

Research on the Impact of Digital Finance on Entrepreneurship Level in Yangtze River Delta region

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Abstract: This paper empirically analyzes the impact of digital finance on entrepreneurship based on a panel data of 41 prefecture-level cities in the Yangtze River Delta region for 9 years from 2011-2019. The paper further analyzes the moderating effect of foreign direct investment and the mediating role of government intervention and innovation, and concludes with heterogeneity analyses. The empirical results show that digital finance has a significant promotion effect on entrepreneurship, and this promotion effect is diminished by the increase of foreign direct investment. Digital finance in turn can promote entrepreneurship by reducing government intervention and increasing the level of innovation. From the heterogeneity analysis, it is clear that the promotion effect of digital finance on entrepreneurship is significant only in central cities, while the negative moderating effect of FDI is significant only in non-central cities.

Keywords: Digital finance, Entrepreneurship, Foreign direct investment.

1. Introduction

The development of inclusive finance can reduce poverty rates and income inequality in developing countries. And it facilitates the further promotion of access to and use of formal financial services by marginalized populations, thereby maximizing the overall welfare of society [1]. Digital finance, as a new form of financial services integrated by digital technology and traditional finance, has lowered the threshold of financial services, expanded the coverage of financial services, and accelerated the development of inclusive finance by using digital technology, so that individuals or enterprises in less developed areas can enjoy financial services conveniently. The development of China's digital finance can be traced back to the launch of Alipay account system in 2004 and the explosive development of the balance account business in 2013. At present, China's digital finance is in a leading position in the world, with third-party payments, online loans and digital insurance business scale all leading the way internationally. China's Yangtze River Delta region itself has a strong industrial base, a developed commodity economy, and a high level of overall financial scale development and technological innovation, playing a crucial role in the course of China's digital finance development. As of the end of 2021, the balance of P&C micro and loans in the Yangtze River Delta region was RMB 6,544,374 million, accounting for 13.40% of the RMB loan balance in the Yangtze River Delta region and 34.03% of the national balance of P&C micro and loans. This strongly supports the development of small and micro enterprises in the Yangtze River Delta region. In addition, the high penetration rate of digital payment, the efficiency of enterprise account opening and the per capita ownership of personal bank settlement accounts in the Yangtze River Delta region show the high level of financial inclusion development in the Yangtze River Delta region.

The increase of financial inclusion helps to diversify the economy, promote economic growth, and drive entrepreneurship development [2]. As one of the important capital forms of socialist market economy, entrepreneurial

investment can reduce income inequality [3], improve the consumption level of residents [4], and promote the efficiency of economic development [5]. The Yangtze River Delta region is one of the most active, open and innovative regions in China, and the economic development of the Yangtze River Delta region cannot be separated from the development of millions of small and medium-sized enterprises, which have added countless jobs and accelerated the economic, cultural and technological development of the Yangtze River Delta region. The Yangtze River Delta region is also the region with the highest number of new registrations of micro and small enterprises, which highlights the entrepreneurial vitality of the Yangtze River Delta region. The development of digital finance has further broadened the financing channels, such as the innovative "loan code" financing service model in Zhejiang Province, which can effectively alleviate the financing constraints of enterprises, improve the operational efficiency of SMEs [6], attract the inflow of labor [7], and promote the efficiency of urban economy [8], so digital finance is also a key factor in a key factor in facilitating entrepreneurship.

Therefore, this paper will investigate the relationship between digital finance and entrepreneurship using panel data from 2011-2019 for 41 prefecture-level cities in the Yangtze River Delta region, and further investigate the moderating role of foreign direct investment and the mediating role of government intervention and innovation, and finally conduct heterogeneity analyses based on regional and market potential.

2. Analysis of Theoretical Mechanisms

2.1. Digital finance and entrepreneurship

The level of financial development has an obvious positive driving effect on regional entrepreneurship [9], but traditional finance has uneven and insufficient development, difficult and expensive financing for SMEs, low availability of services for long-tail people, and insufficient supply of financial services in less developed regions [10], while the development of digital finance can make up for the shortcomings of traditional finance. First, from the

perspective of financing, the financing constraint is an important factor limiting the development of SMEs [11], while digital finance integrates traditional finance and digital technology, adopts diversified financing methods to broaden financing channels, improves information transparency, and can effectively alleviate the financing constraint of enterprises. Secondly, from the perspective of financial service coverage, digital finance breaks the boundaries of traditional finance in space and time, reduces the threshold of financial services, and can make some enterprises in less developed regions use financial services conveniently at any time through cell phones, computers and other devices, thus promoting entrepreneurship in less developed regions. Finally, from the perspective of transaction costs, digital finance in the context of digital technology such as big data can obtain the relevant information required by both the supply and demand sides of funds at low cost, effectively reducing the problem of information asymmetry and lowering transaction costs, thus promoting entrepreneurship. Accordingly, the following hypotheses are proposed:

H1: The development of digital finance has a catalytic effect on entrepreneurship.

2.2. Digital finance, foreign direct investment and entrepreneurship

The relationship between digital finance and entrepreneurship may be influenced by local foreign direct investment (FDI). FDI can have a negative impact on entrepreneurship and can have a crowding-out effect on domestic entrepreneurship, which varies depending on the prevalence of entrepreneurship in the country [12], and the inflow of FDI generates more jobs rather than more entrepreneurial motivation [13-14]. The introduction of FDI can directly bring in advanced foreign equipment, technology, and management capabilities, and then will have more advantages and experience relative to local entrepreneurship. In addition, FDI is also beneficial to financial development, which can promote competition to improve the financial ecosystem through the introduction of advanced financial resources [15], and financial development will increase the attractiveness of the region to FDI [16]. Digital finance is the integration of traditional finance and digital technology, and the traditional financial supply can contribute to the development of digital finance, and the two are mutually reinforcing [17], then the development of digital finance will also improve the introduction of foreign direct investment in the region, and the introduction of foreign direct investment has a suppressive effect on local entrepreneurship, so foreign direct investment plays a negative moderating role. In summary, the following hypothesis is proposed.

H2: Foreign direct investment plays a negative moderating role between digital finance and entrepreneurship.

2.3. The mediating role of innovation and government intervention

There is strong government intervention in China's economy, and finance is an important means of government intervention in the economy, and the resource allocation function of finance in China is currently subject to excessive government intervention. For the Yangtze River Delta region, which has a high level of financial development, increasing government intervention will have a dampening effect on economic growth [18] and bring about distortions in the capital market and inefficient investment [19], making

productivity suffer. At the same time, government intervention can lead to inefficient resource allocation and difficulties in financing the development of SMEs [20]. Restricted by financing constraints, insufficient investment in enterprises will affect their survival and development, and the poor survival of existing enterprises will make it difficult to stimulate the entrepreneurial energy of potential entrepreneurs, and the ability of potential entrepreneurs to obtain the necessary financial support from financial institutions will directly determine their entrepreneurial activities [21], then all of this will affect the improvement of regional entrepreneurship level. The development of digital finance has a significant effect on the improvement of urban resource mismatch in the eastern region [22], and in addition, digital finance has the characteristics of low risk, low cost and high efficiency, which can improve the situation of limited financing for SMEs, so digital finance can use its advantages to reduce the impact of government intervention, thus reducing the inhibiting effect of government intervention on entrepreneurship.

H3: Government intervention plays an intermediary role between digital finance and entrepreneurship. Digital finance can promote entrepreneurship by reducing the impact of government intervention.

The development of digital finance has a "structural" driving effect on enterprise technology innovation [23]. As a new financial business model, digital finance, with the support of emerging technologies such as big data, Internet of Things, and blockchain, can access massive information at low cost and find good trading opportunities for both supply and demand of products and technologies [24]. Innovation requires large capital investment upfront, which makes it difficult to achieve returns in the short term and has a high failure rate, a cost that many startups and SMEs cannot afford. The emergence of digital finance has lowered the threshold of financial services and can provide financial resources to SMEs more conveniently, thus promoting corporate innovation. In addition, digital finance uses big data technology to improve the efficiency of resource circulation within the economic system and facilitate the exchange of factors between regions and industries [13], and many innovative activities require mutual cooperation among enterprises to reach, so it is more efficient to promote innovative cooperation among enterprises, which can improve the level of regional innovation. For firms, innovation means that the same resources can be used to achieve greater output, resulting in increased efficiency and productivity. For cities, innovation not only promotes economic growth, but also industrial structure upgrading, so potential entrepreneurs in cities with higher levels of innovation will be more willing to start their own businesses, thus promoting regional entrepreneurship.

H4: The level of innovation plays a mediating role between digital finance and entrepreneurship, and digital finance can promote employment by facilitating innovation.

3. Research Design

3.1. Model design

3.1.1. Baseline regression model

The model used in this paper is a double fixed effects model with panel data. To test the relationship between digital finance and entrepreneurship, the following model is constructed:

$$entre_{it} = \alpha_0 + \alpha_1 index_{it} + \alpha_2 X_{it} + F_i + F_t + \varepsilon_{it} \quad (1)$$

where the subscripts *i* and *t* represent the city and year, respectively, *entre* represents the entrepreneurship level of the city, *index* represents the digital finance of the city, and *X* represents the set of control variables, including the level of economic development, market potential, level of financial development, infrastructure and openness to the outside world. *F_i* and *F_t* represent the city and time fixed effects, respectively, and ε is the error term.

3.1.2. Moderating effect model

To test the moderating effect of FDI between digital finance and entrepreneurship, the model will be constructed by adding the proxy variable of FDI and the cross product term of FDI and digital finance to the baseline regression model as follows:

$$entre_{it} = \alpha_0 + \alpha_1 index_{it} + \alpha_2 fdi_{it} + \alpha_3 index_{it} \times fdi_{it} + \alpha_4 X_{it} + F_i + F_t + \varepsilon_{it} \quad (2)$$

where *fdi* represents urban foreign direct investment, the cross product term of *fdi* and *index* is used to test the moderating effect, and other settings are consistent with the baseline regression model

3.2. Definition of variables

3.2.1. Explanatory variables

Entrepreneurship (*entre*). Referring to Tian Bifei and Chen Ziruo (2016) [25] used the logarithm of the number of newly registered enterprises in the city to measure the level of entrepreneurship in the city.

3.2.2. Core explanatory variables

Digital finance (*index*). The total digital financial inclusion index from the Digital Financial Inclusion Index (2011-2019) of Peking University compiled by the Digital Finance Research Center of Peking University was used.

3.2.3. Moderating variables

Foreign direct investment (*fdi*). The ratio of the actual amount of foreign investment utilized to the regional GDP is used to measure the level of foreign direct investment in the city.

3.2.4. Mediating variables

Government intervention (*gov*). The logarithm of public finance expenditure is used to measure the government intervention status of the city.

Innovation (*patent*). The logarithm of the sum of the number of invention patents granted, the number of utility model patents disclosed and the number of appearance patents disclosed in the China Innovation and Entrepreneurship Index is used to measure the innovation level of the city.

3.2.5. Control variables

The main control variable selected is the level of economic development (*gdp*) of the city, which is measured by using the logarithm of GDP. The higher the level of economic development, the more opportunities for entrepreneurship in the city. Market potential (*market*) is measured by taking the logarithm of total social retail sales. Market potential is an important factor in making entrepreneurial choices; the greater the market potential, the greater the likelihood of starting a business. The level of financial development (*fin*) is measured by the ratio of the sum of the balance of deposits

and loans of financial institutions in human life currency to the gross regional product at the end of the year. If the entrepreneurship is in a city with a higher level of financial development, then the financing constraints on new businesses will be correspondingly smaller, then the business will be more likely to survive, and then the entrepreneurship level in the city will be higher. Infrastructure development (*basic*) is measured by using the ratio of the sum of postal and telecom revenues to gross regional product. Infrastructure development can bring convenience to the city in terms of traffic and transportation, then it will be more conducive to entrepreneurship. Openness to the outside world (*open*), measured by using the ratio of total imports and exports of local trade to regional GDP. This reflects the degree of economic integration of the city with international markets, then if a region is more open to the outside world it may be more conducive to entrepreneurship.

4. Analysis of Empirical Results

4.1. Baseline regression

The results obtained from the baseline regressions are reported in Table 1. Model (1) adds only the core explanatory variable of this paper, digital finance, and the explanatory variable, entrepreneurship level, while controlling for city and year fixed effects. In order to exclude the interference of other relevant variables, model (2) adds the corresponding control variables to model (1). According to the results, it can be seen that the estimated coefficient of digital finance is significantly positive at 1% confidence level regardless of whether the control variables are added or not, which verifies hypothesis 1 and indicates that there is a significant contribution of digital finance to the level of entrepreneurship in cities. This may be because the development of digital finance provides a better financial environment for entrepreneurship, compared to traditional finance, digital finance is enough to use digital means to effectively alleviate the problem of information asymmetry, which is the main reason why many micro and small enterprises face the problem of financing constraints. While financing constraints have a significant impact on entrepreneurship, the development of digital finance in the context of digital finance can alleviate the disadvantage of lack of hard information such as lack of business records of micro and small enterprises through credit assessment by big data analysis. Moreover, the emergence of digital finance has lowered the threshold of financial services and broadened the financing channels, enabling many enterprises in less developed regions to use the Internet and other platforms to use crowdfunding financing and peer-to-peer network lending for more convenient financing. This can help small and micro enterprises to reduce financing costs and improve financing efficiency, then the capital problem can be solved can lead to more entrepreneurial activities. In terms of control variables, it can be seen that the level of economic development, market potential, level of financial development and infrastructure development also have a significant role in promoting entrepreneurship, which is consistent with the previous expectation. The effect of openness to the outside world is not significant but its coefficient is positive, probably because most entrepreneurs focus more on the local market at the beginning of their business, so the degree of openness to the outside world may not significantly affect the increase of entrepreneurship level.

Table 1. Baseline regression

VARIABLES	(1) entre	(2) entre	(3) entre	(4) entre
index	0.695*** (0.153)	0.677*** (0.151)	0.610*** (0.163)	0.169*** (0.0634)
gdp		0.347** (0.146)	0.197 (0.183)	-0.189*** (0.0714)
market		0.214** (0.0916)	0.317*** (0.102)	-0.153*** (0.0574)
fin		0.186*** (0.0405)	0.176*** (0.0483)	-0.0183 (0.0174)
basic		3.011** (1.346)	3.942** (1.571)	-0.315 (0.576)
open		0.00349 (0.112)	0.223 (0.196)	-0.0425 (0.0474)
Constant	9.846*** (0.0999)	3.409*** (1.273)	2.508* (1.498)	3.905*** (0.875)
City FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes
Obs	369	369	287	320
Number of cities	41	41	41	40
R-squared	0.893	0.906	0.877	0.545

Note: t-values in parentheses, ***, ** and * denote 1%, 5% and 10% significance levels, respectively.

4.2. Robustness test

In order to ensure the accuracy of the regression results, this paper will use two ways of robustness testing: regression of sub-sample intervals and replacing the proxy variables of the explanatory variables. Since the development of digital finance only entered into a high development stage in 2013, the data of 2011 and 2012 are excluded from model (3), and the regression of the sub-sample interval 2013-2019 is conducted, which shows that the promotion effect of digital finance on entrepreneurship is still very significant. Referring to the study of Zhai, Renxiang and Xuan, Changyong (2022) [26], which used the ratio of the sum of employed persons in private enterprises and self-employed persons to the total population as a proxy variable for entrepreneurial activity, this proxy variable is used in model (4) to replace the proxy variable for entrepreneurship level in this paper. Because of the missing data in 2019 and Anqing City, the results of the regression after excluding this part of data are found to be consistent with the results of the benchmark regression. In summary, the results of the benchmark regression in this paper are somewhat robust.

4.3. Moderating effect

First, in table 2 model (2) adds foreign direct investment (FDI) to the baseline regression, and according to its results, FDI has a significant inhibitory effect on entrepreneurship. In order to test the moderating effect of FDI, model (3) adds the interaction term of digital finance and FDI (index×fdi) to model (2), and the regression coefficient is significantly negative, which indicates that FDI negatively moderates the relationship between digital finance and entrepreneurship, i.e., the increase of FDI makes the promotion of digital finance on entrepreneurship weaker, which verifies hypothesis 2. The reason for this is that FDI may have a crowding-out effect on entrepreneurship, firstly, FDI usually has more advanced technology and production equipment, which enables FDI to have higher productivity and produce more competitive products, so that start-up local enterprises simply do not have a competitive advantage in terms of products. Secondly, FDI has richer resources and more advanced management capabilities, so local enterprises do not have advantages in talent competition and management, which will increase the cost and difficulty of local entrepreneurship, thus inhibiting entrepreneurship.

Table 2. Moderating effects

VARIABLES	(1) entre	(2) entre	(3) entre
index	0.677*** (0.151)	0.638*** (0.151)	0.643*** (0.150)
fdi		-2.317** (0.981)	-2.333** (0.977)
index×fdi			-1.282* (0.700)
Constant	3.409*** (1.273)	3.174** (1.268)	2.658** (1.294)
Control	yes	yes	yes
City FE	yes	yes	yes
Year FE	yes	yes	yes
obs	369	369	369
Number of cities	41	41	41
R-squared	0.906	0.908	0.909

Note: t-values in parentheses, ***, ** and * denote 1%, 5% and 10% significance levels, respectively.

4.4. Intermediary effect

4.4.1. Government intervention

In order to test the mediating role of government intervention, according to the method of mediating effect test, the test results in Table 3 are obtained, the results of model (1) show that digital finance has a significant positive role in promoting entrepreneurship, the results of model (2) show that digital finance has a significant inhibitory effect on government intervention, in model (3), the role of digital finance on entrepreneurship is still positive and significant but the coefficient becomes smaller relative to model (1), but the coefficient of government The coefficient of intervention is not significant, so further bootstrap test should be conducted. The results of the test are shown in Table 4, which shows that

the indirect and direct effects are significant, which indicates that there is a mediating role of government intervention, i.e., digital finance can promote entrepreneurship by mitigating government intervention, which verifies hypothesis 3. The reason for the analysis may be that government intervention can lead to inefficient allocation of resources and promote inefficient production, while government intervention may make credit resources tilted, making many SMEs financing difficulties, then it is not conducive to the improvement of entrepreneurship level. In contrast, digital finance development can reduce financing costs and broaden financing channels, making it more convenient for enterprises to finance, so digital finance can promote entrepreneurship by reducing some of the adverse effects of government intervention.

Table 3. Mediating effects of government intervention

VARIABLES	(1) entre	(2) gov	(3) entre
index	0.677*** (0.151)	-0.415*** (0.0946)	0.639*** (0.155)
gov			-0.0921 (0.0899)
Constant	3.409*** (1.273)	16.20*** (0.799)	4.900** (1.934)
Control	yes	yes	yes
City FE	yes	yes	yes
Year FE	yes	yes	yes
obs	369	369	369
Number of cities	41	41	41
R-squared	0.906	0.928	0.906

Note: t-values in parentheses, ***, ** and * denote 1%, 5% and 10% significance levels, respectively.

Table 4. Bootstrap test

	Observed		Bootstrap		Normal-based	
	coefficient	std. err.	z	P>z	[95% conf. interval]	
_bs_1	0.0195225	0.0070569	2.77	0.006	0.0056913	0.0333537
_bs_2	0.1621981	0.0277299	5.85	0.000	0.1078485	0.2165478

4.4.2. Level of innovation

Similarly, the mediating effect of innovation level is tested according to the method of mediating effect test, and the test results in Table 5 are obtained. In model (1), digital finance has a significant positive contribution to entrepreneurship, and in model (2), digital finance has a more significant contribution to the level of innovation in the city, and in model (3), the effect of digital finance on entrepreneurship is still positive but the coefficient becomes smaller compared to model (1), and the coefficient of the level of innovation is also significantly positive, which indicates that the level of innovation has a mediating role in the effect of digital finance on entrepreneurship. This may be due to the fact that the increase of innovation level often requires large and continuous investment, but the failure rate of innovation is high and unstable, and it is difficult to be supported in traditional financial services, while digital financial services are less restrictive and have more diverse financing channels, then it can alleviate the financing constraints of corporate innovation projects. Thus, it is more likely to increase the level of innovation by improving innovation investment. The improvement of innovation level may lead to the improvement of production efficiency, product quality or the

reduction of production cost, then it can improve its market competitiveness and promote the good development of enterprises, in this case, it can improve the enthusiasm of potential entrepreneurs to start their own business, thus promoting the improvement of entrepreneurship level.

4.5. Heterogeneity analysis

According to the Outline of the Yangtze River Delta Regional Integrated Development Plan officially released by the State Council in December 2019, the Yangtze River Delta region contains 27 central zone cities, which radiate and drive the high-quality development of the Yangtze River Delta region, while the remaining 14 are non-central zone cities. The Yangtze River Delta region is an economically developed region on a national scale, but its central and non-central cities can still differ significantly in terms of development. Therefore, a heterogeneity analysis was conducted to determine whether the cities were classified as central cities according to the above criteria. The results, as shown in Table 6, show that in central zone cities, digital finance has a significant promotion effect on entrepreneurship, and the coefficient is larger relative to the benchmark regression, indicating a greater degree of influence, but the moderating effect of foreign direct investment is not significant. In

contrast, in non-central cities, the regression coefficient of digital finance is positive but insignificant. This may be due to the fact that non-central cities are more slowly affected by digital finance than central cities, and may need further development before they can be radiated to non-central cities,

and the negative moderating effect of FDI is significant, which indicates that FDI has a competitive advantage over local entrepreneurship in non-central cities.

Table 5. Mediating effects of innovation

VARIABLES	(1) entre	(2) patent	(3) entre
index	0.728*** (0.153)	0.138* (0.0801)	0.665*** (0.150)
patent			0.461*** (0.106)
Constant	3.412*** (1.271)	4.713*** (0.664)	1.240 (1.333)
Control	yes	yes	yes
City FE	yes	yes	yes
Year FE	yes	yes	yes
Obs	360	360	360
Number of cities	40	40	40
R-squared	0.907	0.128	0.912

Note: t-values in parentheses, ***, ** and * denote 1%, 5% and 10% significance levels, respectively.

Table 6. Regional heterogeneity

VARIABLES	(1) entre	(4) entre
index	0.964*** (0.191)	0.266 (0.246)
fdi	-1.919 (1.198)	-4.062* (2.077)
index×fdi	0.578 (0.859)	-5.022*** (1.345)
Constant	4.255** (1.720)	3.414 (2.533)
Control	yes	yes
City FE	yes	yes
Year FE	yes	yes
Obs	243	126
Number of cities	27	14
R-squared	0.909	0.931

Note: t-values in parentheses, ***, ** and * denote 1%, 5% and 10% significance levels, respectively.

5. Conclusions and Implications

This paper investigates the impact of digital finance on the level of urban entrepreneurship using data from 41 prefecture-level cities in the Yangtze River Delta region from 2011-2019, and examines the moderating effect of foreign direct investment and the mediating effect of innovation level and government intervention, and finally conducts a heterogeneity analysis based on regional and market potential. The empirical study finds that (1) from the results of the benchmark regression, the development of digital finance has a catalytic effect on the level of entrepreneurship in the Yangtze River Delta region. (2) From the results of mechanism analysis, foreign direct investment negatively moderates the relationship between digital finance and entrepreneurship, i.e., an increase in foreign direct investment reduces the promotion effect of digital finance on entrepreneurship. (3) From the analysis of mediating effects, digital finance can promote entrepreneurship by promoting regional innovation level and reducing government

intervention. (4) In the heterogeneity analysis, according to the results of regional heterogeneity, digital finance has a significant positive effect on entrepreneurship in central district cities, while the negative moderating effect of foreign direct investment is not significant.

Based on the empirical results of this paper, the following insights are obtained: (1) Digital finance has a facilitating effect on the improvement of entrepreneurship level in the Yangtze River Delta region, so the development of digital inclusive finance should be accelerated, the development environment of digital finance should be optimized, and the facilitating effect of digital finance on entrepreneurship should be strengthened. At the same time, the advantages of digital technology should also be used to enhance the depth of digital finance, expand the breadth of digital finance coverage, reduce financing costs and create a better business environment. The region should actively develop digital financing methods such as crowdfunding financing, peer-to-peer financing, e-commerce platform financing and supply chain finance to provide more convenient and diversified

financing channels for small and micro enterprises and provide better financial conditions for urban entrepreneurship. (2) From the analysis of intermediary effects, localities should pay attention to the improvement of innovation level, should increase innovation investment, formulate and implement corresponding innovation incentive programs, and stimulate enterprises' enthusiasm for innovation. In addition, the government should create a favorable innovation environment and improve the intellectual property protection system. As for the problem of government intervention, since the Yangtze River Delta region has a relatively developed economy, its own financial market is well developed, and excessive government intervention is likely to cause problems such as skewed resource allocation. Therefore, the government should reduce its intervention in the market and focus on regulating the development of new financial services such as digital finance and preventing the occurrence of various risks, and give full play to the role of the market in resource allocation to promote regional economic development. (3) For non-central cities, too much foreign direct investment should not be introduced blindly, and the government should introduce corresponding policies to support the development of local enterprises and help them reduce their start-up costs to offset the competitive pressure brought by some foreign direct investment. At present, the effect of digital finance on entrepreneurship is only effective in the central cities. Therefore, more policies and resources should be given to non-central cities to guide the flow of digital finance resources to non-central cities, and non-central cities should grasp the opportunity to create a good entrepreneurial environment and promote the improvement of local entrepreneurship with the development of digital finance.

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