken as the weight of the three factors to construct the financial literacy indicators. To avoid the influence of multicollinearity on the measurement analysis, the comprehensive financial literacy index is also constructed.

The KMO value in Table 2 is 0.755, greater than 0.7, indicating that the data is suitable for factor analysis. The rotation results of the three factors by the variance maximal method are shown in Table 3. From Table 3, the characteristic values of the financial knowledge factor, financial attitude factor and financial skills factor before the factor rotation are all greater than 1, indicating that the three factors are suitable for the factor analysis.

Table 2. KMO and Bartlett tests

| Number of KMO sampling | Bartlett Sphecicy Test |
|-------------------------|------------------------|
|                         | Approximate chi square | 51243.301 |
|                         | free degree            | 36 |
|                         | conspicuousness        | 0.000 |

Table 3. Results of analysis and analysis after factor rotation

| variable                    | Results of the analysis before the factor rotation | Results of the analysis after the factor rotation |
|-----------------------------|---------------------------------------------------|--------------------------------------------------|
|                             | eigenvalue | Explain the ratio | Accumulated variance contribution rate | eigenvalue | Explain the ratio | Accumulated variance contribution rate |
| Financial knowledge factor  | 2.498      | 0.524             | 0.524                                   | 1.983      | 0.416             | 0.416                                    |
| Financial attitude factor   | 1.234      | 0.259             | 0.783                                   | 1.568      | 0.329             | 0.745                                    |
| Financial skills factor     | 1.039      | 0.217             | 1.000                                   | 1.220      | 0.255             | 1.000                                    |

Table 4 is the descriptive statistics of the financial literacy index. As can be seen from Table 4, the average value of the family financial literacy index of Chinese residents is 1.6855, the skewness is -0.213, less than 0, and the overall left-biased distribution appears.
(2) The measure of household consumption expenditure
For the measure of household consumption expenditure, referring to previous literature, this paper divides household consumption expenditure (total_con) into household survival consumption expenditure (subsistence_con), developmental consumption expenditure (development_con) and enjoyment consumption expenditure (enjoyment_con), and select the average monthly family survival consumption expenditure, family development consumption expenditure and family enjoyment consumption expenditure to measure household consumption expenditure and consumption structure. Household survival consumption includes food, water, electricity and fuel; household development consumption includes daily necessities and education; household nanny, domestic service, culture and entertainment. This paper takes logarithmically for these three types of household consumption expenditure to mitigate the effect of heteroscedasticity.

(3) The measure of household credit constraints
Drawing on the measure of household credit constraint (constraint_crid) used by Xie Jiaji et al[29]. Use the "Do not know how to apply, or apply rejected" answer as a direct measure of home credit constraints. According to the design of the 2017 CHFS questionnaire, if the purchase of home, medical care, education, financial products, cars, weddings, and funerals is "do not know how to apply, or the application is rejected", the household credit constraint is assigned 1, otherwise 0. According to the calculation requirements of the scoring method, the maximum value of the credit degree in a certain item is 1, a total of 6 items, so the range of the degree of household credit constraint in this paper is [0,6], the closer the number is to 6, the higher the degree of credit constraint of the family.

(4) The measure of the digital financial variables
With the rapid development of information technology and the Internet, traditional financial services no longer adapt to the needs of the new era, so digital finance emerges. The launch of Alipay in 2004 can be seen as the beginning of digital financial services in China. China Digital Inclusive Services, as the biggest advantage of digital finance, mobile payment has brought great convenience and changes to people's lives. The measure of digital financial variables draws on the selection method of digital financial variables[29]"Which of the following payment methods do you and your family usually use when shopping? The option of "swipe card, pay through computer, and pay through mobile phone, pad" is defined as households using digital finance, assigned a value of 0, or 1 otherwise.

(5) Control variables
Referring to Rooij, Meng Hongwei, Yin Zhichao, etc. and other methods to select control variables, this article divides the selected control variables into family characteristic variables (family size, household income, household net assets, household investment risk returns, social pension participation, housing expectations, net income), household characteristics (age, physical condition, marital status, education, household registration) and regional characteristic variables (central, western and eastern). The eastern region of the regional characteristic variables was selected as the benchmark group to mitigate the effect of multicollinearity in the measurement analysis.

For the total family income, household net assets and household net income, considering the rationality of the variable setting and the feasibility of data regression, this paper treats the extreme value of 1% to eliminate the influence of the difference value, and adopts the logarithmic treatment for all the three variables in the regression analysis.

4. Empirical Analysis

4.1. Model Setting
This paper mainly uses ordinary least squares method, structural equation mediation effect model and regulatory effect test model for empirical analysis. When exploring the influence of financial literacy on the consumption expenditure and consumption structure of households, the ordinary least squares method is used; the intermediary effect model is used to estimate and test the influence of financial literacy based on credit constraints, and the regulating effect test model is used in studying the regulating effect of digital finance. The model expression is as follows:

(1) Overall model
\[
\ln C = \beta_0 + \beta_1FL + \beta_X^T + \varepsilon
\]

Among them, \(C\) represents the household consumption expenditure, \(FL\) represents the financial literacy index, \(X^T\) represents the control variables, including the household characteristic variables and the regional characteristic variables, \(\varepsilon\) represents the error items.

(2) Mediation effect model of structural equations
\[
\begin{align*}
\ln C &= \beta_0 + cX + \varepsilon \\
\ln M &= \beta_0 + aX + \varepsilon \\
\ln C &= \beta_0 + bM + c'X + \varepsilon
\end{align*}
\]

\(\varepsilon\) represents the total effect and \(M\) represents the
intermediary variable.

4.2. The Impact of Financial Literacy on Household Consumption

This paper first explores the impact of financial literacy on household consumption using ordinary least squares methods. That is, the different structures of financial literacy, total per capita consumption expenditure and household consumption are analyzed respectively. As shown in Table 5, it shows the regression results of financial literacy on household consumption and its different consumption structure. The results show that financial literacy has a significant positive effect on household total per capita consumption expenditure, which proves the establishment of hypothesis 1. As can be seen from Table 5, for each one-unit increase in the financial literacy index, the total per capita household consumption expenditure increases by 11.6% according to the average value of financial literacy. Second, three and four columns, according to the results of the financial literacy index for family per capita survival, development and enjoy consumption spending have positive effect, financial literacy index each improve a unit, family per capita survival consumption spending increased by 2.6%, family per capita enjoy consumption spending increased by 3.1%, family per capita development consumption spending increased by 5.8%. Therefore, improving the financial literacy of residents contributes to the increase of the total per capita consumption expenditure and the per capita survival type, development type and enjoyment type consumption expenditure.

| Table 5. Impact of financial literacy on household consumption |
|---------------------------------------------------------------|
| variable                        | Total_con | Subsistence_con | Enjoyment_con | Development_con |
|---------------------------------|-----------|-----------------|----------------|----------------|
| Financial literacy             | 0.116***  | 0.026***        | 0.031***       | 0.058***       |
|                                 | (8.04)    | (6.74)          | (8.66)         | (7.72)         |
| Control variables              | Yes       | Yes             | Yes            | Yes            |
| Constant                       | 4.638***  | 2.359***        | 1.141***       | 1.138***       |
|                                 | (28.83)   | (53.91)         | (28.52)        | (13.46)        |
| Observations                   | 39076     | 39076           | 39076          | 39076          |
| R-squared                      | 0.253     | 0.232           | 0.197          | 0.258          |
| Note: ***, **, and * are significant at 1%, 5%, and 10%, respectively, with the t-statistic value in parentheses. |

4.3. Financial Literacy, Credit Constraints and Household Consumption

As can be seen from Table 6, credit constraints have a negative and significant impact on the total household per capita consumption expenditure, and the household per capita survival expenditure, development type and enjoyment type consumption expenditure. In the model of total household per capita consumption expenditure, household per capita survival expenditure, development expenditure and enjoyment consumption expenditure, the interaction terms of financial literacy and credit constraints were all positive at the 10% significance level. In the family per capita survival type, development type and enjoyment consumption expenditure model, the regression coefficient of the interaction term of financial literacy and credit constraint is greater in the family development consumption expenditure model. The possible reason is that the improvement of financial literacy can effectively relieve the pressure of credit constraints, thus increasing family investment in development consumption expenditure, so as to increase the opportunity that may increase family wealth in the future.

Does financial literacy affect household consumption through the intermediary effect of credit constraints? Refer to Wen Zhonglin's structural equation mediation effect[30]. The results are shown in Table 7, which can be seen that financial literacy and credit constraints for household consumption results are also significant, indicating the existence of an intermediation effect, and proving the establishment of hypothesis 2. Among them, financial literacy has a negative impact on credit constraints, and it has a negative impact on household consumption. Through the transmission of credit constraint degree, the total effect of financial literacy on household consumption was positive, and the intermediary effect accounted for 34.12% of the total effect.

| Table 6. Financial Literacy, Credit Confinement, and Household Consumption |
|--------------------------------------------------------------------------|
| variable                        | Total_con | Subsistence_con | Development_con | Enjoyment_con |
|---------------------------------|-----------|-----------------|-----------------|---------------|
| Financial literacy             | 0.119***  | 0.026***        | 0.064***        | 0.029***      |
|                                 | (11.21)   | (8.67)          | (11.60)         | (9.41)        |
| Credit constraints             | -7.688*** | -1.979***       | -4.104***       | -1.605***     |
|                                 | (-168.24) | (-150.66)       | (-172.72)       | (-122.94)     |
| Financial Literacy *           | 0.035***  | 0.008***        | 0.027***        | 0.005***      |
| credit constraints             | (9.93)    | (8.27)          | (11.95)         | (4.70)        |
| Control variables              | Yes       | Yes             | Yes             | Yes           |
| Observations                   | 39, 076   | 39, 076         | 39, 076         | 39, 076       |
| R-squared                      | 0.655     | 0.604           | 0.664           | 0.510         |
| Note: ** *, **, and * are significant at 1%, 5%, and 10%, respectively, with the t-statistic value in parentheses. |
Table 7. Test of the mediation effects of the structural equations

| Direct effects | Structural Coef. | Std.Err. | z     | P>|z| | [95% Conf.Interval] |
|----------------|-----------------|----------|-------|------|------------------------|
| Family consumption | -0.023          | 0.006    | -3.950| 0.000| -0.0345 -0.012         |
| Credit constraints | 0.056           | 0.008    | 6.660 | 0.000| 0.039 0.072           |
| Financial literacy | -1.26           | 0.003    | -422.300| 0.000| -1.270 -1.259         |

In direct effects

| Family consumption | -0.023          | 0.006    | -3.950| 0.000| -0.0345 -0.012         |
| Credit constraints | 0.056           | 0.008    | 6.660 | 0.000| 0.039 0.072           |
| Financial literacy | -1.26           | 0.003    | -422.300| 0.000| -1.270 -1.259         |

4.4. The Regulatory Effect of Digital Finance on Household Consumption

In order to verify the regulatory effect of digital finance on household consumption, according to the regulatory effect test model, the anterior segment and the posterior segment regulation are tested respectively, and then the regulatory effect of the whole path is obtained. As can be seen from Table 8, the results of financial literacy and digital financial interaction term are significant, indicating that digital finance has a regulatory effect in the previous adjustment path; the interaction term of credit constraint and digital financial term is significant, indicating that there is also a regulatory effect in the later adjustment path of digital finance. In conclusion, digital finance has a regulatory effect in the intermediary effect of credit constraint, which proves the establishment of hypothesis 3.

Table 8. Test of digital financial Regulation effect

| Structural Coef. | Std.Err. | z     | P>|z| | [95% Conf.Interval] |
|-----------------|----------|-------|------|------------------------|
| Digital finance | -0.001   | 0.001 | 4.490| 0.000 0.001            |
| Financial literacy | -0.777 | 0.000 | 836.760| 0.000 0.775           |
| (Digital Finance * Financial Literacy) | -0.004 | 0.001 | -5.320| 0.000 -0.006          |
| Credit constraints | -0.008 | 0.002 | -5.590| 0.000 -0.011          |
| Digital finance | 0.789    | 0.005 | 149.390| 0.000 0.778           |
| (Credit constraints * Digital Finance) | -0.036 | 0.006 | -6.090| 0.000 -0.048          |

4.5. Robustness Test

To test the robustness of the analysis results, this paper continues to take the total household consumption expenditure per capita, the household survival, developmental and enjoyment consumption expenditure per capita as explanatory variables, and the interaction terms of the financial literacy index, financial literacy and credit constraints as explanatory variables. The tool variable selected in this paper is the education level of the head, because the level of a person's financial literacy is proportional to its educational level[31]. Financial literacy can be roughly replaced by the educational level of users. The results find that it has a significant positive regression relationship with the interaction terms of financial literacy and credit constraints, indicating that it is suitable as a tool variable. As can be seen from Table 9, at the significance level of 10%, the financial literacy index has a positive and significant regression to the total household per capita consumption expenditure, the household per capita survival expenditure, development type and enjoyment consumption expenditure.

Table 9. Results of the robustness test regression

| variable                  | Total con | Subsistence con | Development con | Enjoyment con |
|---------------------------|-----------|------------------|-----------------|---------------|
| Financial Literacy *      | -1.244*** | -0.264***        | -0.690***       | -0.289***     |
| credit constraints        | (0.033)   | (0.007)          | (0.018)         | (0.008)       |
| Financial literacy index  | 0.608***  | 0.128***         | 0.340***        | 0.140***      |
| controlled variable       | (0.013)   | (0.003)          | (0.008)         | (0.003)       |
| Observations              | 50, 476   | 50, 476          | 50, 476         | 50, 476       |
| R-squared                 | 0.710     | 0.668            | 0.720           | 0.590         |
| DWH checkout              | 218.481   | 260.944          | 201.392         | 216.917       |
| P=0.0000                  | P=0.0000  | P=0.0000         | P=0.0000        | P=0.0000      |

Note: ***, **, and * are significant at 1%, 5%, and 10%, respectively, with values which are robust standard deviations in parentheses.
5. Conclusions and Suggestions

5.1. Conclusion

This paper uses 2017 data from a total of 39,076 questionnaires. Financial literacy indicators are constructed, using the ordinary least squares method, the factor analysis principal component analysis method, and the structural equation intermediary effect model for empirical analysis. The study results show that the:

(1) Financial literacy has a significant impact on household consumption, and financial literacy has a different degree of significant positive impact on the different structures of household consumption.

(2) Credit constraint has an obvious intermediary role between financial literacy and household consumption. Credit constraint will reduce household consumption and influence different household consumption structures under certain significant conditions.

(3) Digital finance has a direct intermediary effect between financial literacy and credit constraint, and credit constraint and household consumption, which has a significant regulatory effect on it.

5.2. Suggestions

This paper presents several constructive policy suggestions.

(1) Strengthen the improvement of residents' financial literacy ability. Improving financial literacy can help families enhance their ability to tap into and use relevant information, and can help families understand loan policies and credit services, enabling them to choose more appropriate credit products. The improvement of financial literacy ability includes financial knowledge, financial attitude and financial skills. On the one hand, grasp the popularization of financial knowledge education, let more residents understand and learn; on the other hand, for the financial attitude and financial skills are closely linked, only to improve the risk awareness and ability of residents, will not fall into the trap of financial fraud.

(2) Reduce the credit constraints of residents and stimulate household consumption. At present, China is still in the state of the epidemic, with slow economic growth and reduced consumption. In order to stimulate China's economic recovery, under a certain policy background, to reasonably reduce the pressure of residents' credit constraints, in order to stimulate the total household consumption expenditure.

(3) Promote the inclusive development of digital finance. In the new era, new technologies and new requirements, it is particularly important to promote the effective development of digital finance. Digital finance should truly benefit every resident, so that consumers can enjoy the convenience of consumption, so as to promote household consumption expenditure.

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