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The impact of internet on entrepreneurship

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A R T I C L E I N F O

A B S T R A C T

Innovation and entrepreneurship are important driving forces for economic growth, and the Internet plays an essential role in entrepreneurship activities. This paper studies the impact of the Internet on entrepreneurship and its mechanism by using China Family Panel Studies (CFPS) dataset in 2014 and 2016. Our empirical findings indicate that the Internet has a significant and positive influence on entrepreneurship, and the results remain robust even after addressing endogeneity. Moreover, heterogeneous examinations suggest that the Internet is more beneficial for opportunistic entrepreneurship and in rural areas. Further mechanism analysis shows that the Internet promotes entrepreneurship mainly through facilitating entrepreneurs to access information and helping entrepreneurs obtain informal financing.

1. Introduction

With the rapidly expanding internet economy, new business operation models are emerging. Internet-based technology changes have profound effects on entrepreneurship as well as economic development. As the largest developing country where the Internet has a substantial impact on entrepreneurship, the impact of the Internet on entrepreneurship in China will have important implications for economic development and poverty reduction in other developing countries.

Entrepreneurship in the Internet era is drawing attention from scholars. Several theoretical and empirical research has investigated the relationships between information technology and entrepreneurship since the outbreak of the dotcom economy at the end of the last century (Janson & Wrycza, 1999; Forman et al., 2012; Zhou & F, 2018). Some scholars mainly use empirical analysis and case studies to examine the effect of information infrastructure brought about by new technology on entrepreneurship activities. For example, Cumming and Johan (2010) find that the Internet spurs entrepreneurial activities by enabling agglomeration across areas. Mostafa et al. (2005) use the data from UK exporters and suggest that b entrepreneurs are more likely to use the Internet to develop export market opportunities and to have better export performance than less entrepreneurial firms. Some researchers find that the effect of the Internet on entrepreneurship is heterogeneous, and the effects are more significant in rural areas than in urban areas (Forman et al., 2012; Sinai & Waldfogel, 2004).

Existing studies tend to focus on explaining the mechanism of the Internet promoting entrepreneurial activities. First, this line of research emphasizes the information effect. Shane and Venkataraman (2000) highlight that information exchange is vital for entrepreneurs, influencing the development and utilization of entrepreneurial opportunities. Internet use can facilitate information exchange and ease information asymmetry when people make the decisions of starting businesses. The Internet provides entrepreneurs

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with more accurate and timely information, which will help them spot business opportunities, adjust business models in time, and reduce risks (Shi & Wang, 2017). Moreover, the Internet can also facilitate entrepreneurs to get knowledge spillovers from the entrepreneurship clusters (Ye et al., 2018; Li, 2008).

Second, the Internet has decentralization characteristics, transforming traditional business models and extending entrepreneurship to the whole market (Gu et al., 2016; Hu et al., 2015; Ye et al., 2018). With the Internet and e-commerce, the market is less likely to be restricted by physical distance. Thus, entrepreneurs are likely to use market size and reduce the cost of entrepreneurship, which facilitates agglomeration economy (Glaeser et al., 2010; Mostafa et al., 2005).

Third, the Internet has a typical general technology characteristic. With the internet plus, different industries can make good use of the Internet and lower the bench for entrepreneurship (Aghion et al., 2007; Bowen & De Clercq, 2008). For instance, digital finance can make up for the shortcomings of traditional banking so that underdeveloped areas can also enjoy convenient financial services, thus promoting entrepreneurial activities (Aghion et al., 2007). In addition, Mollick and Kuppuswamy (2014) find that online crowdfunding can help entrepreneurs get financing at a lower cost.

Endogeneity problems might exist when empirically studying the relationship between internet use and entrepreneurship. Reverse causality might exist. Internet use will affect entrepreneurship, but people who start a business might use the Internet more because of entrepreneurial activities. Moreover, there may be a problem with omitted variables in the model. For example, the individual ability may affect both internet use and entrepreneurial decision. Cumming and Johan (2010) use the natural experiment known as the SuperNet implemented in Canada's rural area to study the effect of Internet technology on entrepreneurship.

China's Internet era started in 1994, and the Internet's infrastructure has improved fast, which has been widely used by various industries and areas ever since. From 1999 to 2020, the number of people who use the internet skyrockets. By the end of 2020, the net citizens in China reached 989 million, and the network coverage reached 70.4%.[1] The economy stimulated by the Internet encourages a new wave of entrepreneurship based on knowledge and the Internet. Since 1997, knowledge entrepreneurship based on the high-tech Internet has risen in China, and it draws worldwide attention with the rise of world-famous firms such as Baidu, Alibaba, and Tencent, which further enhances the e-commerce environment. The increase of mass entrepreneurship has profoundly changed the entrepreneurial development models and paths in China.

Since the first successful transaction, the business model of transactions is primarily transformed by internet-based e-commerce. As a result, entrepreneurs widely adopt new models such as business to business (B2B), business to customer (B2C), and customer to customer (C2C).

Internet-based e-commerce also enhances entrepreneurship in the rural area of China, and Taobao villages[2] spring out. From 2009 to 2020, the Taobao villages have risen from 3 to 5425, and more than one million peasants are engaged in online businesses. The e-commerce transactions in China reached more than 32,550 billion yuan in 2018, and people who are employed by the new economy reached more than 30 million.[3]

Recently many researchers have done a large number of studies on entrepreneurship in China. A strand of research emphasizes the influence of individual characteristics on entrepreneurial decision-making and entrepreneurial performance. Most findings are consistent with similar studies performed in other countries, male and married individuals are more likely to start a business and succeed (Djankov et al., 2006; Giannetti & Simonov, 2009).

Another strand of research discusses the interaction between entrepreneurship and external factors, such as finance and the Informal finance and social networks play an important role in entrepreneurship (Yueh, 2009). Luo et al. (2021) demonstrate that digital financial capability can benefit entrepreneurial performance through sale, borrowing, and investment channels. Some scholars empirically find that the Internet improves entrepreneurship in a region (Zhou & F, 2018; Zhou & H, 2017; Shi & Wang, 2017). Some scholars utilize cases or data and empirically investigate the effects of e-commerce on entrepreneurship (Wang et al., 2019). Many find the Internet improve entrepreneurship in rural areas and ease the traditional dependence of entrepreneurship on social networks in China's rural area (Gu et al., 2016; Wang et al., 2019).

However, existing surveys about internet effects on entrepreneurship are still sparse, especially in developing countries. China has many net citizens, and the empirical studies on China have important implications for other developing countries. This paper will use micro-level survey data to look at how the Internet will affect entrepreneurship choice at the individual level and its heterogeneous effects on different groups of people. We will further investigate two main mechanisms: information and finance, through which the Internet will affect entrepreneurship in China.

The rest of this paper is organized as follows. Section two will introduce data and summary statistics. Section three investigates at the individual level how the Internet will affect entrepreneurship. Section four analyzes two mechanisms of information and finance. The final section includes conclusions and discussion.

2. Data and descriptive statistics

The data used in this study is the China Family Panel Studies (CFPS) data from 2014 to 2016, which is a longitudinal prospective cohort study with biannual surveys conducted through Peking University's Institute of Social Science Survey. The CFPS project covers

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[1] China Internet network information development association(CNNIA).:China Internet development report (2020).

[2] Taobao villages refers to villages which contain villagers with more than 10% who open shops online and have more than 10 million yuan transactions per year.

[3] E-commerce research center: 2018 China e-commerce market data monitoring report, http://www.100ec.cn/zt/2018dsscbg/。.

25 provinces in China, nearly a national probability sample, and collects detailed information on Chinese households, including basic demographic characteristics, economic activities, liabilities and assets, Internet user behavior. This data information lay the foundation for the follow-up empirical research.

Compared with other micro-data, the CFPS project is a longitudinal follow-up survey, making it possible to identify the causal effect of Internet usage on households' subsequent entrepreneurship decisions. Considering the potential impact of schooling and retirement on entrepreneurship decisions, we restrict the sample to households with household headers aged between 18 and 65. The final sample consists of a maximum of 14,238 households. Table 1 presents the definition and summary statistics of the main variables.

Our dependent variable is entrepreneurship, and the dummy variable entrepreneurship equals one if the household engages in business operations, including small operations and enterprise operations. Table 1 shows that entrepreneurs account for 11.6% of the total. The primary independent variable in the study is Internet usage. There are 27.1% of households using the Internet in our sample. The CFPS project investigates the Internet user behavior, and we can get the frequency of online learning, online socialization, and online entertainment, which helps us analyze the impact mechanism.

According to existing studies, we have demographic characteristics, including age, gender, marital status, schooling year, health, family size, and hukou as covariates. Hukou has been a type of population registration system since the era of the planned economy in China. Each individual's hukou is specifically related to the region in which he/she resides. Therefore, hukou status implies the difference between urban and rural residences. Concerning the respondent and household characteristics, the average age of respondents is around 42.54 years old, 52.30% of whom were male, and 82.64% were married.

Table 2 compares the differences between subgroups of individuals using the Internet and individuals not using the Internet. Among the 14,238 observations of the whole sample, 27.1% of observations belong to the treatment group. Thus, we can find that the entrepreneurship choice, household characteristics are significantly different across the two subsamples.

3. Empirical identification strategy and empirical results

3.1. Benchmark model

In order to analyze the impact of the Internet on entrepreneurship, we use the following Probit model:

$$Prob(Y_{it} = 1) = \alpha + \sum \beta X_{it} + \delta Internet_{it} + \lambda_i + \theta_t + u_{it} \tag{1}$$

Where Y_{it} is a dummy variable indicating whether household i chooses entrepreneurship in time t. $Internet_{it}$ is the dummy variable indicating Internet use. The coefficient δ indicates the extent to which the Internet affects entrepreneurial decisions. X_{it} are the control variables including age, gender, marital status, schooling year, health, family size, and hukou. λ_i is region fixed effect, and θ_t is year fixed effect. u_{it} is the error term.

We adopt stepwise regression method by adding control variables in the benchmark model gradually to examine the impact of Internet use on entrepreneurship decisions. Table 3 shows the benchmark regression results. In column (1), the control variables are age, age squared, and gender, and the coefficient of entrepreneurship is significantly positive at the 1% significance level. Thus, the result shows that Internet can increase the probability of entrepreneurship. From column (2) to column (6), we further add demographic characteristics including marital status, schooling year, hukou, family size, and health, and the regression results are similar to column (1) indicating that the estimates are robust.

3.2. Endogeneity problem

The regression results of the previous section show that the use of the Internet can significantly increase the probability of

Table 1
Variable definition and summary statistics.

Variables	Variable definitions	Mean	Std.	Min	Max
Entrepreneurship	Household engaged in business operation = 1, otherwise = 0	0.116	0.320	0	1
Internet	Using the Internet = 1, otherwise = 0	0.271	0.444	0	1
Age	Age of Household head	42.54	12.74	18	65
Male	Male = 1, otherwise = 0	0.523	0.499	0	1
Married	Married = 1, otherwise = 0	0.845	0.362	0	1
Education	Schooling year	8.242	4.723	0	22
Rural	Rural hukou = 1, otherwise = 0	0.528	0.499	0	1
Health	Self-rated health status as relatively healthy and above = 1, otherwise = 0	0.710	0.454	0	1
Family scale	The number of family members	4.344	2.043	1	19
Information channel	The Internet as an important source of access to information = 1, otherwise = 0	0.383	0.486	0	1
Online learning	Using the Internet almost every day for learning = 1, otherwise = 0	0.044	0.204	0	1
Online social	Using the Internet almost every day to socialize = 1, otherwise = 0	0.063	0.243	0	1
Online entertainment	Using the Internet almost every day for entertainment = 1, otherwise = 0	0.102	0.303	0	1
Informal financing	Private financial lending = 1, otherwise = 0	0.193	0.397	0	1
Formal financing	Bank lending = 1, otherwise = 0	0.075	0.263	0	1

Table 2
Comparison between subgroups of individuals using the Internet and individuals not using the Internet.

Variables	Internet = 1		Internet = 0		t-test for difference in means
	Mean	Std.	Mean	Std.	
Entrepreneurship	0.157	0.364	0.103	0.304	0.054***
Age	34.00	10.01	46.10	11.92	12.096***
Male	0.576	0.494	0.499	0.500	0.077***
Married	0.745	0.436	0.892	0.310	−0.147***
Education	12.26	3.313	6.786	4.311	5.474***
Rural	0.287	0.548	0.394	0.489	0.319***
Health	0.845	0.362	0.658	0.474	0.187***
Family scale	4.008	1.878	4.428	2.078	0.420***

Note: ***p < 0.01, **p < 0.05, *p < 0.1.

Table 3
Benchmark regression results.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Internet	0.083***	0.072***	0.053***	0.053***	0.051***	0.050***
	(0.009)	(0.009)	(0.007)	(0.007)	(0.006)	(0.006)
Age	0.061***	0.061***	0.060***	0.060***	0.590***	0.590***
	(0.031)	(0.031)	(0.030)	(0.030)	(0.028)	(0.028)
Age squared	−0.001***	−0.001***	−0.001***	−0.001***	−0.001***	−0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.245***	0.239***	0.232***	0.229***	0.227***	0.220***
	(0.069)	(0.069)	(0.069)	(0.069)	(0.069)	(0.069)
Married		0.027***	0.023***	0.023***	0.023***	0.023***
		(0.008)	(0.005)	(0.005)	(0.005)	(0.005)
Education			0.008***	0.008***	0.008***	0.008***
			(0.002)	(0.002)	(0.002)	(0.002)
Hukou				0.093***	0.089***	0.089***
				(0.017)	(0.017)	(0.017)
Family size					0.148***	0.148***
					(0.067)	(0.067)
Health						0.002
						(0.004)
Region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
pseudo R²	0.112	0.116	0.124	0.126	0.129	0.129
N	15387	15011	14767	14767	14497	14238

Note: Standard errors are in parentheses; ***p < 0.01, **p < 0.05, *p < 0.1. Regression coefficients are marginal effects.

entrepreneurship. However, the benchmark regression model may face the challenge of endogeneity problems. The benchmark model may have a reverse causality problem considering that individuals may use the Internet because of entrepreneurial activity. Besides, there may be a problem with omitted variables in the model. For example, individual ability may affect both Internet use and entrepreneurial decision.

To identify the causal effect of the Internet on entrepreneurship, we construct the variable of new entrepreneurs by using CFPS data in 2014 and 2016. The new-entrepreneurship refers to the households that did not engage in business operation in 2014 but enrolled in business operation in the followed-up survey of 2016. Table 4 shows the regression results of the impact of the Internet on new entrepreneurs. To accurately identify the impact of Internet use in 2014 on entrepreneurship in 2016, the independent variables in the model use data in 2014, and the samples which households were entrepreneurs in 2014 are removed. Other specifications are similar to the benchmark model. We can find that the coefficient of the Internet is still significantly positive at the significance level of 1%,

Table 4
The impact of Internet on new entrepreneurship.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Internet	0.036***	0.036***	0.033***	0.031***	0.031***	0.031***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
pseudo R2	0.147	0.156	0.154	0.159	0.159	0.159
N	7365	7309	7309	7041	7041	7041

Note: Standard errors are in parentheses; ***p < 0.01, **p < 0.05, *p < 0.1. Regression coefficients are marginal effects. Control variables are similar to the benchmark model.

indicating that the use of the Internet can significantly promote entrepreneurial activities, which is consistent with the estimation in the benchmark model.

3.3. Heterogeneous effects

Does the Internet have different effects on different types of entrepreneurship or different regions? We divide the sample into different subsamples to analyze the heterogeneous effect of the Internet on entrepreneurship in this section.

Firstly, we focus on different types of entrepreneurship. The Global Entrepreneurship Monitor divides entrepreneurship types into necessity-based entrepreneurship and opportunity-based entrepreneurship. A necessity entrepreneur is an individual who has turned to entrepreneurship because they cannot find a job or another method to create to make money. They engage in small-scale entrepreneurial activities to meet individual survival needs. In contrast, opportunity-based entrepreneurship generally has a larger scale and growth, creating more employment opportunities. We can distinguish necessity and opportunity entrepreneurs through entrepreneurial size (Glaeser et al., 2010; Zhang, 2018). We use whether to hire workers as the criterion for dividing necessity-based and opportunity-based entrepreneurship.

In columns (1) and (2) of Table 5, we evaluate the marginal effects of the Internet on the necessity and opportunity entrepreneurs, respectively. By comparing the regression results, we can find that internet use significantly promotes survival entrepreneurship and opportunity entrepreneurship, contributing more to opportunity entrepreneurship.

Moreover, China has a typical urban and rural dual structure, with a significant difference in economic activities between urban and rural areas. Therefore, we divide the rural and urban sub-samples to examine the differences between the impact of the Internet on entrepreneurial decision-making in urban and rural areas. Columns (3)–(4) of Table 5 are the regression results of rural and urban samples, respectively. By comparing the regression results, we can find that the use of the Internet has a significant positive effect on entrepreneurship, both in rural and urban areas, while the Internet effect is more significant in rural areas than in urban areas. It may be due to the continuous improvement of rural infrastructure in recent years, which has led to the rapid development of entrepreneurship. As a result, E-commerce entrepreneurship has developed rapidly in China.

The use of the Internet can encourage farmers to start e-commerce businesses. Wang et al. (2017) use the Chinese Household Income Project Survey (CHIPS) data to study the impact of the development of e-commerce on rural entrepreneurship at the county level in China. The empirical results show that the growth of e-commerce can significantly increase the entrepreneurial probability, entrepreneurial investment, and employment scale.

4. Mechanism analysis

4.1. Information channel

Generally, people can obtain information resources conveniently and efficiently by using the Internet. Therefore, the Internet has a strong information effect, particularly for entrepreneurs. The large amount of information provided by the Internet helps entrepreneurs reduce information asymmetry, effectively identify entrepreneurial opportunities, reduce transaction costs and entrepreneurial risks, and realize efficient resource allocation (Wang et al., 2019). We directly investigate the information effect by adding some Internet users' variables, and Table 6 shows the Internet information effects. In column (1), we add the interaction terms of the Internet with information channels, and the coefficient of the interaction term is significantly positive at the 1% significance level. The result shows that the Internet promotes entrepreneurship mainly by facilitating entrepreneurs to obtain information.

Besides, we also analyze the impact of different network information functions. Interactive items of the Internet and online learning, interactive items of Internet and online social, and interactive items of the Internet and online entertainment are added to columns (2) to (4) in Table 6. We identify the impact of Internet learning, Internet socialization, and Internet entertainment on entrepreneurial activities in Table 6. The results show that only the coefficient of interaction term of the Internet and online learning is significantly positive, which indicates that using the Internet to learn online can increase the probability of entrepreneurship. It can be explained from the perspective of digital human capital. The Internet's information acquisition function can improve the digital human capital formed by personal skills, promoting entrepreneurial activities (Li, 2008).

Table 5
Heterogeneous effects analysis.

Variables	(1)	(2)	(3)	(4)
	Necessity-based entrepreneurship	Opportunity-based entrepreneurship	Rural	Urban
Internet	0.054***	0.075***	0.044***	0.029***
	(0.017)	(0.023)	(0.009)	(0.009)
Control variables	Yes	Yes	Yes	Yes
Region fixed effects	Yes	Yes	Yes	Yes
pseudo R²	0.206	0.219	0.208	0.221
N	9675	4578	14238	14238

Note: Standard errors are in parentheses; ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$. Regression coefficients are marginal effects. Control variables include age, age square, gender, marital status, schooling year, health, family size, and hukou.

Table 6
Information channel.

Variables	(1)	(2)	(3)	(4)
Internet	0.015*	0.008	0.004	0.004
	(0.009)	(0.017)	(0.017)	(0.017)
Internet*Information channel	0.014***			
	(0.011)			
Internet* Online learning		0.017**		
		(0.004)		
Internet* Online social			0.004	
			(0.024)	
Internet* Online entertainment				0.006
				(0.012)
Control variables	Yes	Yes	Yes	Yes
Region fixed effects	Yes	Yes	Yes	Yes
pseudo R^2	0.124	0.117	0.117	0.117
N	14238	6665	6099	6703

Note: Standard errors are in parentheses; ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$. Regression coefficients are marginal effects. Control variables include age, age square, gender, marital status, schooling year, health, family size, and hukou.

4.2. Finance channel

Most literature studies believe that financial constraints play an important role in entrepreneurship decisions, and alleviating financial constraints is the key to promote entrepreneurship (Aghion, Fally, & Scarpetta, 2007; Bowen & De Clercq, 2008; Cumming & Johan, 2010; Kerr & Nanda, 2011). Early studies focus on the internal financial constraints formed by the level of their assets, and they find that households with higher capital accumulation and fewer financial constraints are more likely to start their businesses (Paulson & Townsend, 2004; Zhang & Zhang, 2019). In recent years, Internet finance, which relies on innovative technologies such as information technology, big data technology, and cloud computing, has provided colossal development space to reduce financial transaction costs and expand the scope of financial services. Internet finance can make up for the shortcomings of traditional finance so that underdeveloped areas can also enjoy convenient financial services and promoting entrepreneurial activities (Aghion et al., 2007; Mollick and Kuppuswamy; 2014).

This section will focus on the impact mechanism of the Internet on entrepreneurial activities from the financing channel. China is considered as an economy with severe financial depression problems. The financial development in China shows two interrelated features. First, China's financial market is developing slowly, and the finance depression problem is severe (Liu, 2011). This phenomenon is reflected in the official interest rate is far lower than the market interest rate for a long time and in the monopoly position and threshold access of state-owned banks. Second, the private economy is faced with various discrimination in terms of financial credit. Although the non-state sector contributes more than 70 percent of China's GDP, it has received less than 20 percent of traditional bank loans over the past decade (Lu & Yao, 2004). The increasing trend in Internet usage nationwide in China is believed to be a key measure to relieve the financial depression, especially in rural China.

Column (1) of Table 7 adds informal financing based on the benchmark regression model, and we further combine the interaction terms of Informal financing and the Internet in column (2). The variable formal financing replaces the variable informal financing in columns (3)–(4), and other model specifications are identical. We find that informal financing's coefficient is significantly positive at the 1% significance level in columns (1) and (3), indicating financing can promote entrepreneurship. The coefficient of the interaction terms is significantly positive in column (2), while the interaction is not significant in column (4). These results indicate that the Internet promotes entrepreneurial activities by promoting private financing and easing financing constraints. Traditional private lending mainly depends on the acquaintance and social network, while with the development of the Internet, the source of funds widely extended from traditional social networks to strangers.

The statistical result below shows that the Internet's use significantly and positively affects the informal financial sector, crucial to entrepreneurial activities. The informal financial sector's lenders could use big data to reduce the required mortgage assets and lower security constraints. The Internet is of considerable significance to informal financing and entrepreneurship. Although the Internet has broadened the sales channels of traditional financial products, and to a certain extent, it has also solved the problems of transaction costs and information asymmetry when banks and other formal financial institutions lend. However, banks' formal online financial products have not provided significant support for relieving the constraints of entrepreneurial financing.

5. Conclusion

This paper empirically explores the Internet's impact on entrepreneurship and its mechanism using China Family Panel Studies (CFPS) micro-data from 2014 to 2016. Using the Probit model estimate, we find that using the individual Internet can increase the probability of entrepreneurship by around 5% in general after controlling for other factors. We construct new entrepreneurship variables according to the characteristics of CFPS tracking data to solve the endogenous problems in the regression model. The main regression results still hold after dealing with endogeneity issues, and the use of the Internet has a significant positive impact on entrepreneurial decision-making.

Table 7
Financing channel.

	(1)	(2)	(3)	(4)
Internet	0.052*** (0.008)	0.028*** (0.008)	0.037*** (0.007)	0.032*** (0.007)
Informal financing	0.186*** (0.038)	0.119*** (0.040)		
Informal financing *Internet		0.132** (0.063)		
Formal financing			0.410*** (0.054)	0.347*** (0.056)
Formal financing *Internet				0.112 (0.078)
Control variables	Yes	Yes	Yes	Yes
Region fixed effects	Yes	Yes	Yes	Yes
pseudo R^2	0.123	0.128	0.121	0.123
N	15301	14204	15301	14204

Note: Standard errors are in parentheses; ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$. Regression coefficients are marginal effects. Control variables include age, age square, gender, marital status, schooling year, health, family size, and hukou.

It is worth noting that Internet use is heterogeneous for different types of entrepreneurship and different areas. The use of the Internet has a positive and significant impact on both necessity and opportunity entrepreneurs, and the effect is larger for opportunity entrepreneurship. Furthermore, Internet can benefit entrepreneurs, especially those in rural areas.

Compared with previous studies, this paper analyzes the mechanism of Internet use on entrepreneurship from information and finance. On the one hand, the results show that the Internet can significantly promote entrepreneurship through information channels. The use of the Internet is mainly through the information acquisition function of online learning to encourage potential entrepreneurs to improve the digital human capital formed by personal skills, thereby promoting entrepreneurial activities. On the other hand, the Internet can significantly promote entrepreneurship through entrepreneurial financing channels. With the development of digital finance and fintech, the Internet promotes entrepreneurial activities by promoting Internet finance and alleviating financing constraints from analyzing the types of financing.

CRediT authorship contribution statement

Ying Tan: Conceptualization, Formal analysis, Writing – review & editing. **Xiaoying Li:** Methodology, Validation, Writing – review & editing, Funding acquisition.

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