

The Household Head's Educational Level and Financial Decision-Making

Siman Wang

School of Business, Hunan University of Science and Technology, Xiangtan, Hunan 411201, China

Abstract: This paper addresses the pressing need for diversification in financial asset choices among Chinese households, in alignment with the ongoing reforms in the education system. It examines the influence of the educational attainment of the household head on family financial decision-making. Drawing on microdata from the 2013 China Household Finance Survey (CHFS), the study reveals a significant correlation between the educational level of the household head and the diversity of family financial asset selections, with these findings remaining robust across various tests. The study also notes regional and household registration-based disparities in financial asset preferences. Crucially, the educational level of the household head appears to enhance financial asset selection predominantly by elevating family income. Moreover, a propensity for risk-taking is found to facilitate more educated households in diversifying their financial assets. This research underscores the pivotal role of the household head's education in shaping family financial choices, offering insightful implications for fostering high-quality development in both the educational and financial sectors.

Keywords: Household Head's Educational Attainment, Financial Decision-Making, Income, Risk Attitude.

1. Introduction

In the context of escalating supply-side reforms, the ascendancy of innovation in driving development, and a burgeoning job market, the role of education has become increasingly pivotal. With the nationwide implementation of comprehensive education in recent years, there has been a consistent elevation in educational attainment across China. This progression has enriched the populace's financial literacy, subsequently intensifying their investment inclinations. However, the rigidity of China's financial market innovation mechanisms, coupled with prohibitively high entry thresholds, has hindered the effective integration of certain financial products with the consumers' cognitive competencies and consumption patterns. This disconnect has resulted in diminished household participation in financial markets. Therefore, the construction of a robust financial market framework and the enhancement of household financial involvement bear significant and pressing relevance. While existing scholarship underscores the influence of variables such as income, gender, marital status, and health on financial asset allocation [1][2][3], the potential impact of the escalating educational attainment of citizens, in the milieu of ongoing educational reforms, has not yet been accorded sufficient scholarly attention.

Theoretically, enhanced education can increase household labor income, creating greater wealth that allows families to allocate more funds for investment. Furthermore, a higher level of education deepens the understanding of financial knowledge and encourages families to increase their total income and assets by purchasing riskier financial products[4][5][6][7]. In practice, the proportion of participants in financial markets has been steadily rising in recent years, with over sixty percent of families opting to invest in financial assets. Considering the disparities between urban and rural areas and regional differences, the selection of financial products may exhibit an imbalance. In response, the national implementation and expansion of inclusive finance policies, along with the improvement of financial

market order, have provided additional social security for families engaging in financial asset investments.

The extant literature has extensively addressed the influence of financial literacy on household choices in financial asset allocation. Campbell (2006) observed that families with higher levels of financial literacy are more inclined to arrange for precautionary savings and leverage their social networks and financial endowments in formulating optimal financial asset strategies[8]. Ge (2013) highlighted that increased financial knowledge and investment experience enhance the likelihood of households engaging in financial markets, as well as the proportion of risk assets in their portfolios[9]. Hu and Zang (2017) contended that financial literacy, as an integral form of human capital, entails the capacity to apply financial resources and knowledge, profoundly constraining rational financial decisions and significantly impacting household financial behaviors[10]. However, these studies predominantly analyze the impact of financial literacy on household financial asset choices, not delving into the specific effects of the household head's educational level on asset selection.

More directly pertinent to this study is the literature exploring the nexus between educational attainment and asset allocation. Lei et al. (2010) found that individuals with higher educational levels are more predisposed to investing in high-risk assets compared to their less-educated counterparts[11]. Yin et al. (2014) discovered that those extensively engaged in the stock market, with stocks constituting over half of their family's financial assets, are predominantly highly educated[12]. Cooper and Zhu (2016) employed a life-cycle model to investigate the relationship between educational attainment and financial assets, including stock participation[13]. Their findings suggest that higher educational levels correlate with increased entry into financial asset markets, with wealth generated from stocks surpassing that from other financial products. Nonetheless, these studies do not principally consider educational level as a variable to examine its effect on family financial asset choices. Moreover, they do not elucidate the influence of educational levels on

family financial asset choices from an income perspective, where income enhancement is a key factor. Regarding research content, these studies do not delve into the potential impact of risk attitudes in the process whereby educational level facilitates financial asset selection.

This paper starts with the reality that Chinese families urgently need a diverse selection of financial assets and, in conjunction with the ongoing education system reforms, focuses on the impact of the educational level of the family household head on family financial choices. Compared to existing literature, this paper's potential contributions are manifested in several aspects. Firstly, it systematically analyzes the impact of the household head's educational level on family financial asset choices and explores the mechanism of this impact from an income perspective. This expands the research field of human capital and financial asset allocation, significantly supplementing existing studies. Secondly, it examines the moderating role of risk attitude in the process of educational level driving family financial asset choices. This deepens the understanding of the intrinsic patterns of how educational levels affect financial asset allocation and provides a reference for promoting financial market development through education. Lastly, it investigates the differences in the impact of the educational level of household heads from various regions and household registrations on family financial asset allocation. This enriches the research content on human capital and financial market development, offering more explicit policy implications.

2. Theoretical Analysis and Research Hypothesis

2.1. Direct effect

According to human capital theory, there is a significant link between an individual's cognitive abilities and their educational attainment, with higher levels of education generally corresponding to enhanced cognitive skills. The educational level of individuals is closely associated with their proficiency in acquiring financial knowledge [14]. On one hand, household heads with advanced educational backgrounds are equipped with a broader range of financial knowledge, and superior analytical and comprehension skills, enabling them to accurately pinpoint investment opportunities in the market and thereby minimize the costs associated with investment experimentation [15]. On the other hand, individuals with higher education have access to more robust social networks, which serve as a conduit for comprehensive and precise investment information[16]. This, in turn, fosters a greater inclination towards participating in financial markets and diversifying their financial product portfolios.

2.2. The mediating effect

Schultz argues that the degree of education and the consequent enhancement of human capital constitute the most pivotal elements influencing changes in individual income distribution [17]. Individuals with higher educational levels typically exhibit elevated aptitudes and competencies in employment, professional activities, and entrepreneurial endeavors. Their educational capital not only creates but also expands the channels for personal income generation, thereby promoting the accumulation of wealth [18]. Indeed, a higher educational tier correlates with enhanced cognitive abilities, which in turn, equips individuals with a surplus of disposable

income [19]. This stability in income sources provides both short-term and long-term economic assurances, enabling them to allocate more resources toward the selection and management of financial assets.

Based on the preceding discussion, this paper proposes the following hypotheses to be empirically tested:

H1: The educational attainment of the household head is a significant factor in promoting the family's involvement in selecting financial assets.

H2: The educational attainment of the household head contributes to the family's selection of financial assets by enhancing overall household income.

2.3. The synergistic Mechanism

The impact of educational level on financial asset choices is influenced by attitudes towards risk. Individuals with a stronger preference for risk are more likely to increase their investments in riskier assets and adopt proactive retirement strategies [20]. Conversely, those with a stronger aversion to risk tend to limit their selection of financial assets and are less likely to engage in active retirement planning [21]. A preference for risk enhances the effect of educational level on the choice of financial assets, whereas an aversion to risk diminishes it. In reality, groups with higher levels of education have stronger information acquisition abilities, not only in terms of enhanced cognitive capacity but also in accessing more accurate investment information[22]. Therefore, a risk preference mindset leads to greater confidence in the financial market, subsequently increasing the extent of household participation in financial markets.

In summary, the following hypotheses are proposed for empirical validation:

H3: The efficacy of the household head's educational level in enhancing family financial asset choices is contingent upon the family's risk attitude.

3. Research and Design

3.1. Data sources

The 2013 China Household Finance Survey (CHFS), conducted by the China Household Finance Survey and Research Center, represents a comprehensive national survey. This second round of the CHFS encompassed 29 provinces, 262 counties (districts and county-level cities), and 1048 communities (villages), involving questionnaire surveys of nearly 30,000 households. The survey extensively covered various aspects, including assets and liabilities, income and expenditure, insurance and protection, demographic characteristics of families, and employment. It particularly focused on the detailed investigation of the usage and distribution of household financial assets. The questionnaire was designed to measure respondents' educational level, income, and risk attitude, providing an authoritative data source for this study on the impact of educational level on financial asset choices.

In terms of data processing, to avoid the disturbance of outliers, this study followed the approach of previous literature by excluding samples with missing values in the control variables. Additionally, considering that household heads who are very young or very old have a minimal impact on family asset investment choices, samples of individuals younger than 16 or older than 90 were excluded. Consequently, the final effective sample size for this analysis was 19318 households.

3.2. Variable selection

Dependent Variables: This research defines family financial choices through three key variables: participation in the stock market, engagement in commercial insurance, and involvement in high-risk financial markets. Operationally, a family's engagement in the stock market is assigned a value of 1 for participation and 0 for non-participation. Similarly, involvement in the commercial insurance market is denoted as 1 if the family participates, and 0 if not. Lastly, holding any form of high-risk financial assets by a family is indicated as 1, while the absence of such holdings is coded as 0.

Independent Variable: The primary variable of interest in this study is the educational level of the household head, as captured in the CHFS data. Educational level is quantitatively represented on a scale from 1 to 9, categorizing the educational stages as follows: illiterate, primary school, junior middle school, senior middle school, secondary vocational school, junior college, undergraduate degree, master's degree, and doctoral degree.

Control Variables: The study incorporates individual characteristic variables including age, gender, marital status, and health condition. In the CHFS dataset, gender is encoded as a binary variable, with male assigned 1 and female 0. Age is quantified based on the numerical ages of family members. Marital status is treated as a binary variable, designating married individuals as 1 and unmarried as 0. Health status is similarly dichotomized, with good health assigned 1 and poor health 0. Family characteristic variables encompass factors such as private business ownership, household registration status, and family size. In the CHFS, whether a family member operates a private business is indicated, with families owning a business coded as 1, and those without as 0. Household registration status distinguishes between rural (coded as 1) and urban (coded as 0) households. Finally,

family size is determined by the count of family members.

3.3. Model establishment

Based on the theoretical analysis outlined above, this study employs the Probit model to examine the impact of the household head's educational level on family financial asset selection. The specific model setup is as follows:

$$Y_i = C_0 + C_1EDU + C_2X_i + \mu_i + \tau_t + \varepsilon_{it} \quad (1)$$

In model (1), Y_i denotes the dependent variable, signifying the family's choice of financial assets. This is quantified based on the family's engagement in the stock market and their participation in high-risk financial markets. Specifically, $Y_1 = 1$ indicates active involvement in the stock market, while $Y_1 = 0$ represents non-participation in either stock or high-risk financial markets. Furthermore, $Y_2 = 1$ signals the family's purchase of commercial insurance, and $Y_2 = 0$ indicates no such purchase. Participation in high-risk financial markets is also marked by $Y_3 = 1$, with $Y_3 = 0$ suggesting non-participation. The variables serve as the independent variable (EDU), capturing the educational level of the household head. The control variables, denoted X_i include a set of individual and family characteristic variables. The term μ_i embodies the individual fixed effects, τ_t represents the time-fixed effects, and ε_{it} is the random error component, presumed to adhere to a normal distribution.

4. Empirical Results and Analysis

4.1. Analysis of benchmark regression results

Table 1. Benchmark Regression Results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Edu	0.031*** (5.981)	0.034*** (6.175)	0.042*** (5.765)	0.046*** (5.512)	0.128*** (2.896)	0.121*** (1.465)	0.159*** (3.290)	0.142*** (2.896)
Gender		0.052* (2.357)		0.135*** (3.213)		-0.031 (-1.255)		0.125** (2.211)
Age		0.024*** (6.84)		0.015*** (6.039)		0.002 (1.275)		0.005 (1.258)
Marry		0.119*** (6.32)		0.332*** (5.098)		0.059** (2.066)		0.061** (1.066)
Health		0.121*** (3.857)		0.054 (1.214)		0.247*** (9.155)		0.347*** (6.544)
Prop		-0.112* (-1.897)		-0.146* (-1.892)		0.032 (0.735)		0.035 (0.614)
Scale		-0.098*** (-7.561)		-0.111*** (-6.109)		- (-3.689)		- (-5.236)
Urban		-0.139*** (-4.897)		- (-4.161)		- (-5.421)		- (-5.553)
Risk							0.115*** (5.312)	0.109*** (5.092)
EDU							0.178** (2.251)	0.187** (2.469)
*Risk								
Individual/time Effect	YES	YES	YES	YES	YES	YES	YES	YES
N	19336	19336	19336	19336	19336	19336	18234	18234

In Table 1, columns (1) through (6) display the Probit model's estimation outcomes. The results consistently reveal a positive and statistically significant relationship between the educational level of the household head and the family's participation in financial markets, irrespective of the inclusion of control variables. This indicates that heads of households with higher educational attainments are more actively involved in the stock market, commercial insurance market, and high-risk financial markets. A noteworthy aspect is the significant positive impact of purchasing commercial insurance at the 1% confidence interval. This finding highlights that respondents with higher educational levels are less inclined towards passive retirement strategies, such as relying on children or government subsidies for retirement funding. Instead, they favor a more proactive approach, opting for commercial insurance to secure retirement finances.

4.2. The Influence of Risk Attitude

To investigate the influence of risk attitude on the selection of family financial assets, this paper utilizes the interaction term approach, a methodology frequently employed in academic research. This involves augmenting the baseline estimation model (1) by introducing an interaction term that combines the risk attitude with the educational level of the household head. The detailed formulation of the econometric model is as follows:

$$Y_i = \beta_0 + \beta_1 EDU \times Risk + \beta_2 EDU + \beta_3 Risk + \beta_4 X_i + \mu_i + \tau_i + \varepsilon_{it} \quad (2)$$

In this model, *Risk* represents risk attitude, and β_1 is the estimated coefficient for the interaction term between the household head's educational level and risk attitude. If β_1 is significantly positive, it indicates that risk attitude significantly influences the household head's financial asset choices. The study measures the risk attitude variable using relevant questions from the CHFS questionnaire. Specifically, risk aversion is assigned a value of 0, while risk preference is defined as 1.

Columns (8) and (9) of Table 1 present the estimated outcomes regarding the impact of risk attitude. The results indicate that highly educated household heads with a preference for risk are more inclined to participate in the stock market and markets for high-risk assets, and are also more likely to purchase commercial insurance.

4.3. Robustness test

To validate the robustness of the aforementioned estimations, this part of the study undertakes a robustness test by altering the measurement metrics of crucial variables. In an effort to circumvent the potential impact of varying measurement approaches on the results, this research utilizes the educational attainment of the father as an alternative measure for the educational level. Table 2 presents the outcomes of this robustness analysis, which reaffirm the positive influence of educational level on the selection of financial assets, thereby substantiating the stability and reliability of the baseline estimations.

Table 2. Robustness Test

	(1)	(2)	(3)	(4)	(5)	(6)
EDU	0.042*** (2.886)	0.046*** (3.213)	0.035*** (3.567)	0.037*** (3.731)	0.058*** (6.431)	0.066*** (7.951)
Control Variables	NO	YES	NO	YES	NO	YES
Individual/time Effect	YES	YES	YES	YES	YES	YES
N	19336	19336	19336	19336	19336	19336

5. Mechanism Test and Heterogeneity Analysis

5.1. Mechanism testing

This section is dedicated to empirically testing the mechanisms proposed in the theoretical analysis, aiming to deepen the understanding of the essential patterns through which the educational level of the household head impacts the selection of financial assets. In line with prevalent methodologies in academic research[23] [24] (Huang Qunhui et al., 2019; Mao Qilin, 2019), the study employs the subsequent model for this verification process:

$$Income_i = M_0 + M_1 EDU + M_2 X_i + \mu_i + \tau_i + \varepsilon_{it} \quad (3)$$

$$Income_i = \gamma_0 + \gamma_1 EDU \times Risk + \gamma_2 EDU + \gamma_3 Risk + \gamma_4 X_i + \mu_i + \tau_i + \varepsilon_{it} \quad (4)$$

Equation (3) conducts the initial level of analysis, investigating the impact mechanism of family income. Equation (5) delves into the second tier of examination, exploring the joint influence mechanism of educational level and risk attitude. The focus of Equation (4) is on γ^1 ; if γ^1 is

statistically significant, it suggests that both risk attitude and educational level synergistically contribute to the elevation of family income, indicating a combined mechanism where the household head's risk attitude and educational level jointly raise the family's income.

The variable of family income in this study is quantified using the logarithm of the total family income. According to columns (1) and (2) of Table 3, the impact coefficient of the educational level is positively significant at the 1% level, denoting that higher educational levels correlate with increased total family income. This result implies that an increase in the household head's educational level can lead to higher wage earnings and, consequently, an overall rise in family income levels. The outcomes in columns (3) and (4) show that the coefficient of the interaction term ($EDU \times Risk$) remains positive and significant at the 1% level. This indicates that individuals with a risk-prone disposition, who are more educated, have the potential to generate more wealth. Thus, individuals with a propensity for risk, after acquiring additional knowledge, may be more inclined to pursue entrepreneurial ventures and make financial asset choices, leading to wealth creation and a greater likelihood of participating in high-risk financial markets.

Table 3. Mechanism Analysis

	(1)	(2)	(3)	(4)
EDU	0.056*** (2.864)	0.043*** (2.504)	0.039*** (2.667)	0.025*** (2.566)
RISK*EDU			0.054*** (6.761)	0.047*** (5.864)
RISK			0.034*** (2.285)	0.024*** (2.184)
Control Variables	NO	YES	NO	YES
Individual/time Effect	YES	YES	YES	YES
N	19318	19318	19318	19318

5.2. Heterogeneity analysis

Given the significant differences in living standards and lifestyles among families across various regions and household registration types, there is a potential for diverse financial asset choices. Accordingly, this paper emphasizes examining the heterogeneous impacts of the household head's educational level in terms of regional variation and household registration status. This nuanced analysis is intended to enrich the understanding of how educational attainment fundamentally influences the choice of financial assets.

5.2.1. Regional Heterogeneity in Effects

In this study, regional dummy variables are integrated into the econometric model (1) to interact with the household head's educational level, aiming to investigate whether there are regional differences in the influence of increased educational levels on financial asset selection. To this end, two specific regional dummy variables are introduced: one representing cities in the eastern region ($D1$), coded as 1 for these cities and 0 for others, and another for capital cities ($D2$), coded as 1 for provincial capitals and 0 for other prefectural-level cities.

Table 4 details the estimated outcomes of this analysis on regional heterogeneity. Columns (1) and (2) focus on the interaction term between the educational level of the household head and the eastern region dummy variable. The results demonstrate that the coefficient $EDU \times D1$ is significantly positive at the 1% level, indicating that families in the eastern region are more likely to engage in financial

asset choices as their educational level increases, compared to those in the central and western regions. Columns (3) and (4) present findings that, upon introducing the interaction term between the educational level and the provincial capital dummy variable, the coefficient of $EDU \times D2$ also exhibits a significantly positive effect at the 1% level. This suggests that families in provincial capitals are more disposed towards investing in risky financial assets.

5.2.2. Heterogeneous Impacts Based on Household Registration Types

In this research, the econometric model (1) is augmented by incorporating an interaction term between household registration type dummy variables and the educational level of the household head. This approach is aimed at examining whether there is a variance in financial asset selection among families with different types of household registrations as their educational level rises. To this end, a dummy variable for household registration is employed: individuals with an urban household registration (U) are coded as 1, and those with a rural registration as 0. Columns (5) and (6) specifically report the estimated outcomes of incorporating the interaction term between the household registration dummy variable and the household head's educational level. The findings reveal that the coefficient of $EDU \times U$ is significantly positive at the 1% level. This indicates that families with urban household registrations are more likely to engage in financial asset selection as their educational level improves, in comparison to their rural counterparts.

Table 4. Heterogeneity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
EDU	0.025*** (2.153)	0.025*** (2.345)	0.037*** (4.272)	0.036*** (5.189)	0.029*** (4.621)	0.028*** (4.561)
EDU*D1	0.012*** (6.543)	0.008*** (5.854)				
EDU*D2			0.035*** (5.252)	0.041*** (6.221)		
EDU*U					0.033*** (3.206)	0.031*** (3.115)
Heterogeneous Variable	YES	YES	YES	YES	YES	YES
Control Variables	NO	YES	NO	YES	NO	YES
Individual/time Effect	YES	YES	YES	YES	YES	YES
N	19336	19336	19336	19336	19336	19336

6. Conclusions and Enlightenment

This research, stemming from the pressing need for diverse financial asset options among Chinese households and in conjunction with the ongoing reforms in the education system, leverages the 2013 CHFS microdata to scrutinize the influence of household heads' educational levels on family financial decision-making. The empirical findings corroborate the theoretical proposition that the educational attainment of household heads substantially facilitates the selection of financial assets within families, a conclusion that remains robust even after various stability tests. The study further observes distinct preferences in financial asset selection among families across different regions and household registration types. Importantly, it elucidates that the enhancement of family financial asset choices due to the household head's educational level is predominantly through augmenting family income. Additionally, a higher educational level is shown to counteract the effects of risk aversion in family financial asset selection.

This research yields the following significant policy insights: Firstly, family members must elevate their educational attainment, thereby facilitating a more judicious allocation of financial assets. Governments should endeavor to universally implement compulsory education and motivate citizens to enhance their educational levels. Individuals with higher education could be given additional incentives, while universities should be encouraged to increase the dissemination of financial knowledge and raise awareness about financial risk prevention. Furthermore, the government needs to guide the public in proactive retirement planning and strengthen the social security infrastructure, thereby enhancing the overall standard of retirement planning. Additionally, increasing the transparency and security of financial markets and serving as an effective conduit of information between financial institutions and investors is essential.

Secondly, governmental investment in education should be amplified to raise the level of financial literacy among the populace. Government entities should consistently boost their educational spending, deepen educational management reforms, and refine evaluation systems. Such fiscal inputs in education can effectively raise the level of familial education, thereby increasing the accumulation of human capital, and consequently improving employment competitiveness and income levels.

Thirdly, financial institutions should broaden their service platforms and escalate efforts to promote financial literacy. They need to diversify and develop their financial services to cater to families from various socioeconomic backgrounds with different financial products. Additionally, institutions should create financial products tailored to different regional populations, aligning with local pricing and consumption habits. Simultaneously, there should be targeted initiatives to disseminate financial knowledge more broadly and intensively.

References

- [1] H. S. Rosen, S. Wu: Portfolio Choice and Health Status, *Journal of Financial Economics*, Vol.72(2004) No 3 ,p.457-484.
- [2] J. Agnew, P. Balduzzi, A. Sundén: Portfolio Choice and Trading in a Large Plan. *American Economic Review*, Vol.93(2003) No 1 ,p.193-215.
- [3] W.X.Wu, P.G.Rong, Q.Xu: Health and Family Asset Choices ,*Economic Research Journal*, (2011) ,p.43-54.
- [4] X.H.Wei, Y.Y.Zhang, W.X.Wu, et al.: Study on the Factors Influencing Financial Asset Allocation of Chinese Resident Families, *Management Review*, , Vol. 26(2014) No 7,p.20-28.
- [5] P. M . Romer: Increasing Returns and Long-Run Growth[J]. *Journal of Political Economy*, Vol.94(1986) No 5,p.1002-1037.
- [6] X.Q.He, W.Shi, K.G.Zhou: Background Risk and Residents' Investment in Risky Financial Assets , *Economic Research Journal*, (2009) No 12,p.119-130.
- [7] Wu W.X., Z.Z.Wang, K.Wu, et al: A Review of Family Finance Research - From the Perspective of Asset Allocation, *Scientific Decision Making*, (2015) No 4,p.69-94.
- [8] J. Y. Campbell : Household Finance, *Journal of Finance*, Vol. 61 (2006) No 4, p.1553-1604.
- [9] H.S. Ge : The Impact of Financial Knowledge and Investment Experience on Chinese Families' Participation in Financial Markets and Asset Allocation, *Southwestern University of Finance and Economics*, (2013).
- [10] Z.Hu, R.H.Zang: Study on the Impact of Financial Literacy on Household Financial Planning - Micro Evidence from Urban Families in China , *Journal of Central University of Finance and Economics*, (2017) No 2, p.72-83.
- [11] X.Y.Lei, Y.G.Zhou: Asset Portfolio Choices of Chinese Families: The Role of Health Status and Risk Preference, *Journal of Financial Research*, (2010) No 1, p.31-45.
- [12] Z.C.Yin, Q.Y.Song, Y.Wu: Financial Knowledge, Investment Experience, and Family Asset Choices, *Economic Research Journal*, (2014).
- [13] R.Cooper, G.Zhu : Household finance over the life-cycle: What does education contribute? , *Review of Economic Dynamics*, (2016) No 20, p.63-89.
- [14] J.Mincer: Human Capital Responses to Technological Change in the Labor Market, *Social Science Electronic Publishing*, Vol. 31 (2000) No 3, p.200-202.
- [15] Z.P.Xiao, X.Z.Zhang: Study on the Impact of Institutions and Human Capital on Household Participation in Financial Markets - Survey Data from Chinese Private Entrepreneurs ,*Economic Research Journal*, (2012) , p.91-104.
- [16] D Xiao., Y.X.Lü: Educational Background and Chinese Family Participation in the Stock Market - An Empirical Analysis Based on CFPS Microdata, *Economic Theory and Business Management*, Vol. 330 (2018) No 6, p.82-97.
- [17] T. W. Schultz: Investment in Human Capital, *Economic Journal*, , Vol. 82(1972) , p.787.
- [18] W.X.Wu, Y.C.Qiu anchun, L.W.Zhang: The Effectiveness of Chinese Household Investment Portfolios: A Study Based on the Sharpe Ratio, *The Journal of World Economy*, (2015) No 1, p.154-172.
- [19] Z.G.Yuan, J.Feng, C.Y.Luo: Residents' Savings and Investment Choices: Implications for Financial Asset Development, *Contemporary Economic Science*, Vol.26 (2004) No 6, p.1-10.
- [20] A.Lusardi, O. S.Mitchelli: Financial Literacy and Retirement Preparedness: Evidence and Implications for Financial Education, *Business Economics*, Vol.42(2007) No 1,p.35-44.
- [21] T.Li, J.Guo: Risk Attitude and Stock Investment, *Economic Research Journal*, (2009) No 2, p.56-67.

- [22] W. F. Sharpe : Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk, Journal of Finance, Vol. 19 (2012) No 3, p.425-442.
- [23] Q.H.,Huang , Y.G.Yu, S.L.Zhang: Internet Development and Productivity Improvement in Manufacturing: Intrinsic Mechanisms and Chinese Experience, China Industrial Economics, (2019) No 8, p.5-23.
- [24] Q.L.Mao, J.Y.Xu: Market Transition, Employment Dynamics, and Regional Productivity Growth in China, Management World, (2015) No 10, p.7-23.