

Social Security and Financial Fraud: Analysis based on Chfs2015 Data

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Abstract

Based on the 2015 household financial Survey (CHFS) data in China, this paper constructs Logit The model and OLS model are used to empirically analyze the impact of social security on financial fraud. The results of endogenous research show that the higher the degree of family participation in social endowment insurance, medical insurance and unemployment insurance, the higher the degree of social security of families, the greater the possibility of financial fraud, the more types of financial fraud, and the higher the amount of fraud losses.

Keywords

social security; financial fraud; endogeneity; chfs.

1. Introduction

With the rapid development of technology and economy, the financial industry as an important part has been playing a positive role in promoting other industries. Because the financial industry has the particularity and complexity in its operation of money, movable property and securities, its operation mode is different and different scales. (Sun Wei and Chen Bing)2002) financial fraud refers to the behavior of criminals who cause losses to the economy and society by constructing false facts, illegally occupying other people's assets or public finances. There are many types of financial fraud, such as telephone fraud, Internet fraud, insurance fraud and fund-raising fraud. With the development of social economy and science and technology, the field of fraud is becoming wider and wider, and the means are more changeable, which brings serious harm to the society.Great losses to the economy. (Zhang Xiangming, 2013; Wang Jia Xi and Li Xueting, 2016). Social security is not only a social system, but also an important livelihood project (Tao Yuanyuan, 2017), which aims to protect the national basic life and social security order, and is closely related to the economic operation of the whole society (Yu Feng and Zhang Rong, 2018).

With the popularity of mobile Internet, network technology brings convenience to the lives of residents, but also leads to more efficient fraudulent Mass Deception. According to the 2017 Internet fraud trend report released by hunter network, the average loss of the deceived people in Internet fraud is as high as 50168.2 yuan. Compared with last year, the number of reported cases of Internet fraud increased by nearly 18%.The average personal loss has increased by more than 50%, and the financial frauds on the Internet have become increasingly harmful to the safety of people's financial property. However, an online survey report released by the online financial platform, 360 in 2015, shows that among the surveyed netizens, the proportion of all kinds of fraudulent messages has reached 70%, after having experienced various financial frauds. More than 50% of users choose to "silently accept". Less than 50% of netizens want to protect their rights through related channels. However, only 60% of 7%. users can think of their rights awareness in concrete actions.

Financial fraud not only caused economic and spiritual losses to the deception individuals and families, but also seriously damaged the national financial order and social order, and directly

harms the healthy development of society and economy (Zhang, 2007; Wang and Li, 2016). Based on this, financial fraud has become an important issue worth studying in the financial field. It is of great theoretical and practical significance to conduct in-depth research on the characteristics, influencing factors and consequences of financial fraud.

2. Data, Specification and Variables

2.1. Data

The data used in this paper are from the China family financial Survey (chfs) project carried out by the China family financial investigation and research center of Southwestern University of Finance and Economics in June 2015. The survey covers 29 provinces in China, and the micro level data of more than 37000 households are counted.

2.2. Specification

The basic specification is constructed as follows:

$$Y = \alpha_0 + \alpha_1 X + \alpha_2 Z + \varepsilon$$

Among them, y is the explanatory variable of financial fraud, including the continuous variable "fraud loss" and "fraud type" and the virtual variable "whether it is subjected to fraud". In this paper, whether the family "is subjected to fraud" means whether it has encountered financial fraud, "fraud loss" refers to the amount of money lost due to fraud, and "fraud category" means that there have been several fraudulent practices.

X is the core explanatory variable social security. According to the information provided by the questionnaire, the respondents' social pension insurance, social medical insurance and unemployment insurance status are included in the measurement system. Three indicators are used to measure the high level of social security quantitatively assessed. The first index is the amount of pension received every month. The second indicator is the balance of medical insurance accounts (medical); the third indicator is whether there is unemployment insurance (employ).

3. Empirical Results

3.1. The Impact of Social Security on Families' Financial Fraud

Table 2 shows the empirical regression results (including marginal effects) of using Logit model, column 2, 4 and 6 respectively reports their respective marginal effects. The results of column 1 and column 2 show that the higher of the average family pension is, the more vulnerable it is to be swindled. And the increase in the amount of pensions per unit will increase by 0.006%. column 3 and column 4 indicate that the greater the balance of family health insurance accounts, the higher the probability of experiencing financial fraud, and the increase in the medical insurance account balance by 2.04%. Column 5 and column 6 show that people who hold unemployment insurance are more likely to be subjected to financial fraud, and the probability of having an unemployment insurance increases with the probability of financial fraud per unit increase 8.6%. shows that the significant level of the three core explanatory variables is 1% and the estimated coefficient is positive, which means that the more the family pension is, the higher

the balance of the medical insurance account. That is, the higher the degree of social security, the more likely it will be subjected to financial fraud.

Table 1: variable definition table

Variable	Variable name	Variable definition
fraud	Are you being swindled?	It's =1, no =0
number	Types of fraud	The sum of the number of different types of fraud.
lost	Fraud loss amount	The amount of fraud loss is calculated.
pension	Pension amount per month	The average amount of pensions a family receives per month.
medical	Medical insurance account balance	Balance of family medical insurance account
employ	Is there unemployment insurance?	It's =1, no =0
age	Age	Age of head of household
marriage	Marital status	Married =1, other =0
gender	Gender	Male =1, female =0
rural	Household register	Rural =1, city =0
lnsalary	Total annual household income	The total income is calculated.
education	Degree of Education	Did not go to school =1; primary school =2; junior high school =3; high school =4; secondary vocational high =5; Tertiary Vocational College =6; undergraduate =7; master degree =8; doctoral student =9
job	Is there a job?	It's =1, no =0
property	Do you own real estate?	It's =1, no =0

Z is a control variable. This paper selects control variables from three aspects of family demographic characteristics.

Table 2: Influence of social security on family financial fraud

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	fraud	fraud	fraud	fraud	fraud	fraud
pension	0.000292*** (1.46e-05)	0.000063*** (3.11e-06)				
medical			0.0093*** (6.63e-06)	0.0204*** (1.45e-06)		
employ					0.415*** (0.0483)	0.086*** (0.0099)
gender	0.0338 (0.0236)	0.0073 (0.0051)	0.0254 (0.0235)	0.0055 (0.0051)	0.0635 (0.0389)	0.0131 (0.0080)
age	-0.0113*** (0.00102)	-0.0025*** (0.00022)	- 0.00309*** (0.000934)	- 0.00068*** (0.000205)	-0.000388 (0.00198)	-0.000080 (0.00041)
rural	-0.614*** (0.0280)	-0.133*** (0.006)	-0.708*** (0.0274)	-0.155*** (0.0058)	-0.514*** (0.0527)	-0.106*** (0.0107)
marriage	0.130*** (0.0324)	0.023*** (0.0070)	0.146*** (0.0321)	0.032*** (0.0070)	-0.110* (0.0598)	-0.023* (0.0123)
education	0.200*** (0.00873)	0.043*** (0.00185)	0.240*** (0.00849)	0.053*** (0.00179)	0.164*** (0.0134)	0.034*** (0.0027)
job	-0.00773 (0.0309)	-0.00168 (0.0067)	-0.166*** (0.0299)	-0.036*** (0.0065)		
lnsalary	0.0168*** (0.00321)	0.0036*** (0.00069)	0.0123*** (0.00322)	0.0027*** (0.00071)	-0.0135*** (0.00439)	-0.0028*** (0.00090)
property	-0.142*** (0.0335)	-0.0308*** (0.0073)	-0.149*** (0.0334)	-0.033*** (0.0073)	-0.152*** (0.0480)	-0.031*** (0.0099)
Constant	0.336*** (0.0802)	0.336*** (0.0802)	-0.00319 (0.0781)	-0.00319 (0.0781)	0.321** (0.125)	0.321** (0.125)
Observations	36,566	36,566	36,566	36,566	13,728	13,728

Note: *** p<0.01, ** p<0.05, * p<0.1, data in brackets denote standard error.

3.2. The Impact of Social Security on Families Suffered from Financial Fraud

Table 3 shows the empirical regression results of social security for families suffering from financial fraud by using OLS regression model. Among them, column 1 shows that the more families receive the amount of pension, the more types of fraud they suffer, and the increase in the amount of pensions per unit will increase by 6.68% units, including 2 and 3. The higher the

balance of medical insurance accounts, the more types of financial fraud will be suffered. The estimated coefficients of these three core explanatory variables are significantly positive at 1%. The regression results show that the higher the social security level of a family, the more types of financial fraud it will suffer.

Table 3: Influence of social security on families' financial fraud types

	(1)	(2)	(3)
VARIABLES	number	number	number
pension	0.0668*** (6.58e-06)		
medical		0.0127*** (2.63e-06)	
employ			0.194*** (0.0256)
gender	0.0624*** (0.0118)	0.0603*** (0.0118)	0.100*** (0.0212)
age	-0.00943*** (0.000515)	-0.00635*** (0.000470)	-0.00708*** (0.00110)
rural	-0.356*** (0.0146)	-0.390*** (0.0144)	-0.323*** (0.0310)
marriage	0.0190 (0.0161)	0.0255 (0.0161)	-0.0717** (0.0317)
education	0.133*** (0.00416)	0.147*** (0.00403)	0.123*** (0.00712)
job	0.00649 (0.0159)	-0.0522*** (0.0154)	-0.787 (1.203)
lnsalary	0.00660*** (0.00162)	0.00441*** (0.00162)	-0.0141*** (0.00242)
property	-0.0935*** (0.0165)	-0.0980*** (0.0165)	-0.0821*** (0.0260)
Constant	1.288*** (0.0399)	1.159*** (0.0388)	2.192* (1.205)
Observations	36,523	36,523	13,716
R-squared	0.139	0.134	0.085

Note: *** p<0.01, ** p<0.05, * p<0.1, data in brackets denote standard error.

3.3. The Impact of Social Security on the Amount of Family Financial Fraud Losses

Table 4 shows the empirical regression results of social security for family financial fraud losses by using OLS regression model. Among them, column 1 shows that the more the families receive the pension, the more financial fraud they will lose, and the amount of financial fraud will increase by 10.06% units when the pension amount is added to each unit. column 2 shows that the balance of family medical insurance accounts is more. The loss of financial fraud will increase with the increase of medical insurance account balances. The amount of financial fraud losses will increase by 15.53% units, and the estimated coefficients of these two core explanatory variables are significantly positive at 10% level. The higher the balance of a family's pension and medical insurance accounts, the more types of financial fraud it will suffer.

Table 4: the impact of social security on the amount of family financial fraud losses

	(1)	(2)	(3)
VARIABLES	lost	lost	lost
pension	0.01006* (8.35e-06)		
medical		0.01553* (3.32e-06)	
employ			0.00369 (0.0294)
gender	0.00247 (0.0149)	0.00203 (0.0149)	-0.0226 (0.0244)
age	0.000602 (0.000652)	0.00104* (0.000594)	-0.00141 (0.00126)
rural	-0.0487*** (0.0185)	-0.0531*** (0.0182)	-0.0173 (0.0356)
marriage	-0.0293 (0.0203)	-0.0287 (0.0203)	-0.0541 (0.0364)
education	0.0140*** (0.00527)	0.0155*** (0.00510)	0.0104 (0.00817)
job	0.0138 (0.0201)	0.00499 (0.0195)	0.167 (1.383)
lnsalary	-0.00690*** (0.00206)	-0.00732*** (0.00205)	-0.0133*** (0.00278)
property	-0.0355* (0.0209)	-0.0365* (0.0209)	-0.0578* (0.0298)
Constant	0.239*** (0.0505)	0.223*** (0.0491)	0.310 (1.385)
Observations	36,566	36,566	13,729
R-squared	0.001	0.001	0.003

Note: *** p<0.01, ** p<0.05, * p<0.1, data in brackets denote standard error.

4. Conclusion

In this paper, we use the 2015 household financial survey data of China (chfs) to empirically study the impact of social security on families. Whether the court is subjected to financial fraud, suffers from the types of financial fraud and the amount of money lost by fraud, discusses the impact mechanism of social security on its financial fraud. The empirical results show that the promotion of social security has a significant positive impact on financial fraud in families.

Based on the above conclusions, this paper puts forward the following policy recommendations: for people with relatively high level of financial literacy, it is necessary to enhance their awareness of financial fraud, enhance their awareness of prevention, and appropriately reduce risk preferences, focusing on increasing personal information protection and risk prevention in daily life, so as to promote a series of financial activities under the premise of ensuring asset safety. At the same time, we must establish a multi-level supervision system in the financial market. We must firmly safeguard the property safety of the masses, maintain the stable operation of the financial market, ensure the rational and efficient economic order, strengthen the crackdown on financial fraud, and deal with fraudsters quickly and strictly.

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