Social Interaction, Financial Literacy, and Household Financial Fragility

SHI Dan[1,a] YU Sheng-nan[2,b*]

[1]School of Economics, Wuhan University of Technology, 430070 Wuhan Hubei,China
[2]School of Economics, Wuhan University of Technology, 430070 Wuhan Hubei,China

Abstract. With the rapid development of digitalization, social interaction is becoming more and more frequent and complex, and the problem of household financial fragility is becoming more and more prominent, which brings challenges to macro financial stability. In order to explore the relationship between social interaction and household financial vulnerability, Based on the data of China Family Panel Studies(CFPS) 2018, this paper constructs an index system of social interaction, financial literacy and household financial fragility, discusses the influence mechanism of social interaction on household financial fragility, and clarifies the mechanism of social interaction affecting household financial fragility through financial literacy. The results show that social interaction significantly alleviates household financial fragility; social interaction alleviates household financial fragility by improving financial literacy ; this impact mainly exists in subgroups with higher financial literacy, urban and Internet-using households. Therefore, household financial fragility can be alleviated by improving social interaction conditions and narrowing the financial literacy gap.

1 Introduction

Household financial fragility reflects the financial distress that may occur when a household is faced with the inability to bear debts in time or in full (Leika and Marchettini, 2017)[1.] Families in financial distress often face severe liquidity constraints, as it can be seen that household financial fragility is the liquidity problem of families in essence (Brunetti et al.,2016)[2]. Household financial fragility affects the level and structure of household consumption as well as the allocation of household assets. Not only that, it will also be transferred to macro finance through the mechanism and therefore needs extra attention (Zhang Ji, 2018)[3]. However, a study by Meng De-feng et al. (2019)[4] on household financial fragility indicated that nearly half of the households in China are moderately vulnerable or highly vulnerable. Zhang Ji et al. (2020)[5] concluded that 71.43% of households in China have more significant financial fragility. The household financial fragility has been widely noted. Therefore, a further discussion of the influencing factors of the household financial fragility and a search for ways to alleviate the fragility of the household financial fragility in order to maintain financial stability is an urgent problem to be solved.

The family is the unit of society and must have a strong social character. The concrete manifestation of sociality is that human behavior is purposeful, which determines people's life needs to be satisfied through selective social interaction in society (Wang Sibin, 2010)[6]. Social interaction refers to the fact that the preferences, expectations and budget constraints of decision makers are influenced by the actions of other decision makers in the interaction process (Manski, 2000)[7]. Social interaction plays an important role in household finance by significantly increasing household commercial insurance participation and stock market participation, influencing household risky asset choices, etc. (Ding Li et al., 2019; Shiqi Guo and Pinghan Liang, 2014; Hong Yang and Ke Zhang, 2021)[8 9 10], which has a significant impact on household financial fragility. However, current studies related to the factors influencing household financial fragility mainly focus on education level, marital status, income level, financial literacy, and family size (Brunetti et al.,2016; Meng, D.-F. et al., 2019; Leika and Marchettini, 2017)[2 4 1], with little attention paid to the relationship between social interaction and household financial fragility. In the current digital context, the channels and ways of social interaction are gradually becoming more diverse and no longer limited by time and space (Nambisan, 2017)[11]. At the same time, the emergence of digital finance has made up for the shortcomings of traditional finance and given households more effective risk response measures (Li, Bo, and Zhu, Taihui, 2020)[12], bringing new possibilities for alleviating

[a]shidan@whut.edu.cn
*Corresponding author: [b]yushengnan0126@163.com

household financial fragility. It can be concluded that it has strong theoretical and practical significance to explore the impact of social interaction on household financial fragility in this context.

As another important factor influencing household financial fragility, financial literacy generally refers to the combination of awareness, knowledge, skills, attitudes, and behaviors that individuals need to make sound financial decisions (Atkinson and Messy, 2011)[13]. On the one hand, social interaction is one of the important channels for improving the level of financial literacy. Households acquire and screen high-quality online information through online social interaction (Liu, Hong, and Ma, Wenhan, 2017)[14], while at the same time, the frequency and scope of offline social interaction will further increase (Guo, Shiqi, and Liang, Pinghan, 2014)[9]. In other words, residents can obtain financial information, learn financial knowledge, and influence financial behavior to enhance financial literacy through both online and offline channels (Zhang, Zhengping, 2021)[15]. On the other hand, the difference in financial literacy affects the effectiveness of household risk identification, coping and buffering, which leads to the differentiation of household financial fragility (Li, Bo and Zhu, Taihui, 2020)[12]. Nowadays, with the advancement of technology, financial markets have been developed like never before, and the complexity of various types of financial information and financial products far exceeds the general level of awareness (Wu, Sat. et al., 2018)[16]. Households lacking financial literacy are more likely to incur higher borrowing costs and related expenses, resulting in over-indebtedness of households (Klapper et al., 2013)[17]. At the same time, the problem of unreasonable asset ratios in households with insufficient financial literacy can also lead to a lack of liquidity in household assets and adversely affect household financial fragility (Wu, Satellite, 2018)[16].

Overall, social interaction affects household financial fragility, but the specific effects are likely to be influenced by the level of financial literacy of households themselves. So, can social interaction significantly mitigate household financial fragility? Is there any difference in the impact of social interaction on different types of household financial fragility? What is the possible mechanism of action? The above questions have not yet been unanimously discussed in the academic community. Therefore, based on the relevant data of the China Family Panel Studies database in 2018, this study constructs an indicator system of social interaction, financial literacy and household financial fragility, focuses on the mechanism of social interaction on household financial fragility and aims to clarify the effect of social interaction on household financial fragility through In addition, this paper distinguishes between groups and regions. focuses on the mechanism of social interaction on household financial fragility and aims to clarify the effect of social interaction on household financial fragility through In addition, this paper distinguishes between groups and regions. Based on the intersection of sociology and finance, the main contribution of this paper is to discuss the effect of social interaction on household financial fragility through financial literacy, to improve the theory of factors affecting household financial fragility, and to enrich the theory of social interaction on household financial fragility. This study will not only help households to make better risk management decisions, improve household welfare and guarantee household financial security, but also achieve financial stability, thus promoting the smooth operation of China's macroeconomy.

2 Theoretical Analysis

Social interaction may impact household financial fragility. Social interaction can compensate for market deficiencies and help households obtain more external resources, effectively promoting the reallocation of household resources and alleviating household financial fragility in two ways: enhancing household solvency and increasing the liquidity of household assets.

On the one hand, social interaction enhances household solvency. Through verbal communication and observation of others' behaviors, social interaction can obtain diversified financial information, which can increase employment opportunities and profit opportunities, promote household income and enhance household solvency. At the same time, social interaction internalizes external transactions and helps promote stakeholder cooperation and trust (Pan, Jing, and Zhang, Xuezhi, 2015)[18]. As an intangible incentive constraint mechanism, trust increases the possibility of households to obtain interest-free borrowing from friends and relatives, reduces the cost of debt, alleviates household indebtedness, and enhances household solvency. The combination of increased income and reduced debt to improve household solvency can effectively mitigate household financial fragility.

On the other hand, social interaction increases household asset liquidity. There are two channels for the impact of social interaction on household financial decision-making behavior: endogenous interaction and situational interaction (Manski, 2000)[7]. The endogenous interaction channel of social interaction influences household decision making through the contemporaneous behavior of household reference groups (He, Xingqiang, and Li, Tao, 2009)[19]. When the group generally tends to increase savings and reduce risky investments, social interaction increases household savings and alleviates the problem of household asset illiquidity. On the other hand, the situational interaction channel of social interaction emphasizes the exemplary effect of behavioral outcomes (He, Xingqiang, and Li, Tao, 2009)[19]. Households with high household savings and low risk assets tend to have stronger financial risk resilience and perform better in the face of adverse financial risk shocks, which will attract other households in the community to imitate their household asset liquidity allocation behavior and bring positive effects on other households' asset liquidity.

However, it is worth noting that participating in P2P investment, Ponzi scheme and other bad financial behaviors that make profits in the early stage will also increase the liquidity pressure burden of other families in the community through endogenous interaction and situational interaction. Generally speaking, social interaction will positively affect household solvency, but the direction of its impact on household asset liquidity is still uncertain. However, considering that the vast majority of Chinese residents are risk-averse, their household financial behavior generally tends to increase savings, reduce risky asset holdings (Ma Yu and Wang Wenxuan, 2022)[20], and increase the liquidity of household assets. So the more likely outcome is that social interaction mitigates household financial fragility. In summary, hypothesis 1 is proposed in this paper as follows.

Hypothesis 1: Social interaction can mitigate household financial fragility.

Social interaction influences household financial fragility through financial literacy. Financial literacy is considered to be a key influencing factor of household financial fragility (Meng et al., 2019; Zhang et al., 2020; Liu et al., 2020)[4 5 21]. Increasing consumer financial literacy can help alleviate over-indebtedness, thereby reducing household financial fragility (Li Bo and Zhu Taihui, 2020)[12]. Referring to the OECD ICE① index system, financial literacy specifically includes three dimensions: financial knowledge, financial behavior and financial attitude.

First of all, social interaction can influence household financial fragility through the dissemination of financial knowledge. Observational learning and verbal communication during social interaction can not only prompt households to obtain necessary financial information, but also effectively promote the level of household financial literacy. Groups with low financial literacy or financial illiteracy are often unable to make effective decisions (Chen, Z., and Luo, H., 2019)[22]. In the process of information screening and analysis, financial literacy can alleviate household financial fragility in several ways. The increase of financial knowledge can help families form a more objective understanding of various types of financial products, choose a better financial asset allocation portfolio, and enhance household risk resilience, thereby reducing the possibility of households falling into financial vulnerability in the face of negative financial risk shocks. Mastering the necessary financial knowledge can help families deal with complex financial information, choose appropriate lending channels, reduce the cost of household debt, and alleviate household financial fragility. On the contrary, the lack of financial knowledge will lead to the lack of accurate judgment of financial information, resulting in expensive and unnecessary debt burden on households.

Second, social interaction can influence household financial fragility by promoting financial behavior. The improvement of social interaction level will stimulate the demand of family investment and financial management, which has an important impact on promoting household participation in financial behaviors such as stock market, derivatives market, pension investment plan and elderly medical insurance (He Xingqiang and Li Tao, 2009; Guo Shiqi and Liang Pinghan, 2014; Li Ding et al., 2019)[19 9 8]. Meanwhile, household financial behavior directly determines the level of household consumption, savings, income and borrowing, thus affecting the high and low level of household financial fragility. Rational household financial behavior can optimize household asset allocation, increase household solvency and asset liquidity, and alleviate household financial fragility.

Finally, social interaction can affect household financial fragility by influencing household risk attitudes, but this effect is uncertain. On the one hand, households in social interaction tend to have similar risk preferences. When the group's risk attitude is conservative, households in social interaction generally tend to hold low-risk assets, increase savings, and reduce household debt, which will enhance household financial risk resilience and reduce household financial fragility. Social interaction may also have the opposite effect. In other words, social interaction makes household risk attitudes more aggressive, which increases household financial fragility. On the other hand, with the rapid development of digitalization, while the social network brings great convenience, the risk vulnerability of network information security also becomes more and more obvious. In the face of more frequent and complex social interaction, households show weaker risk aversion and even get involved in online financial frauds, resulting in increased leverage and greater likelihood of overdraft consumption, which increases household financial fragility.

Overall, social interaction may increase household financial literacy and thus mitigate household financial fragility, but the effect of different dimensions of financial literacy may not have the same effect. In view of this, hypothesis 2 is proposed in this paper as follows.

Hypothesis 2: Social interaction alleviates household financial fragility by improving financial literacy, and the effect of financial literacy in different dimensions is also different.

3 Model Construction

3.1 Data Sources and Variable Selection

The data used in this paper are derived from the China Family Panel Studies (CFPS) conducted by the China Social Science Survey Center of Peking University in 2018. Individuals and family relationships in CFPS2018 were matched with the household economic database, and after excluding households with a head of household younger than 18 years old, and families with extreme outliers and severe missing values, this study finally obtained a valid sample size of 10381 households.

3.1.1 Explained Variables

Drawing on Meng, D.F. et al. (2019) [4] and O′Connor et al. (2019)[25], household financial fragility is measured in terms of both over-indebtedness and emergency savings. Over-indebtedness is represented by the household debt-

① Organization for Economic Cooperation and Development International Financial Education Network. Official website address: https://www.oecd.org/financial/education/oecd-international-network-on-financial-education.htm.

to-income ratio. The threshold of debt-to-income ratio is set at 30%, and households above this threshold are set as over-indebtedness households, which is set at 1;otherwise, it is set to 0. Emergency savings refers to the savings deposits sufficient to maintain the current living standard in case of risk shocks. Generally speaking, it takes 3 to 6 months for unemployed workers to get re-employed. Therefore, this paper defines households with total household cash and savings of less than 3 months of living expenses as households with insufficient emergency savings, set at 1, and vice versa as 0.

By considering over-indebtedness and emergency savings together, it can be concluded that when households do not have over-indebtedness or insufficient emergency savings, FF = 0, households are in low financial vulnerability; When households have over-indebtedness or insufficient emergency savings, FF=1, households are in moderate financial vulnerability; FF=2 when households have both over-indebtedness and insufficient emergency savings, indicating that households are at a high level of financial vulnerability.

3.1.2 Core Explanatory Variables

Social interaction includes both offline and online forms. Offline social interaction indicators include monthly dining out expenses, monthly local transportation expenses, clothing and footwear purchases, cultural and recreational expenses, travel expenses, and favor gift expenses (Guo Shiqi and Liang Pinghan, 2014; Antinyan et al., 2019)[22 26]; while online social interaction indicators include monthly cell phone expenses , monthly postal communication fees, online shopping fees, frequency of social interaction via the Internet, time spent on business Internet access, whether or not to use a computer to access the Internet, and the number of days per week to log into the mailbox (Ruo-Shi Wang and Shi-Hua Hu, 2020; Yu-Feng Wu et al., 2022)[27 8.] According to the different measurement indicators of household social interaction, this paper uses the entropy value method to calculate the 13 indicators of social interaction, obtain the corresponding indicator weights, and standardize the obtained results to measure the level of social interaction of each household.

3.1.3 Mechanical Variables

Referring to the indicator system of OECD INFE, this paper measures financial literacy in three dimensions: financial knowledge, financial behavior and financial attitude (Liu, Bo et al., 2020)[21]. Financial knowledge examines the degree of understanding and mastery of bank interest rates, inflation, and financial risks by using the number of financial literacy questions answered correctly by the respondents; financial behavior examines the actual skillfulness of the respondent households in choosing financial products by using whether they hold financial assets; and financial attitude examines the risk preferences of the respondent households by using the results of the five-item risk attitude test. Using entropy value method for processing, the indicator weights of the above three dimensions are obtained, so as to further synthesize the financial literacy level of each household.

3.1.4 Control Variables

According to the practice of Wu Yu (2021)[28,] this paper adds control variables such as household head characteristics and household characteristics. Household head characteristics include squared age of the household head, gender, marriage, health, and employment. Since the CFPS database does not set the concept of household head, this paper uses the financial respondent in the household economic questionnaire as the household head to match the above relevant data. Household characteristics variables include household size, number of properties owned, insurance participation, and importance of Internet access to information. After excluding the extreme values and invalid samples, the results of descriptive statistics of the main variables are shown in Table 1.

Table 1. Descriptive Statistics.

Variable Symbols	**Variable Name**	**Variable Definition**	**Sample Size**	**Mean Value**	**Standard Deviation**	**Minimum**	**Maximum**
FF	Household financial fragility	When the household has no over-indebtedness and sufficient emergency savings = 0; when the household has over-indebtedness or insufficient emergency savings = 1; when the household has both over-indebtedness and insufficient emergency savings = 2	10,381	0.778	0.752	0	2
Social	Social interaction	Responses to questions related to social interaction synthesized by entropy method	10,381	0.122	0.0354	0.0298	0.363
Literacy	Financial	Total score of financial knowledge,	10,381	0.392	0.184	0	1

	literacy	financial behavior and financial attitude related questions synthesized by entropy method					
knowledge	Financial knowledge	Total score of the three financial knowledge questions	10,381	0.413	0.817	0	3
behavior	Financial behavior	Holding financial products = 1	10,381	0.0485	0.215	0	1
risk	Financial attitude	Risk attitude question oriented risk preference, with six levels, the closer to 1 the more risky	10,381	2.907	1.400	1	6
age2	Age squared	Square value of (age of household head /100 in the year surveyed)	10,381	0.301	0.147	0.0324	0.865
gender	Gender	Male=1; Female=0	10,381	0.529	0.499	0	1
marriage	Marriage	Married (with spouse) = 1; Other = 0	10,381	0.844	0.363	0	1
health	Health	Very healthy = 5; Very healthy = 4; Fairly healthy = 3; Fairly healthy = 2; Unhealthy = 1	10,381	2.778	1.233	1	5
employ	Employment	Employed=1; Other=0	10,381	0.742	0.438	0	1
familysize	Household size	Household size	10,381	3.762	1.929	1	21
property	Number of properties	Number of properties owned by household members in total	10,381	0.217	0.514	0	6
insurance	Insurance	Having commercial insurance=1; Other=0	10,381	0.286	0.452	0	1
tech_use	Importance of the Internet for access to information	Internet access to information is important=1; Not important=0	10,381	0.546	0.498	0	1

3.3 Modeling

Considering that the explanatory variable household financial fragility in this paper is a discrete ordered variable, the ordered Probit model is used for estimation. As an extension of the Probit model, the ordered Probit model is exclusively used to deal with the case where the explanatory variable is an ordered variable (Mckelvey and Zavoina, 1975)29. In this paper, the following model is developed to test the effect of social interaction on household financial fragility.

$$FF_i = F(C + \beta_1 Social_i + \beta_2 X_i + \delta_i) \quad (1)$$

In model (1), FFi represents household financial fragility; Sociali represents the core explanatory variable, indicating the level of social interaction; Xi represents the control variables, including individual characteristic variables and household characteristic variables; δi represents the independently distributed random perturbation term, containing other not included in the econometric model factors not included in the econometric model; and C represents the constant term. F(*) is a nonlinear function as shown below.

$$F(*) = \begin{cases} 0 & FF_i < u_1 \\ 1 & u_1 < FF_i < u_2 \\ 2 & FF_i > u_2 \end{cases} \quad (2)$$

µ1,µ2 represent different thresholds for the household financial fragility latent variable FFi*.

FFi is an ordered discrete variable with unobservable latent variables. The latent variable FFi* is shown as follows.

$$FF_i^* = C + \beta_1 Social_i + \beta_2 X_i + \delta_i \quad (3)$$

C, β1, and β2 represent the parameters to be estimated.

4 Empirical Analysis

4.1 Analysis of Benchmark Regression Results

The results of the ordered Probit model estimation of the effect of social interaction on household financial fragility are presented in Table2. Column (1) represents the overall results of the effect of each independent variable on household financial fragility. The regression coefficient of social interaction is -1.139 and is significant at the 1% level. Columns (2)-(4) show the results of the marginal effects of each independent variable on three different levels of household financial fragility: low, medium, and high household financial fragility. The coefficients of the effect of social interaction on three levels of household financial fragility, low, medium and high, are 0.432, -0.125 and -0.307, respectively, and are significant at the 1% level. In summary, the increase in the level of social interaction increases the probability of low household financial fragility and also decreases the probability of medium and high household financial fragility, indicating that social interaction can mitigate household financial fragility. Hypothesis 1 was tested.

By examining other control variables, this paper finds that in terms of household head characteristics variables, households dominated by male heads have lower financial fragility compared to females, and households dominated by older heads have lower financial fragility compared to younger ones, which is consistent with Brunetti et al. (2016)[2]. The coefficients of marital and health status of the household head are significantly negative, which is due to the fact that divorce and sickness reduce household income and increase household expenditure, thus household financial fragility is higher. In terms of household level variables, the coefficient of household size is significantly positive at the 1% level, which may be due to the high consumption expenditure (Wu, Yu et al., 2021)[28], as well as the high proportion of elderly, infirm, and disabled household members whose ability to withstand uncertain external financial risk shocks is weak. The coefficient of the number of properties is significantly positive, indicating that a larger number of properties increases household financial fragility to some extent, and households with more houses may have more mortgage loans and their assets are less liquid compared to those with only one house. The coefficient of owning commercial insurance is significantly negative at the 1% level, and commercial insurance can manage and allocate household risk and wealth and enhance the household's resilience to financial risk. In addition, this study argues that household financial fragility is lower for accessing information important through the Internet, and the Internet helps optimize household asset allocation (Zhou, Guangsu, and Liang, Qi, 2018)[24], thus alleviating household financial fragility.

Table 2. Impact of Social Interaction on Household Financial Fragility.

Variables	**(1)**	**(2)**	**(3)**	**(4)**
	Coefficient estimation	**Low fragility**	**Moderate fragility**	**High fragility**
Social	-1.139***	0.432***	-0.125***	-0.307***
	(0.325)	(0.123)	(0.036)	(0.087)
age2	-1.043***	0.395***	-0.115***	-0.281***
	(0.095)	(0.036)	(0.011)	(0.026)
gender	-0.035	0.013	-0.004	-0.009
	(0.023)	(0.009)	(0.003)	(0.006)
marriage	-0.152***	0.058***	-0.017***	-0.041***
	(0.032)	(0.012)	(0.004)	(0.009)
health	-0.101***	0.038***	-0.011***	-0.027***
	(0.009)	(0.003)	(0.001)	(0.003)
employ	0.110***	-0.042***	0.012***	0.030***
	(0.028)	(0.011)	(0.003)	(0.008)
familysize	0.069***	-0.026***	0.008***	0.019***
	(0.006)	(0.002)	(0.001)	(0.002)
property	0.102***	-0.039***	0.011***	0.027***
	(0.022)	(0.008)	(0.002)	(0.006)
insurance	-0.117***	0.044***	-0.013***	-0.032***
	(0.027)	(0.010)	(0.003)	(0.007)
tech_use	-0.201***	0.076***	-0.022***	-0.054***
	(0.026)	(0.010)	(0.003)	(0.007)
N	10,381	10,381	10,381	10,381

Note: ***, **, and * represent significant at the 1%, 5%, and 10% levels, and the numbers in parentheses are robust standard errors, The table below is the same.

4.2 Mechanism Analysis

Through benchmark regression, this study found that overall social interaction significantly mitigated household financial fragility. Since the problem of household financial fragility largely stems from inadequate household financial literacy, i.e., insufficient household financial literacy and inability to adopt rational financial behaviors and attitudes, which in turn leads to weakened household solvency and asset illiquidity, household financial fragility increases. Therefore, this paper further examines the mechanism of social interaction through financial literacy to influence household financial fragility.

In recent years, in domestic academia, most mechanism tests refer to the studies of Wen Zhonglin et al. (2004, 2005, 2014)[30 31 32], and adopt the stepwise test method for empirical derivation. However, Jiang Ting (2022)[33] clearly stated in his study that the focus of the mechanism test should be focused on enhancing the credibility of the identification of mechanism variables on the explanatory variables, while the proposed mechanism variables should have a direct and obvious effect on the explanatory variables. Therefore, this paper mainly explains the influence mechanism of mechanism variables on the explanatory variables, and only tests the influence relationship between explanatory variables and mechanism variables empirically.

Table 3. Mechanism Analysis of Financial Literacy.

Variables	(1)	(2)	(3)	(4)
	literacy	**knowledge**	**behavior**	**risk**
Social	0.521***	3.358***	1.196***	-0.074
	(0.051)	(0.219)	(0.058)	(0.399)
Control variables	Controlling	Controlling	Controlling	Controlling
N	10,381	10,381	10,381	10,381

Table 3 presents the results of the mechanism test for the total indicator of financial literacy and the three sub-indicators of financial literacy, financial behavior, and financial attitude. Column (1) shows that the coefficient of social interaction is significantly positive at the 1% level, i.e., social interaction alleviates household financial fragility by enhancing financial literacy. Subsequently, the paper further examines the effect of the three sub-indicators of financial literacy in the mechanism of social interaction on household financial fragility. Column (2) of Table 3 analyzes the effect of social interaction on financial literacy, and the results show that the coefficient of social interaction is significant at the 1% level, and financial literacy is the mechanism variable of social interaction on household financial fragility. The results in column (3) of Table 3 show that the coefficient of social interaction is significantly positive at the 1% level, social interaction significantly promotes household financial behavior, and financial behavior is also a mechanism variable for social interaction to affect household financial fragility. The estimation results in column (4) of Table 3 show that the coefficient of social interaction on household financial risk attitude is not significant, so financial attitude is not a mechanism variable in the process of social interaction influencing household financial fragility. The above results suggest that the effect of social interaction on financial risk attitudes is not significant due to the uncertainty of group risk attitudes.

In summary, the results demonstrate that social interaction alleviates household financial fragility by enhancing financial literacy. Further analysis shows that social interaction alleviates household financial fragility specifically by disseminating financial literacy and promoting financial behavior. Financial attitudes did not realize a mechanistic role in the effect of social interaction on household financial fragility. Hypothesis 2 was verified that social interaction alleviates household financial fragility by enhancing financial literacy, and the effect of financial literacy differs in different dimensions.

In order to further verify the accuracy of the results of the mechanism analysis in this paper, this paper also draws on the method of Zhonglin Wen and Baojuan Ye (2014) [32] to re-examine the effect of social interaction on household financial fragility through financial literacy. The results obtained are consistent with the previous①.

In addition, this paper also does the relevant endogenous test and robustness test②.

5 Conclusions and Policy Implications

5.1 Conclusions

This paper uses CFPS2018 data for empirical testing, and further analyzes the impact of social interaction and financial literacy on household financial fragility of Chinese residents. The benchmark regression results show that the mitigating effect of social interaction on household financial fragility is significant after controlling for household head and household-related characteristic variables, and the obtained results still hold after considering endogeneity issues and robustness issues. The mechanism test results show that social interaction alleviates household financial fragility by increasing household financial literacy. In particular, social interaction alleviates household financial fragility by spreading financial knowledge and promoting financial behavior. The results of the heterogeneity study suggest that the effect of social interaction in alleviating household financial fragility through financial literacy is more significant in high financial literacy, urban and internet using households.

5.2 Policy Implications

① The results of the stepwise test method are not presented in the text due to space limitations. See the Appendix for details.

②Space limitations are not listed, if necessary, please write to us.

Considering the above findings together with the actual situation of social interaction, financial literacy and household financial fragility of Chinese households, this paper proposes the following policy recommendations.

First of all, improve the environment for social interaction.

(1) Expand the external radiation of high trust. Use digital means such as community WeChat groups and network platforms to promote the grid-based management of "Internet+public financial services" in the community, build communication channels between the government and families, encourage families to actively participate in community public financial services, and improve the transparency of public financial services and the credibility of government departments. Set up family mutual help groups within the community. The mutual help groups can share financial management skills, strengthen interaction and communication among families, enhance trust among families, and allow families to participate deeply in social interaction, obtain effective financial information through daily interaction and improve the ability to use financial information in a comprehensive manner.

(2) Enhance the convenience of offline interaction and aggregation. The improvement of offline physical facilities, including the repair, addition and improvement of sports centers, green parks, large shopping centers, theaters, cultural and art galleries, public travel routes, etc., can effectively facilitate families' social interaction. Set up financial knowledge exchange corners and financial security bulletin boards in the public domain to create an offline social interaction environment for families related to finance, and enhance the possibility of families exchanging and learning financial information through social interaction.

(3) Guarantee the security carrying capacity of online interactions. Refine network security management empowerment measures and strengthen sensitive word tracking and detection. Relying on artificial intelligence, neural learning and edge computing technology, the typical "rebate", "dividend" and other network fraud-related inducement words on social platforms are deleted and restricted in a timely manner to reduce the further spread of financial risks brought about by inappropriate financial behaviors through the network. In addition, it can effectively clean up the social interaction environment and alleviate the financial vulnerability of households.

Secondly, bridge the gap in financial literacy. In the context of the urban-rural dual structure, the financial literacy gap is widespread, and it is necessary to find an effective way to narrow it.

(1) Build a long-term mechanism for national financial literacy education. Incorporate the financial literacy improvement plan into the national knowledge education system, enter the primary and secondary school classrooms through financial knowledge, and help family residents improve their financial knowledge reserves and use efficiency, so as to drive the improvement of the financial literacy level of the entire society, and then comprehensively alleviate household financial fragility.

(2) Innovate the effective way of national financial literacy education. Financial events are carried out in a variety of ways to stimulate the endogenous motivation of families to enhance financial literacy. For rural areas, financial knowledge and financial awareness such as agricultural product insurance and futures are integrated into the process of agricultural technology service promotion and cultivation of new farmers, so as to reduce the cost of rural financial education, improve the effectiveness of farmers' financial literacy education, and alleviate the financial vulnerability of rural households according to local conditions.

(3) Purify the financial environment for national financial literacy. Build a financial supervision system that integrates government regulatory departments, financial institutions and families. Especially for rural families and families with low financial literacy, establish a whistleblowing reward system, mobilize the enthusiasm of vulnerable families to participate in financial supervision, and establish effective guarantees for the comprehensive improvement plan of national financial literacy, so as to effectively alleviate the financial vulnerability of vulnerable families.

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