

Working Paper No. 2018004



PHBS
北京大学汇丰商学院



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Family Ties and Employment Behavior: The Role of Financial Intermediaries

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Abstract

We study the interaction effect of financial intermediaries and family ties on people's labor participation and employment type in China. Although the effects of financial intermediaries and family ties on employment behavior have already been studied separately, this article will present the effects of both factors in one model. We give empirical evidence to support earlier arguments that family ties negatively affect labor force participation and positively affect self-employed/family-employed behavior, as well as the financial development positively affect labor force participation. Departing from extant literature, our results overall indicate a compensating effect of financial intermediaries for family ties on labor participation and employment type, though the interaction effect fell short of significant to predict employment type for the model including all samples. We further argue that there are gender differences and urban and rural differences on the role of financial intermediaries. The effect of financial intermediaries is compensating the strength of family ties on labor participation and employment type for female and rural people, while it's not significant for male and urban people.

Keywords: Employment Behavior; Employment Type; Family Ties; Financial Intermediaries; Labor Participation

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Abstract

We study the interaction effect of financial intermediaries and family ties on people's labor participation and employment type in China. Although the effects of financial intermediaries and family ties on employment behavior have already been studied separately, this article will present the effects of both factors in one model. We give empirical evidence to support earlier arguments that family ties negatively affect labor force participation and positively affect self-employed/family-employed behavior, as well as the financial development positively affect labor force participation. Departing from extant literature, our results overall indicate a compensating effect of financial intermediaries for family ties on labor participation and employment type, though the interaction effect fell short of significant to predict employment type for the model including all samples. We further argue that there are gender differences and urban and rural differences on the role of financial intermediaries. The effect of financial intermediaries is compensating the strength of family ties on labor participation and employment type for female and rural people, while it's not significant for male and urban people.

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Family Ties and Employment Behavior: The Role of Financial Intermediaries

I. Introduction

Literature has shown the role of family on people's employment behavior (Alesina and Giuliano, 2010; Algan et al., 2005). Various factors have been examined on the effect on this relationship (Bentolila and Andrea, 2008; Schoeni, 2002); yet, no article is known about the influence of financial development on this relationship. Although some research has suggested the importance of financial development on people's employment behavior (Chen and Chen, 2016; Shen and Zou, 2016), there is little empirical evidence to support such a claim.

We take up the challenge in the present study by investigating the roles of family ties and the development of financial intermediaries in determining people's employment behavior and status, mainly relying upon the China Family Panel Studies (CFPS) data set in conjunction with China City Statistical Yearbook. We considered how the relationship with family may impact people's employment behavior, manifested by labor participation and employment type, and how this impact may be affected by the degree of financial development in the region.

Empirical evidence has shown significant differences among different financial or economic development area on female labor force participation (Shen and Zou, 2016; Mammen and Christina, 2000). Alesina and Giuliano (2010) studied the importance of family ties on economic behavior and claim that family ties have significant effect on participation of women and youngsters in labor force. This can enrich our understanding and give a more complete knowledge on employment behavior, as well as the interaction effect between family and financial intermediaries.

As a part of social capital, family has an important role in determining people's economic behaviors. However, as the development of financial market and easier access to financial intermediaries, the role of family is probably changed. Well-developed financial market with marketization, leads to the transfer of production and financial activities from family to the market and enterprises. In this circumstance, people would be more involved in labor market or running their own business due to more job opportunity and financing opportunity. From another perspective, financial intermediaries may further amplify the family power because of the role of family in traditional Chinese culture. In order to figure out the relation between financial intermediaries and the family power in the reality, a study combining these two factors on individuals' employment behavior would be a good start.

Alesina and Paola Giuliano (2010) measured the strength of family ties by three related survey answers about the importance of the family in people's life taken from the World Value Survey (WVS). According to their measure of family ties, Asian countries lie in the highest range. The structure of family and strength of family ties varies across countries. Bisin and Verdier (2000, 2001), Bisin et al. (2004) and Tabellini (2008) explained that heterogeneity comes from heterogeneity in parent's preferences and experiences. Differences in culture may also cause differences in the strength of family ties. Apart from the country-specific cultural differences, there is also heterogeneity in the strength of family ties within a country. Even though we conduct a within-country analysis, regions across China still demonstrate large variations in cultural belief. Talhelm and Zhang et al. (2014) found that rice-growing southern China is more interdependent than the wheat-growing north. In the present paper, we focus on Chinese families and test the strength of family ties in China by presenting the different employment behavior decision within individuals.

The idea that the financial market impacts unemployment has been raised in recent years. Acemoglu (2001) argued that credit market frictions may explain high unemployment in Europe. As a recent proponent of this idea, Chen and Chen (2016) studied the effect of financial development on labor participation and employment ratios in China, and found that the degree of financial efficiency associates negatively with employment probability. Most measures in fact assess the regional unemployment rate and show the impacts of financial intermediaries at macro level. We attempt to analyze people's employment behavior and verify the important role of financial intermediaries. Moreover, a preliminary attempt at giving and testing the main hypothesis that the strong financial intermediaries appear to be a compensation for family ties on people's employment behavior. Ning and Qi (2017) suggest that workers with different employment status should be considered separately during the urbanization and citizenship establishing. Considering this, we further divide employed people into self-employed or wageworker and test the role of family.

When we are connecting family and employment behaviors, gender specific problems cannot be omitted. There are many economists contributing to the gender gaps in people's employment behaviors. A recent study found that the culture, especially the belief of continuing the family line would increase the gender gaps in labor supply (Zhang and Li, 2016). Hence, the comparison of family ties on male and female is necessary in our discussion.

The present paper is organized as follows. Section II summarizes the relevant literature and proposes a set of hypothesis. Section III introduces the data used to set up the models for labor participation and employment type. Section IV presents empirical results for all observations, as well as separated by gender and region groups. The final section discusses the results and concludes.

II. Theory and Hypotheses

Family Ties and Employment Behavior

A series of literature state the impact of family on economic development, people's economic behaviors and labor market participating decisions. Alesina and Giuliano (2010) emphasize the importance of family values as one of the most relevant cultural traits. With strong family ties, the lower labor force participation of women and young adults, the lower geographical mobility since ties are more useful when living close (Alesina and Giuliano, 2010), the lower people's civic engagement and political participation (Alesina and Giuliano, 2011), stronger preferences for family activities and therefore the lower female employment rate, youth and senior employment rate (Algan et al., 2005).

H1. With stronger family ties, the labor participation of people is lower.

Hout and Rosen (2000) found that family background and structures affect self-employment probabilities. Bertrand and Schoar (2006) showed that stronger families are associated with a higher fraction of self-employment and smaller average establishment size. When family ties are strong, financing constraints may be mitigated without the need to resort to external financing arrangements and this relationship is expected to be stronger in countries whose social values adhere more to risk-sharing attitudes (Mertzanis, 2016). The stronger the family ties, the lower difficulties in financing.

H2. With stronger family ties, the probability of people self-employed or family-employed is higher.

The role of financial intermediaries

Goldsmith (1969) defined financial development as a change in financial structure and constructs the financial interrelations ratio (FIR) to reflect the basic feature in financial

development for the first time. In his book, he argues that there is a positive relation between financial intermediaries and economic growth, which could be due to increasing both the efficiency and the volume of investment. There are several literatures connecting the differences in financial development with unemployment (Acemoglu, 2001; Shen and Zou, 2016). Wasmer and Weil (2004) asserted that credit market imperfections influence the labor market and aggregate economic activity. In higher financial development area, credit markets could provide loans to new firms more flexibly, which creates more job opportunity and entrepreneurial opportunity. This implies financial intermediaries to be positively related to labor participation and self-employed/family-employed. Furthermore, Gindling and Newhouse (2014) suggested that the interventional access to credit should be effectively targeted to the minority of self-employed with higher growth potential to achieve even better benefits, particularly in low-income contexts.

Although the effects of these two factors on employment behavior have already been studied separately, this study will present the effects of both factors in one model. There is the possibility of a trade-off between financial market and family ties on people's employment behavior. Based on earlier research, the strength of family ties is predicted to have a negative influence on people's labor participation. Considering the increase in job opportunity along with financial development, we propose the hypothesis that financial intermediaries would weaken the effect of family ties on people's labor participation. A culture based on strong family ties may sometimes impede economic development (Bertrand and Schoar, 2006). A possible explanation for the important role in people's self-employed behavior is that family ties serve as a second-best solution to people living in a poor financial environment. In this way, the development of financial intermediaries would weaken the effect of family ties on people's self-employed or

family-employed behavior because the funding source of family firm would be transferred from family members to the market. These arguments generate our hypotheses regarding the compensating effect between financial intermediaries and family ties on people's employment behavior.

H3. In higher financial development area, the labor participation of people is higher. The effect of financial intermediaries and family ties are compensating each other on people's labor participation.

H4. In higher financial development area, the probability of people self-employed or family-employed is higher. The effect of financial intermediaries and family ties are compensating each other on people's employment type.

III. Methods

Data Sources

Our analysis is based on two primary datasets. The first is China City Statistical Yearbook (2016) for the province level finance related data. The data in China City Statistical Yearbook (2016) is based on year 2015, which can avoid reverse causation problem.

The second dataset is China Family Panel Studies (CFPS 2016) provided by the Institute of Social Science Survey (ISSS) of Peking University. The questionnaires contain individual-, family-, and community-level data, including information on standard demographic characteristics (gender, age, education, residence, health status, labor force participation, income, etc.), family characteristics (number of family members, number of child, and more). There are 33,296 CFPS individuals in the adult dataset. After matching their family-level data, there are 32,809 individuals left. For further analysis, the ultimate dataset contains 18,860 individuals

excluding students, people out of labor market (male above 60 and female above 55), and people with missing value in important variables.

For regional characteristics, GDP per capita, unemployment rate, average wage, etc. are downloaded from National Bureau of Statistics of China.

Dependent Variables

Labor force participation. According to the answers to job related questions, we construct a dummy variable to identify whether or not they are actively participating in labor market (taking the value of 1 or 0 respectively). The definition of participating in labor market is implied by the following two questions. One question assesses the current employment status (employed, not employed and out of labor market). The second question asks whether or not you are looking for a job (taking the value of 1 and 0 respectively). People not employed and also not looking for a job are identified as not actively participating in labor market.

Self-employed/Family-employed. There is a question asking the employment type of job (self-employed/family-employed, employed by company/others and not applicable). In order to know the employment type of employed people, we construct a dummy variable to identify whether or not they are self-employed/family-employed (taking the value of 1 and 0 respectively).

Independent Variable

Family ties (FamTie). There are different ways to measure family values. In many literatures, the strength of family ties is a principal component analysis of family values computed from the World Values Survey (WVS). Lack of corresponding questions in CFPS, here we construct a variable that whether or not you would turn family members for help when you are sick as a proxy variable for the strength of family ties.

[Insert Figure 1 about here]

Moderating Variable

Development of financial intermediaries (FinDev). *FinDev* was constructed for 22 provinces (combined from prefecture-level cities), 4 municipalities and 5 autonomous regions, to measure the financial development level. The financial development index is the ratio of local financial institution loan balance to GDP.

Control Variables

[Insert Table 1 about here]

Analytic Model

Due to the dichotomous nature of the dependent variables, we ran Probit model to test the hypothesis.

Probit Model I:

$$P(Y_{1ij} = 1) = \Phi(\alpha_0 + \alpha_1 * FamTie_{ij} + \alpha_2 * FinDev_{ij} + \alpha_3 * FamTie_{ij} * FinDev_{ij} + \alpha_4 * X_{ij} + \alpha_5 * M_{ij} + \alpha_6 * Z_{ij} + \epsilon_{1ij})$$

Probit Model II:

$$P(Y_{2ij} = 1) = \Psi(\beta_0 + \beta_1 * FamTie_{ij} + \beta_2 * FinDev_{ij} + \beta_3 * FamTie_{ij} * FinDev_{ij} + \beta_4 * X_{ij} + \beta_5 * M_{ij} + \beta_6 * Z_{ij} + \epsilon_{2ij})$$

$P(Y_{1ij} = 1)$ represents the probability that individual i in family j actively participates in labor market. $P(Y_{2ij} = 1)$ represents the probability that individual i in family j is self-employed or family-employed. $FamTie_{ijt}$ is defined as the strength of family ties. $FinDev_{ij}$ is the financial development index of the province where individual i lived. X_{ij} are our controls which vary depending on the left hand side variable for individual i . M_{ij} are our controls which vary depending on the left hand side variable for family j . Z_{ij} are our controls which vary depending

on the left hand side variable for the province where individual i lived. $FamTie_{ij} * FinDev_{ij}$ is the interaction term of financial development index and strength of family ties, which is used to study the impact of financial intermediaries on family ties.

IV. Results

Main Results of All Samples

Table 2 reports the results of four Probit regressions testing for the influence of family ties and financial development on the likelihood to labor participation (Model 1 and Model 2) and the likelihood to self-employed or family-employed (Model 3 and Model 4) for all people. Each regression is controlled for individual, family and regional characteristics. In all models, the coefficients on the family ties are significant.

Hypothesis 1 states that with stronger family ties, the labor participation of people is lower. For labor participation, the reported coefficient on the family ties in the model without financial development index (Model 1) is negative.

Hypothesis 2 states that with stronger family ties, the probability of people self-employed or family-employed is higher. For employment type, the reported coefficient on the family ties in the model without financial development index (Model 3) is positive. These results are in line with the hypothesis and prior literatures.

The effects of family ties are stable and similar when the moderating variable $FinDev$ and their interaction term are added into the models (Model 2 and Model 4). Model 2 indicates that every one unit increases in strength of family ties decreases the possibility of labor participation 0.959 times less likely, while one unit increases in financial development increase it 1.158 times more likely.

Hypothesis 3 states that in higher financial development area, the labor participation of people is higher. The effect of financial intermediaries and family ties are compensating each other on people's labor participation. The interaction term of financial development and family ties in Model 2 is significant with positive sign as expected, which shows that financial intermediaries weaken the effect of family ties on people's labor participation. Model 4 implies that every one unit increases in strength of family ties and financial development increase the possibility to self-employed or family-employed 1.181 and 1.217 times more likely, respectively.

Hypothesis 4 states that in higher financial development area, the probability of people self-employed or family-employed is higher. The effect of financial intermediaries and family ties are compensating each other on people's employment type. The interaction term of financial development and family ties in Model 4 has positive sign as expected, which shows that financial intermediaries and family ties are compensating each other on people's employment type. However, the interaction term does not show to be significant. It is therefore concluded that the effect of family ties is not dependent on the financial development, or, the effect of financial development is not dependent on the strength of family ties.

[Insert Table 2 about here]

Gender Difference in the Main Results

We further evaluate the gender difference in the aforementioned patterns of employment behavior. Table 3 reports the results of eight Probit regressions testing for the influence of family ties and financial development on the likelihood to labor participation (Models 1 to 4), and the likelihood to self-employed or family-employed (Models 5 to 8), with the separation between females and males. In all models, the reported coefficients on the family ties have the same signs as those in models with all samples. Comparing the effects of family ties on labor force

participation and employment type, they are both larger for male. Moreover, for labor force participation, the effect of family ties shows to be significant only for male, not for female.

Individual controls included in the regression are education, number of child, age, marriage and other characteristics (described above). For labor force participation, the effects of marriage and the effects of age are different between female and male. Marriage has a positive effect on male labor participation but a negative effect on female labor participation. Age is negatively related to male labor participation, while it is positively related to female labor participation.

Model 2 implies that every one unit increases in strength of family ties decreases the possibility of female labor participation 0.967 times less likely, while one unit increases in financial development increase it 1.095 times more likely. The interaction term of financial development and family ties for female labor participation is significant with positive sign.

Model 6 implies that every one unit increases in strength of family ties and financial development increase the possibility for female to self-employed or family-employed 1.183 and 1.725 times more likely, respectively. The interaction term of financial development and family ties for female employment type is significant with negative sign.

These results shows that the effect of family ties on labor participation and employment type are minor for female in financially developed area. However, the role of financial intermediaries for male does not show this pattern. Model 4 and Model 8 suggest that the effect of financial intermediaries does not seem to be significant for male employment behavior. These results are in line with prior literatures that there are relationships between female employment behavior and financial development or economic development, but not significant with male (Shen and Zou, 2016; Pampel and Tanaka, 1986). The financial development is relevant for

employment behavior of female, but not of men as expected. The compensating effect of financial intermediaries on family ties is only significant for female employment behavior.

Recalling the result of all samples, the interaction effect fell short of significant to predict employment type, which may be mainly due to the male group. Also, the coefficient on interaction term for labor force participation is larger for female, which indicates that the compensating effect of financial intermediaries on family ties is larger for female. Hence, as the development of financial intermediaries, both labor participation and self-employed/family-employed behavior increase for female and male, but the compensating effect on family ties is more sensitive for female.

[Insert Table 3 about here]

In China, the responsibility of continuing the family line and taking care of children are important factors contributing to gender gaps in labor supply (Zhang and Li, 2016). Ye and Zhao (2018) argued that gender identity also acts as a lens through which individuals view their social world and upon which they make decisions, and influences family-related behaviors, such as wives' labor force participation and housework division. China has relatively high female employment rate in the world (Attané, 2012) and a large population with traditional gender identity. The fact that traditional gender attitudes in family still influence female's employment behavior has important consequences. Over the last half a century, female have experienced substantial labor market gains; both the gender gap in labor force participation and the gender gap in earnings have declined (Bertrand, Kamenica, and Pan, 2015). Several factors have been identified as contributing to the market gains: reversal of the gender gap in education (Goldin, Katz, and Kuziemko, 2006) especially in countries with conservative gender norms (Bussemakers, van Oosterhout, Kraaykamp, and Spierings, 2017), various technological

innovations favoring female (Greenwood, Seshadri, and Yorukoglu, 2005), labor demand shifting toward industries where female have comparative advantage (Black and Juhn, 2000), and less labor market discrimination against female.

Urban and Rural Difference in the Main Results

In the sample observations, there are 75% people having rural registration type. We tested the hypotheses by separating the sample into rural and urban. The results are reported in Table 4. We regressed the labor force participation (Models 1 to 4) and employment type (Models 5 to 8), separated by rural and urban. In all models, the reported coefficients on the family ties are significant with same signs as those in models with all samples. The effect of family ties shows to be significant for both urban and rural people. Comparing the coefficient on family ties for labor force participation and employment type, they are both relatively larger for rural people.

Individual controls included in the regression are education, number of child, age, marriage and other characteristics (described above). For labor force participation, the effects of marriage and the effects of age are also different between urban and rural people. Marriage has a positive effect on urban people labor participation but a negative effect on rural people labor participation. Age is negatively related to urban people labor participation; while it is positively related to rural people labor participation. For employment type, as the age goes up, the probability of self-employed or family-employed would be decreased for urban people, but increased for rural people.

Model 4 implies that every one unit increases in strength of family ties decreases the possibility of rural people labor participation 0.935 times less likely, while one unit increases in

financial development increase it 1.221 times more likely. The interaction term of financial development and family ties for rural people labor participation is positive but not significant.

Model 8 implies that every one unit increases in strength of family ties and financial development increase the possibility of rural people self-employed or family-employed 1.203 and 1.251 times more likely, respectively. The interaction term of financial development and family ties for rural people employment type is significant with positive sign.

These results shows that the effect of family ties on labor participation and employment type are minor for rural people in financially developed area. However, the role of financial intermediaries for urban people does not show this pattern. Model 2 and Model 6 show that the effect of financial intermediaries does not show to be significant for urban employment behavior. Surprisingly, the coefficient on financial intermediaries is negative for urban people alone, which is different with the results including all samples. And the role of financial intermediaries even shows to strengthen the effect of family ties on urban people labor participation in Model 2. The financial development is more relevant for rural people employment behavior. That is, the compensating effect of financial intermediaries on family ties is only significant for rural people employment type. For labor participation, the role of financial intermediaries on family ties between urban and rural people is in a contradictory way.

[Insert Table 4 about here]

In China, there is a large regional development disparity in rural and urban areas. Audra and Terry (2003) found that early 1990s factor markets in a typical rural county in northern China remained underdeveloped despite more than a decade of economic reform and market liberalization. Caselli (1997) argued that declines in borrowing costs associated to efficiency gains in the financial sector decrease the fraction of rural workers and this is consistent with the

observed trends in developing countries. China has made big improvements in the process of industrialization and urbanization in recent year. However, there is still a large development difference between rural and urban areas due to the restriction of the residence registration (*hukou*) system (Ye and Zhao, 2018). Nonetheless, the overall trend of self-employment in rural China in the past a few decades indicated a positive sign of development (Mohapatra, Rozelle, and Goodhue, 2007), possibly facilitated by the development of financial intermediaries in the rural region as implied from the present study.

V. Discussions and Conclusion

From the empirical evidence of Chinese families, the results show that family ties and financial intermediaries both play important roles in people's employment behavior, such that the stronger the family ties, the lower is one's labor participation and the higher probability is one's self-employed/family-employed behavior. In higher financial developed area, higher labor participation, higher probability of self-employed or family-employed. Moreover, this study addresses the combination of both factors on people's employment behavior. We know that there exists the compensating effect of financial intermediaries for family ties on labor participation and employment type. To a certain extent, this may be due to the transfer of production and financial activities from family to the market and enterprises in well-developed financial market with marketization. In the model for self-employed/family-employed, the interaction term fell short of significance. However, this does not prove strong family ties and financial intermediaries to be unrelated. More analysis is needed to specify the influence of financial intermediaries on family ties. This paper also studies the effect of family ties and financial development separated for female and male, urban and rural people.

The financial development is relevant for employment behavior of female, but not of men as expected. The effect of financial intermediaries and family ties are compensating each other on female labor participation and employment type. The role of financial intermediaries for male does not show this pattern. The financial development is more relevant for rural people employment behavior compared to urban people. The compensating effect of financial intermediaries on family ties is only significant for rural people employment type. For labor participation, the roles of financial intermediaries on family ties between urban and rural people are in an opposite way.

Based on our results, we can conclude that financial development is more related to female employment behavior than male employment behavior, and more related to rural people than urban people. From this study, the role of financial intermediaries is clear. However, more research needs to be done to access more accurate variables measuring the family ties and compute more suitable regional level financial index, as well as figure out the exact mechanisms through which the financial intermediaries affect family ties on people's employment behavior. Apart from the employment behavior, we believe that financial intermediaries may also affect the role of family ties on other economic behavior.

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Figure 1 Sample Distribution across Labor Participation Types

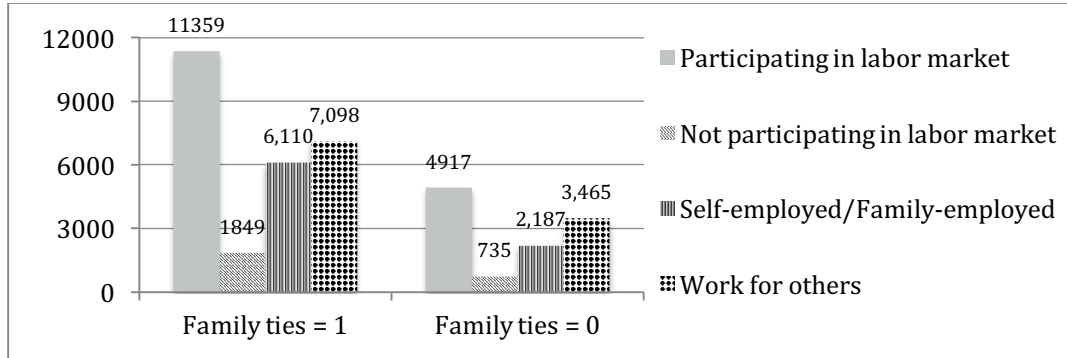


Table 1 Description of Control Variables

	Variable Name	Description
Individual Level	Gender	Take the value of 1 for male
	High education	Take the value of 1 for high school and above
	Number of Child	Take the value from 0 to 9
	Age	Take the value from 16 to 60
	Marriage	Take the value of 1 for married
	Party	Take the value of 1 for the member of Communist party of China
	Health	Self rated health status. Take the value from 1 to 5
Family Level	Number of Family Member	Take the value from 2 to 19
	Registration type (Hukou)	Current household registration type. Take the value of 1 for non-agricultural family
	Family income per capital	Past 12 months family income/ Number of Family Member
	Financial asset	Take the value of 1 for family with financial asset
Regional Level	GDP per capital	Gross domestic product per capital in province level
	Urbanization rate	Population shift from rural to urban areas
	Average wage	Average wage in province level
	Unemployment Insurance rate	Unemployment insurance covered rate in province level
	Population	Population in province level
	Secondary industry Labor share	In province level
	Unemployment rate	Unemployment rate

Table 2 Full Sample Labor Force Participation and Employment Type

	Labor Force Participation		Self-employed/Family-employed	
	Model 1	Model 2	Model 3	Model 4
FamTie	-0.0407*** (0.00208)	-0.0417*** (0.00167)	0.171*** (0.0196)	0.166*** (0.0203)
FinDev	/	0.147** (0.0600)	/	0.196*** (0.0263)
FamTie*FinDev	/	0.0681*** (0.00357)	/	-0.0317 (0.0203)
Individual Controls:				
Gender	0.659*** (0.00761)	0.660*** (0.00726)	-0.264*** (0.0610)	-0.263*** (0.0612)
High education	0.626*** (0.0325)	0.625*** (0.0323)	-0.578*** (0.0478)	-0.578*** (0.0480)
Number of child	0.175*** (0.0161)	0.176*** (0.0156)	0.119*** (0.0142)	0.121*** (0.0141)
Age	0.000294 (0.00105)	0.000139 (0.000988)	0.0269*** (0.00367)	0.0267*** (0.00366)
Marriage	-0.00598 (0.0487)	-0.00553 (0.0485)	0.0821** (0.0400)	0.0817** (0.0406)
Party	0.516*** (0.00602)	0.511*** (0.00525)	-0.345*** (0.0381)	-0.346*** (0.0387)
Health	-0.105*** (0.00690)	-0.104*** (0.00643)	0.0413*** (0.00449)	0.0421*** (0.00443)
Family Controls:				
Number of family member	-0.0145*** (0.00377)	-0.0149*** (0.00382)	0.0450*** (0.00266)	0.0449*** (0.00261)
Registration type	-0.306*** (0.0831)	-0.305*** (0.0832)	-0.744*** (0.0151)	-0.743*** (0.0151)
Log (family income per capital)	0.0787*** (0.0128)	0.0805*** (0.0120)	-0.140*** (0.0178)	-0.138*** (0.0179)
Financial asset	-0.0613 (0.0455)	-0.0641 (0.0437)	0.0191 (0.123)	0.0176 (0.124)
Regional Controls:				
GDP per capital	0.0000113*** (0.00000413)	0.0000140*** (0.00000488)	0.00000713*** (0.00000236)	0.00000948*** (0.00000210)
Urbanization rate	-2.535*** (0.770)	-2.863*** (0.840)	-3.052*** (0.894)	-3.329*** (0.841)
Average wage	0.00000175 (0.00000376)	-0.00000318 (0.00000510)	-0.0000140*** (0.00000276)	-0.0000181*** (0.00000235)
Unemployment insurance rate	0.0893 (0.497)	0.239 (0.506)	0.900** (0.371)	1.017*** (0.335)
Population	-2.22e-09*** (4.12e-10)	-1.13e-09*** (7.39e-11)	-3.52e-09*** (2.17e-10)	-2.51e-09*** (2.75e-10)
Secondary industry labor share	-0.000824 (0.00247)	-0.00187 (0.00258)	-0.00615*** (0.000633)	-0.00719*** (0.000759)
Unemployed rate	-0.0648*** (0.00426)	-0.0205 (0.0177)	0.0409** (0.0177)	0.0823*** (0.0139)
Constant	1.423** (0.614)	1.567** (0.630)	2.294*** (0.535)	2.401*** (0.511)
Observations	18860	18860	15945	15945
Pseudo R2	0.0909	0.0913	0.2341	0.2344

Notes: Robust Standard errors (cluster in education) in parentheses; FD represents financial development index, which is a mean-centered variable; FD*Family Ties represents the interaction between financial development index and family ties, which is using mean-centered financial development index to calculate; * $p < 0.10$, ** $p < 0.05$, *** $p < .01$.

Table 3 Gender Difference in Labor Force Participation and Employment Type

	Labor Force Participation				Self-employed/Family-employed			
	Model 1 Female	Model 2 Female	Model 3 Male	Model 4 Male	Model 5 Female	Model 6 Female	Model 7 Male	Model 8 Male
FamTie	-0.0351 (0.0226)	-0.0332 (0.0245)	-0.0734** (0.0353)	-0.0761** (0.0381)	0.184*** (0.00164)	0.168*** (0.00266)	0.189*** (0.0264)	0.189*** (0.0280)
FinDev	/	0.0906*** (0.0207)	/	0.139 (0.108)	/	0.545*** (0.0541)	/	-0.0143 (0.0300)
FamTie*FinDev	/	0.109* (0.0572)	/	0.00703 (0.0820)	/	-0.123* (0.0750)	/	0.0139 (0.0801)
Individual Controls:								
High education	0.590*** (0.0424)	0.589*** (0.0422)	0.664*** (0.00138)	0.663*** (0.00167)	-0.621*** (0.0592)	-0.627*** (0.0609)	-0.502*** (0.0412)	-0.502*** (0.0407)
Number of child	0.190*** (0.0173)	0.191*** (0.0171)	0.0860*** (0.00539)	0.0870*** (0.00485)	0.145*** (0.0288)	0.152*** (0.0289)	0.0972*** (0.00350)	0.0971*** (0.00348)
Age	0.0088*** (0.00117)	0.00869*** (0.00111)	-0.0127*** (0.00150)	-0.0128*** (0.00144)	0.0349*** (0.00541)	0.0345*** (0.00544)	0.0234*** (0.00257)	0.0234*** (0.00257)
Marriage	-0.461*** (0.00608)	-0.460*** (0.00595)	0.632*** (0.0295)	0.632*** (0.0292)	0.376*** (0.00637)	0.378*** (0.00458)	-0.0789** (0.0393)	-0.0789** (0.0400)
Party	0.361*** (0.0173)	0.357*** (0.0163)	0.948*** (0.0000720)	0.943*** (0.0000493)	-0.0654 (0.0685)	-0.0553 (0.0641)	-0.447*** (0.0217)	-0.447*** (0.0208)
Health	-0.0692*** (0.00547)	-0.0680*** (0.00494)	-0.161*** (0.00761)	-0.160*** (0.00739)	0.0326*** (0.00767)	0.0347*** (0.00817)	0.0388*** (0.000472)	0.0388*** (0.000703)
Family Controls:								
Number of family member	-0.0172*** (0.00327)	-0.0177*** (0.00340)	-0.00886*** (0.00180)	-0.00905*** (0.00181)	0.0492*** (0.00143)	0.0490*** (0.000889)	0.0475*** (0.00242)	0.0475*** (0.00254)
Registration type	-0.273*** (0.0967)	-0.273*** (0.0971)	-0.401*** (0.0564)	-0.400*** (0.0553)	-0.855*** (0.0407)	-0.849*** (0.0395)	-0.660*** (0.00892)	-0.661*** (0.00856)
Log (family income per capital)	0.0685*** (0.0150)	0.0698*** (0.0146)	0.0865*** (0.00679)	0.0878*** (0.00610)	-0.188*** (0.0280)	-0.182*** (0.0283)	-0.113*** (0.0119)	-0.113*** (0.0117)
Financial asset	0.0267** (0.0121)	0.0227*** (0.00873)	-0.183* (0.106)	-0.185* (0.104)	0.0325 (0.0655)	0.0316 (0.0642)	0.00976 (0.142)	0.00969 (0.144)
Regional Controls:								
GDP per capital	0.00002*** (0.000005)	0.00002*** (0.000005)	0.000005 (0.0000040)	0.000007 (0.0000046)	0.000008*** (0.000002)	0.0000142*** (0.0000068)	0.0000067** (0.0000023)	0.0000066** (0.0000027)
Urbanization rate	-3.423*** (0.986)	-3.688*** (1.038)	-0.921* (0.555)	-1.189* (0.633)	-3.187*** (0.724)	-3.847*** (0.466)	-3.011*** (1.024)	-3.004*** (1.071)
Average wage	0.000004 (0.000006)	-0.0000008 (0.000007)	-0.000002*** (0.0000007)	-0.000005*** (0.0000016)	-0.00002*** (0.000001)	-0.0000299*** (0.00000175)	-0.0000105** (0.0000037)	-0.0000104** (0.0000045)
Unemployment insurance rate	0.0195 (0.812)	0.153 (0.812)	0.181*** (0.0601)	0.287*** (0.0723)	0.980*** (0.0971)	1.234*** (0.263)	0.828 (0.698)	0.825 (0.723)
Population	-2.8e-09*** (5.7e-10)	-1.9e-09*** (2.3e-10)	-1.69e-09*** (5.29e-10)	-9.1e-10*** (2.65e-10)	-3.2e-09*** (3.6e-10)	-6.14e-10 (9.84e-10)	-3.78e-09*** (1.89e-10)	-3.8e-09*** (2.64e-11)
Secondary industry labor share	-0.000395 (0.00288)	-0.00128 (0.00299)	-0.000650 (0.00112)	-0.00143 (0.00120)	-0.0142*** (0.000301)	-0.0167*** (0.00131)	-0.000635 (0.000984)	-0.000613 (0.000766)
Unemployed rate	-0.0598*** (0.0118)	-0.0212 (0.0247)	-0.0934*** (0.00241)	-0.0611*** (0.00918)	-0.00629 (0.00570)	0.0995*** (0.0217)	0.0681** (0.0270)	0.0670** (0.0331)
Constant	1.683** (0.852)	1.801** (0.864)	2.041*** (0.285)	2.156*** (0.301)	2.966*** (0.477)	3.209*** (0.345)	1.536*** (0.489)	1.534*** (0.515)
Observations	9131	9131	9729	9729	7066	7066	8879	8879
Pseudo R2	0.0499	0.0503	0.0944	0.0946	0.3125	0.3141	0.1792	0.1792

Notes: Robust Standard errors (cluster in education) in parentheses; FD represents financial development index, which is a mean-centered variable; FD*Family Ties represents the interaction between financial development index and family ties, which is using mean-centered financial development index to calculate; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 4 Urban and Rural Difference in Labor Force Participation and Employment Type

	Labor Force Participation				Self-employed/Family-employed			
	Model 1 Urban	Model 2 Urban	Model 3 Rural	Model 4 Rural	Model 5 Urban	Model 6 Urban	Model 7 Rural	Model 8 Rural
FamTie	-0.0211*** (0.00210)	-0.0210*** (0.00490)	-0.0650*** (0.0115)	-0.0672*** (0.0116)	0.0660*** (0.00400)	0.0639*** (0.00168)	0.190*** (0.0115)	0.185*** (0.0158)
FinDev	/	-0.0577 (0.0790)	/	0.200*** (0.0441)	/	0.0742 (0.106)	/	0.224*** (0.0652)
FamTie*FinDev	/	0.164*** (0.0551)	/	0.0469 (0.0289)	/	-0.0660 (0.0680)	/	-0.00910*** (0.00226)
Individual Controls:								
Gender	0.697*** (0.00550)	0.698*** (0.00665)	0.666*** (0.005714)	0.668*** (0.00494)	0.0270 (0.0467)	0.0265 (0.0460)	-0.336*** (0.0368)	-0.335*** (0.0373)
High education	0.588*** (0.0311)	0.588*** (0.0315)	0.378*** (0.00581)	0.374*** (0.00459)	-0.615*** (0.0569)	-0.615*** (0.0566)	-0.636*** (0.00350)	-0.636*** (0.00420)
Number of child	0.167*** (0.0219)	0.167*** (0.0221)	0.140*** (0.00543)	0.142*** (0.00488)	0.229*** (0.0102)	0.229*** (0.00964)	0.0845*** (0.00428)	0.0874*** (0.00484)
Age	-0.0281*** (0.00110)	-0.0282*** (0.00102)	0.0113*** (0.000761)	0.0111*** (0.000832)	-0.00303 (0.00598)	-0.00300 (0.00592)	0.0344*** (0.000863)	0.0343*** (0.000892)
Marriage	0.0617*** (0.00247)	0.0638*** (0.0000464)	-0.0284 (0.0683)	-0.0279 (0.0684)	0.180*** (0.0438)	0.179*** (0.0428)	0.0588** (0.0292)	0.0574** (0.0290)
Party	0.711*** (0.0504)	0.704*** (0.0517)	0.0788*** (0.00362)	0.0808*** (0.00280)	-0.587*** (0.0374)	-0.588*** (0.0322)	-0.238*** (0.00323)	-0.234*** (0.00209)
Health	-0.103*** (0.0172)	-0.103*** (0.0175)	-0.108*** (0.00078)	-0.106*** (0.00143)	0.0234* (0.0130)	0.0232* (0.0121)	0.0429*** (0.00989)	0.0442*** (0.00134)
Family Controls:								
Number of family member	-0.0297*** (0.00532)	-0.0303*** (0.00500)	-0.00876** (0.00415)	-0.00919** (0.00420)	0.0204** (0.00854)	0.0207*** (0.00787)	0.0486*** (0.00649)	0.0486*** (0.00635)
Log (family income per capital)	0.180*** (0.0239)	0.181*** (0.0232)	0.0624*** (0.00678)	0.0650*** (0.00602)	-0.0354** (0.0160)	-0.0352** (0.0151)	-0.152*** (0.0156)	-0.150*** (0.0164)
Financial asset	-0.0952 (0.0989)	-0.0963 (0.0988)	-0.0845* (0.0463)	-0.0922* (0.0485)	-0.0289 (0.197)	-0.0282 (0.197)	-0.00744 (0.07391)	-0.0143 (0.0741)
Regional Controls:								
GDP per capital	0.00000171 (0.0000024)	0.0000027 (0.0000028)	0.0000155*** (0.0000026)	0.0000185*** (0.0000034)	0.0000114 (0.00001)	0.0000117 (0.0000125)	0.000006*** (0.0000006)	0.000009*** (0.0000004)
Urbanization rate	-0.718 (0.579)	-0.848 (0.634)	-3.147** (0.508)	-3.469*** (0.578)	-4.213 (2.703)	-4.260 (3.002)	2.975*** (0.481)	-3.287*** (0.358)
Average wage	0.000009* (0.000004)	0.000008* (0.000004)	-0.000005*** (0.000002)	-0.00001*** (0.0000039)	-0.00001*** (0.000003)	-0.000012* (0.000007)	-0.0000205*** (0.000001)	-0.000026*** (0.0000007)
Unemployment insurance rate	-0.655 (0.724)	-0.573 (0.734)	0.627** (0.254)	0.755*** (0.254)	1.986*** (0.703)	2.005** (0.868)	1.192*** (0.302)	1.313*** (0.233)
Population	2.02e-10 (4.26e-10)	5.38e-10** (2.45e-10)	-2.83e-09*** (7.86e-10)	-1.48e-09*** (7.49e-11)	-4.6e-09*** (1.45e-09)	-4.4e-09*** (6.31e-10)	3.44e-09*** (8.19e-12)	-2.15e-09*** (3.69e-10)
Secondary industry labor share	0.00609** (0.00309)	0.00590* (0.00309)	-0.00657*** (0.00093)	-0.00788*** (0.00112)	0.0131** (0.00611)	0.0129** (0.00555)	-0.0113*** (0.000448)	-0.0127*** (0.000916)
Unemployed rate	-0.110*** (0.0181)	-0.0941*** (0.0104)	-0.00377*** (0.00351)	0.0148 (0.0175)	0.162 (0.119)	0.168 (0.158)	0.0373*** (0.007)	0.0884*** (0.00899)
Constant	0.111 (0.910)	0.167 (0.918)	0.666*** (0.00571)	2.008*** (0.379)	0.527 (0.496)	0.541 (0.616)	2.773*** (0.391)	2.894*** (0.335)
Observations	4741	4741	14119	14119	3812	3812	12133	12133
Pseudo R2	0.1434	0.1438	0.0905	0.0911	0.0974	0.0974	0.1928	0.1932

Notes: Robust Standard errors (cluster in education) in parentheses; FD represents financial development index, which is a mean-centered variable; FD*Family Ties represents the interaction between financial development index and family ties, which is using mean-centered financial development index to calculate; Urban/ Rural represents the registration type of people; * $p < 0.10$, ** $p < 0.05$, *** $p < .01$.