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Use Promote Inclusive Entrepreneurship Among Farmers?

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Abstract: The development of Internet technology has a huge impact on social equity and efficiency, fully mobilize the potential of innovation and entrepreneurship of social vulnerable groups, which is of great significance to achieve common prosperity. Using CGSS2017 data and the characteristic data of prefecture-level cities, this paper evaluates the inclusiveness of Internet development for farmer entrepreneurship. Research findings: First, Internet application not only promotes individual entrepreneurship but also significantly promotes entrepreneurship of rural residents. It can be seen that the development of the Internet is conducive to the equalization of entrepreneurial opportunities between urban and rural areas in China. Second, compared with the impact of Internet use and application on entrepreneurship of rural vulnerable groups, the frequency of Internet use has greater promoting effect on rural vulnerable groups; However, the scope of Internet use has a more significant promotion effect on entrepreneurship of the rural mainstream population. Therefore, it is proposed to accelerate the construction of network coverage in rural areas; Strengthen the training of farmers' Internet use skills; We have made policy recommendations on improving regulations for the Internet and fostering a sound cyberspace.

Keywords: Internet application, Peasant household entrepreneurship, Inclusive.

1. Introduction

The rapid development of Internet has an important impact on the development of China. Especially for rural residents, with the rapid development and wide application of information and communication technology, it has injected great vitality into rural areas. At the same time, the state has strongly encouraged entrepreneurship, and a large number of farmers have chosen the Internet to start businesses, thus the unique phenomenon of "Taobao Village" has appeared in China. According to the Report on E-commerce of Agricultural Products in 2021, by December 2020, the number of rural netizens in China was 309 million, the Internet penetration rate in rural areas reached 55.9%, and the number of Taobao villages in China reached 5,425, driving 8.28 million people to start businesses and obtain employment. The emergence of innovative technologies such as big data, Internet of Things and cloud computing has greatly broken the restrictions on farmers' entrepreneurship, such as Alipay and WeChat payment, which have changed the availability and convenience of rural financial services; The third-party e-commerce represented by Taobao simplifies the transaction process and improves the efficiency of farmers' entrepreneurship. It can be expected that the development of the Internet has brought greater sharing and convenience of information, knowledge and technology, weakened the restrictive conditions of entrepreneurship, expanded the scope of entrepreneurial groups, and further promoted inclusive entrepreneurship.

Inclusive entrepreneurship is a concept used by OECD[1] in The Missing Entrepreneurship: Policies for Inclusive Entrepreneurship in Europe. What is reflected in the report is that inclusive entrepreneurship is to give all people equal opportunities to start businesses and promote their wider and deeper participation in business activities. At present, the research on inclusive entrepreneurship focuses more on bringing the "bottom of the pyramid" group into market activities to become entrepreneurs, giving full play to their entrepreneurial innovation potential, and then increasing economic income. The "bottom of the pyramid" groups mainly include women, young people, the elderly and the disabled. Although there is some overlap in their classification, each group is different from the mainstream group in starting a business. These groups are often in a weak position in starting a business, and there are problems such as scarce entrepreneurial opportunities, insufficient entrepreneurial motivation, and difficulties in starting a business. The emergence of the Internet has spawned a new business environment, expanded the margin and scale of the market, and promoted a wider range of people to have the opportunity to participate in market entrepreneurship. According to the existing literature, the Internet has a significant role in promoting residents' entrepreneurship, and the relatively poor people are more affected by it, so it is a new way to solve the poverty problem of vulnerable groups (Zheng Gang, Chen Xiao, Si Xiaofu, 2020)[2]. However, at present, there are few studies on inclusive entrepreneurship, and the only ones are mainly case studies, focusing on the emergence of Taobao Village, studying the Internet revolution and the inclusive entrepreneurship model supported by the government. Empirical analysis is rare, and there is no detailed demonstration of the inclusiveness of Internet applications to the entrepreneurship of vulnerable groups. Considering that absolute poverty has been completely eliminated in China, it is necessary to consolidate the achievements of poverty alleviation. Therefore, it is of great practical significance to further clarify the entrepreneurial influence of the Internet on the vulnerable groups and deeply tap the innovative potential of the rural vulnerable groups to comprehensively promote rural revitalization and achieve common prosperity.

Based on the above analysis, this paper uses the data of China Comprehensive Social Survey (CGSS2017), which is representative of the whole country, to build an empirical

framework and evaluate the inclusive impact of Internet application on farmers' entrepreneurship. Firstly, based on the empirical analysis of sub-samples, it is found that Internet application can promote residents' entrepreneurship, and the promotion effect in rural areas is greater than that in cities, and it is considered that the Internet has an inclusive effect on farmers' entrepreneurship. Secondly, based on the premise that the Internet is inclusive to farmers' entrepreneurship, it is found that the frequency of Internet use plays a more significant role in promoting rural vulnerable groups' entrepreneurship, while the scope of Internet use plays a more significant role in promoting rural mainstream groups.

2. Literature Review

This paper is devoted to studying whether the development of the Internet can promote the inclusive entrepreneurship of farmers, and analyzes it from the perspective of rural vulnerable groups, and compares whether rural vulnerable groups benefit more from different ways of using the Internet. Relevant literature can be summarized from the following aspects.

The first is the literature related to entrepreneurship. At present, the influencing factors of entrepreneurship in academic circles are mainly divided into three aspects: the study of entrepreneurial subject, the study of entrepreneurial process and the study of entrepreneurial environment. Summarizing the previous studies, it is found that the characteristics of entrepreneurs, such as personality traits, skills and knowledge level, are closely related to their entrepreneurial choices. Entrepreneurial process includes opportunity identification, opportunity evaluation and resource acquisition and development opportunities. Opportunity identification is the core element of entrepreneurial process (Lin Song, Jiang Yanfu, 2005)[3]. Existing literature shows that social capital, previous experience and entrepreneurial role models are important factors in identifying opportunities (Zeng Yiwu, Chen Yongfu, Guo Hongdong, 2019)[4], which have a significant impact on entrepreneurial activities. Entrepreneurial environment is generally divided into family environment and general environment. Zhang Huanyu and others (2018) [5]think that individual family environment has many entrepreneurial resources, and it is easier to choose entrepreneurship under the influence of business model in family environment. General environment includes market environment, policy environment, financial support, infrastructure and entrepreneurial atmosphere, etc. Bird(1988) [6]shows that general environmental factors are a kind of regulating variable, which affects entrepreneurial choice by influencing individual entrepreneurial attitude.

Secondly, the "internet plus" and "double innovation" policies have brought new opportunities to stimulate the vitality of innovation and entrepreneurship. A large number of studies have shown that Internet applications can promote entrepreneurship. Specifically, the role of the Internet in promoting entrepreneurship is mainly manifested in the following three aspects. First, the Internet has effectively lowered the threshold and cost of starting a business. Entrepreneurial activities based on the Internet directly contact consumers and accurately grasp market demand; Simplify the production and marketing channels, reduce transaction costs, channel costs, bargaining costs and other costs. In addition, using internet finance to improve the financial penetration rate in remote areas, increase the spread of financing information, and alleviate the difficulties of entrepreneurs in financing difficulties and expensive financing; Give play to the functions of big data and cloud computing, promote the transparency and consistency of information between investors and entrepreneurs, strengthen the credit risk restraint mechanism, and enhance the financing confidence of entrepreneurs. Second, the application of Internet stimulates the innovative and entrepreneurial thinking of entrepreneurs. Wang Jinjie and others (2017) [7][6]believe that the reduction of e-commerce reduces the impact of academic qualifications on entrepreneurship, and Liu Xiangrong (2018)[8] further studies find that social software based on the Internet improves the knowledge stock and effectiveness of individuals. On the other hand, Yang Xueru and others (2018) [9]believe that the cross-regional characteristics of the Internet are conducive to expanding social networks, obtaining massive and diverse information, and helping entrepreneurs to broaden their horizons and seize entrepreneurial opportunities. The third is to improve the entrepreneurial environment. Internet enterprises cooperate with the government to provide entrepreneurs with perfect training skills services, logistics services, financial services, etc., which improves the probability of starting a business; Moreover, the formation of "Taobao Village" has produced a driving effect, and farmers in the whole region have a high entrepreneurial enthusiasm, recreating the entrepreneurial model of successful online merchants and reducing the risk of farmers' entrepreneurship.

To sum up, the literature research evaluates the promotion effect of Internet on entrepreneurship. According to the existing literature, with the advantages of improving entrepreneurial environment, reducing entrepreneurial costs and improving entrepreneurial efficiency, the Internet can effectively broaden the scope of entrepreneurial groups and deeply tap the entrepreneurial employment potential of vulnerable groups. Under the traditional entrepreneurial mode, the rural vulnerable groups are excluded from entrepreneurship and market because of their inherent disadvantages, such as economic situation, social resources, psychological endurance and knowledge level. Zhang Xun et al. (2019) [10]found that with the popularity of the Internet, the availability and convenience of financial services have been improved, which has helped the low-income people who were excluded from traditional finance to ease the loan constraints and promote their access to venture capital. Lv Mingyang and others (2020) [11]believe that the use of the Internet has stimulated the vitality of the re-employment innovation of the elderly. Mao Fei et al. (2021) [12]used the comprehensive survey data of China in 2017, and found that the use of the Internet improved women's human capital, gender concept and social capital, and promoted rural women's entrepreneurial choice. At present, many scholars have found that the Internet can promote the entrepreneurship of vulnerable groups, but most of them only study that the Internet has stimulated the entrepreneurial potential of a certain type of vulnerable groups, and have not used more categories of vulnerable groups to verify the impact of the Internet on their entrepreneurship, and then compare the difference between the impact of Internet applications on the entrepreneurship of mainstream people and vulnerable groups.

Finally, the literature about inclusive entrepreneurship. As mentioned above, inclusive entrepreneurship emphasizes the right of equal opportunities and fair participation for the bottom of the pyramid (BOP) group, and shares the benefits

of economic growth brought by equal opportunities through entrepreneurial behavior. As far as the existing literature is concerned, the theory of inclusive entrepreneurship is still in the initial stage, and there is no perfect and universal definition of inclusive entrepreneurship. Referring to Peng Ruimei's (2019) [13]research, this paper defines inclusive entrepreneurship as entrepreneurial activities aimed at equitably sharing the new opportunities brought by economic growth, realizing sustainable economic and social development, and enabling the poor and vulnerable groups to participate in new economic opportunities and share the fruits brought by such new opportunities. The existing literature agrees that the development of inclusive entrepreneurship is mainly due to the emergence of the Internet, and Taobao Village is a typical representative. However, because there is no quantitative index for inclusive entrepreneurship, scholars mainly use case analysis and theoretical analysis for research.

In this paper, the definition of inclusive entrepreneurship is more biased towards the perspective of vulnerable groups, and it is considered that, in contrast, the entrepreneurial potential of vulnerable groups is greater, which is inclusive entrepreneurship. Combined with the previous analysis of the impact of the Internet on entrepreneurship, the disadvantaged groups have participated in entrepreneurship to a great extent through the application of the Internet, sharing the opportunities brought by Internet technology, that is, the emergence of the Internet has promoted inclusive entrepreneurship. However, Hu Angang and others (2002)[14] believe that the development of the Internet has led to the emergence of the "digital divide", which has further aggravated the income gap between men and women, between urban and rural areas, and between different backgrounds of education, and promoted the unequal distribution of resources and opportunities, and the disadvantaged groups have not shared the new opportunities brought by Internet technology. Based on the research of Mao Yufei et al. (2017) [15]and Su Lanlan et al. (2020)[16], it is found that different ways of using the Internet have different impacts on entrepreneurship. Obviously, the use of the Internet has a certain impact on inclusive entrepreneurship, but unfortunately, there is no literature to systematically analyze the impact of different groups' use of the Internet on entrepreneurship from the perspective of inclusive entrepreneurship.

Based on the above analysis, this paper analyzes the influence of internet application on entrepreneurship and explores the inclusiveness of internet entrepreneurship on farmers' entrepreneurship; And analyze the influence of different ways of using the Internet on the entrepreneurship of rural vulnerable groups. The possible contributions of this paper are as follows: First, based on the empirical method of sub-samples, this paper analyzes whether Internet application can promote inclusive entrepreneurship in rural areas and further enrich the theory of farmers' entrepreneurship and inclusive entrepreneurship. Secondly, the Internet application is subdivided into frequency of use, degree of dependence and scope of use, and the influence of different ways of use on rural vulnerable groups' entrepreneurship is discussed in detail.

3. Data Source, Variable Setting and Model Construction

3.1. Data sources

The data in this paper is the household survey data of China General Social Survey (CGSS) in 2017. The survey samples come from 28 provinces (autonomous regions and municipalities directly under the Central Government) in China, and the data includes 12,582 samples. According to the research needs, a total of 2206 valid samples were obtained after deleting problems such as abnormal data and missing data. Further, this paper uses the data of China Statistical Yearbook (2017) to obtain the regional GDP of 28 provinces.

3.2. Variable setting

Explained variable; Entrepreneurial behavior. According to the working status of the respondents in the questionnaire, whether to start a business or not is distinguished. The respondents who answered that individual industrial and commercial households and they are bosses (or partners) are regarded as entrepreneurs, and they are assigned to 1, and the rest are assigned to 0.

Explanatory variables: Using three variables: Internet usage frequency, Internet dependence and Internet usage scope to comprehensively and deeply investigate the influence of Internet application on individual entrepreneurship. Select "How did you use the Internet in the past year" and "If I don't surf the Internet for a while, will I be restless?" , "How often do you surf the Internet for the following reasons?" As a proxy variable, it measures the way individuals use the Internet.

Table 1. Descriptive statistics of variables.

Variable type	variable	N	mean	se	Min	Max
dependent variable	start a business	2206	0.14	0.34	0	1
Core explanatory variable	Internet usage frequency	2206	4.08	1.09	1	5
	Internet dependence	2206	2.37	1.13	1	5
	Scope of internet use	2206	5.08	1.27	0	6
instrumental variable	Number of personal internet devices	2206	1.96	1.19	0	10
Control variable	gender	2206	0.5	0.5	0	1
	age	2206	42.1	14	18	86
	nation	2206	0.93	0.25	0	1
	eudcation	2206	6.63	3.22	1	13
	Political status	2206	0.13	0.34	0	1
	Health	2206	3.78	0.98	1	5
	marriage	2206	0.74	0.44	0	1
	lnGDP	2206	10.19	0.64	7.85	11.3

Tool variables: refer to the research of Zhou Guangsu et al. (2018), and select the questionnaire "How many devices do you currently have that can access the Internet?" As a tool variable. The more internet devices an individual owns, the easier it is to use the internet, and there is a strong correlation between them. In addition, the number of internet devices is an individual's heterogeneous feature, which has no direct correlation with entrepreneurial behavior, so it meets the exogenous requirement.

Control variables: in order to eliminate the research errors caused by individual differences and regional differences, this paper introduces eight control variables: individual gender, age, nationality, education level, political outlook, health status, marriage and regional GDP.

3.3. Model construction

In view of the fact that the dependent variable whether farmers start a business is a binary classification variable and the sample data obeys normal distribution, the binary Probit model is used for analysis. The regression model is as follows:

$$P(Y_i = 1|T) = \alpha + \beta_i X_i + \delta_i T_i + \mu_i$$

Among them, i represents different farmers, $P(Y_i = 1|T)$represents the probability that farmer I chooses to start a business, X is the Internet application (including Internet usage frequency, Internet dependence and Internet usage range), $T$is the control variable, α is the constant term, and μ is the random interference term. In order to test the robustness of the results, LPM model is used as a control analysis. At the same time, considering the possible endogenous problems, the appropriate tool variables are selected and verified by$IV-Probit$ model and $2SLS$ model.

4. Empirical Analysis

4.1. The impact of Internet applications on entrepreneurship

In this paper, Probit model is used for regression estimation to test the influence of Internet application on individual entrepreneurship, and the results are shown in Table 2. The frequency and scope of Internet use have a significant impact on farmers' entrepreneurship. From the perspective of marginal effect, the frequency and scope of Internet use will increase by one unit respectively, and the possibility of farmers' starting a business will increase by 8% and 14.5% respectively. It shows that the increase of internet usage frequency and range is helpful to improve the probability of farmers' entrepreneurship. However, the degree of internet dependence has no significant impact on farmers' entrepreneurship.

Examine other control variables. As far as individual control variables are concerned, we find that gender, marriage and health are positively correlated with entrepreneurship, that is, men, married and healthier individuals are more willing to start businesses; Education level and political outlook are negatively correlated with entrepreneurship, that is, individuals with higher education level and party member status have lower willingness to start a business; Age and entrepreneurship are inverted "U", that is, young people are more inclined to start businesses; There is no significant relationship between nationality and entrepreneurship. As far as regional control variables are concerned, there is no significant relationship between the degree of regional economic development and entrepreneurship. The possible reason is that for entrepreneurship, regional GDP is a slow variable, which is difficult to identify by cross-sectional data analysis.

Table 2. Internet Application and Entrepreneurship: Benchmark Analysis

variable	(1)	(2)	(3)
Internet usage frequency	0.080**		
	(2.24)		
Internet dependence		0.042	
		(1.35)	
Scope of internet use			0.145***
			(4.19)
gender	0.237***	0.240***	0.236***
	(3.36)	(3.39)	(3.33)
age	0.108***	0.105***	0.104***
	(5.23)	(5.12)	(5.09)
Age^2	-0.001***	-0.001***	-0.001***
	(-5.43)	(-5.36)	(-5.11)
nation	-0.081	-0.075	-0.112
	(-0.57)	(-0.53)	(-0.78)
education	-0.062***	-0.056***	-0.067***
	(-4.72)	(-4.42)	(-5.12)
Political status	-0.243*	-0.219*	-0.248*
	(-1.91)	(-1.73)	(-1.95)
health	0.096**	0.099**	0.088**
	(2.49)	(2.57)	(2.27)
marriage	0.177*	0.184*	0.185*
	(1.76)	(1.83)	(1.84)
lnGDP	0.068	0.079	0.073
	(1.22)	(1.44)	(1.30)
_cons	-4.378***	-4.247***	-4.756***
	(-6.17)	(-6.03)	(-6.62)
N	2206	2206	2206

4.2. Robustness analysis

In order to further ensure the reliability of the benchmark analysis in this paper, the following two methods are used to test the robustness: first, the samples of the respondents aged between 18 and 55 are selected for the robustness test; Secondly, OLS regression is used instead of Probit regression, and the results of the two methods are shown in Table 3. After the regression, the coefficient symbols and significance of Internet usage frequency, dependence degree and Internet usage range are consistent with the above, which shows that the improvement of Internet usage frequency and Internet usage range significantly promotes individual entrepreneurship, and further verifies that Internet dependence degree has no significant impact on individual entrepreneurship.

Table 3. Robustness analysis.

variable	Probit			OLS		
	(1)	(2)	(3)	(4)	(5)	(6)
Internet usage frequency	0.087**			0.016**		
	(2.19)			(2.14)		
Internet dependence		0.051			0.009	
		(1.51)			(1.33)	
Scope of internet use			0.165***			0.029***
			(4.10)			(4.39)
Control variable	Yes					
N	1819	1819	1819	2206	2206	2206

4.3. Endogenous problem handling

In the above regression, Internet application variables may have endogenous problems due to missing variables and reverse causality. On the one hand, individual differences, such as personal ability and risk attitude, will affect farmers' application of the Internet, on the other hand, it is possible that individuals need to use the Internet in the process of starting a business, resulting in reverse causality. In order to solve the possible endogenous problems in the model, the number of personal internet devices is used as a tool variable to test.

Table 4 shows the test results using IV-Probit model and 2SLS model. After adding instrumental variables, the direction and significance of the regression coefficients of Internet usage frequency, Internet dependence and Internet usage range are consistent with the previous ones, indicating that after overcoming the potential endogenous problems, Internet usage frequency and Internet usage range still significantly promote individual entrepreneurship.

Table 4. Endogenous problem test.

variable	IV-Probit			2SLS		
	(1)	(2)	(3)	(4)	(5)	(6)
Internet usage frequency	0.583***			0.121**		
	(2.59)			(2.54)		
Internet dependence		5.234			1.100	
		(0.71)			(0.72)	
Scope of internet use			0.637**			0.133**
			(2.54)			(2.52)
Control variable	Yes					
N	2206	2206	2206	2206	2206	2206

4.4. Internet applications and inclusive entrepreneurship

The above empirical results show that the effectiveness of Internet application in promoting individual entrepreneurship does not mean that the Internet has brought about equalization of entrepreneurial opportunities. Therefore, it is further analyzed whether Internet entrepreneurship is inclusive, that is, it has brought about equalization of entrepreneurial opportunities while promoting entrepreneurship. Influenced by the dual structure of urban and rural areas, the economic development and infrastructure construction in rural areas are far inferior to those in cities, and the availability of human capital, financial capital and social capital required by farmers to start businesses is far lower than that of urban residents, which leads to farmers being at the disadvantage end of starting businesses. If it can be proved that the development of the Internet has a greater role in promoting farmers' entrepreneurship, it can explain the inclusiveness of Internet entrepreneurship.

Table 5 reports the regression results using samples of urban residents and rural residents respectively. Columns (1)-(3) in Table 5 are based on the results of rural residents, and columns (4)-(6) are based on the results of urban residents. The frequency of Internet use, the degree of dependence and the scope of use have a significant positive impact on rural residents' entrepreneurship; For urban residents, only the range of internet use has a significant impact on entrepreneurship, while the frequency of internet use and dependence have no significant impact on entrepreneurship. From a significant point of view, the possibility of farmers' starting a business will increase by 15.5% and 8% respectively for each additional unit in the frequency and dependence of farmers' using the Internet. The possibility of starting a business for urban residents and rural residents will increase by 18% and 11.6% respectively for each additional unit using the Internet. Therefore, it shows that the development of the Internet can promote the inclusive entrepreneurship of farmers.

Table 5. Regression results of urban-rural heterogeneity analysis.

variable	Rural resident			Urban resident		
	(1)	(2)	(3)	(4)	(5)	(6)
Internet usage frequency	0.155***			0.012		
	(3.01)			(0.24)		
Internet dependence		0.080*			0.009	
		(1.78)			(0.20)	
Scope of internet use			0.180***			0.116**
			(3.70)			(2.27)
Control variable			Yes			
N	922	922	922	1284	1284	1284

4.5. The impact of different Internet usage on rural vulnerable groups.

The previous analysis shows that the development of the Internet is conducive to individual entrepreneurship, and it also promotes rural residents' entrepreneurship and brings inclusive entrepreneurship. However, the disadvantaged groups in rural areas, such as women, low education and patients with diseases, are different from ordinary farmers. They are more influenced by social and economic status, social discrimination and prejudice, and physical weakness, so it is difficult to participate in social and economic activities on an equal footing. So does inclusive entrepreneurship brought by Internet application have an effect on rural vulnerable groups? In order to deepen the understanding of the relationship between Internet application and farmers' inclusive entrepreneurship, this paper further investigates whether Internet application can promote the entrepreneurship of rural vulnerable groups, and considering that different application methods of the Internet lead to different degrees of influence on entrepreneurship, it is divided into three ways of using the Internet: frequency, degree of dependence and scope of use.

4.5.1. Rural women groups

Table 5 reports the regression results with gender as the grouping standard. The frequency of Internet use has a significant impact on rural men's and women's entrepreneurship, but from the perspective of marginal effect, if the frequency of Internet use increases by one unit, the possibility of rural men's and women's entrepreneurship will increase by 13.3% and 17.6% respectively, which reflects the inclusiveness of Internet entrepreneurship. However, judging from the degree of dependence and the scope of use of the Internet, it can only promote rural men's entrepreneurship. The possible explanation is that in rural areas, the traditional idea of "men are the masters outside and women are the masters inside" prevails, and most women devote their time and energy to their families. However, increasing the frequency of Internet use can achieve inclusive entrepreneurship. The reason is that if women spend more time on the Internet, they have more time to themselves than other rural women, and they can have time to develop entrepreneurial opportunities after catching them. But on the whole, most rural men bear the responsibility of the whole family, and their hearts are full of motivation to get rid of poverty and become rich, and they have strong entrepreneurial initiative, and they are always better than women in social capital, entrepreneurial experience, financing channels and anti-risk ability. Therefore, on the whole, the application of the Internet can promote rural men's entrepreneurship.

4.5.2. Low income groups

In this paper, farmers are divided into high-income groups and low-income groups based on the annual income of 12,000 yuan, and two groups of sample Probit estimation models are used respectively. The regression results are shown in Table 6. As far as the frequency of internet use is concerned, it only helps to improve the entrepreneurial probability of low-income people in rural areas, but has no significant impact on high-income people in rural areas, which reflects its inclusiveness; However, as far as the use scope of the Internet is concerned, it has a more significant impact on the entrepreneurship of rural high-income people. The reason may be that rural high-income people have a wide range of social contacts, high heterogeneity of contacts, easy to understand and use the diversified functions of the Internet, and easy to capture entrepreneurial opportunities or meet like-minded members for cooperative entrepreneurship; For low-income people in rural areas, the understanding of the use function of the Internet is relatively simple, and it takes them a lot of time and energy to explore the diversified functions of the Internet, so the scope of their Internet use is narrow and the impact on entrepreneurship is low.

Table 5. Analysis of the Impact of Internet Application on Entrepreneurship of Farmers of Different Gender

variable	man			feman		
	(1)	(2)	(3)	(4)	(5)	(6)
Internet usage frequency	0.133*			0.176**		
	(1.86)			(2.34)		
Internet dependence		0.148**			0.021	
		(2.31)			(0.33)	
Scope of internet use			0.300***			0.090
			(3.89)			(1.36)
Control variable			Yes			
N	451	451	451	471	471	471

Table 6. Analysis of the Impact of Internet Application on Entrepreneurship of Farmers with Different Income Levels

variable	Low Income			High Income		
	(1)	(2)	(3)	(4)	(5)	(6)
Internet usage frequency	0.402***			0.076		
	(3.33)			(1.24)		
Internet dependence		0.093			0.059	
		(1.07)			(1.10)	
Scope of internet use			0.150*			0.190***
			(1.74)			(2.98)
control variable			Yes			
N	357	357	357	565	565	565

4.5.3. People with low educational level

Based on the education level of farmers, the data are divided into low-educated people and high-educated people with junior high school education as the dividing point, and the regression results are shown in Table 7. As far as the frequency of internet use is concerned, it only helps to improve the entrepreneurial probability of rural people with low education, but has no significant impact on rural people with high education. As far as the scope of Internet use is concerned, the impact on entrepreneurship of rural people with high education is more significant than 0.05, and it is considered that the impact on entrepreneurship of rural people with high education is not obvious; It has a significant positive impact on the entrepreneurship of rural people with low academic qualifications. Therefore, for people with low academic qualifications in rural areas, both the frequency and scope of Internet use reflect the inclusiveness of Internet entrepreneurship.

Table 7. Analysis of the Impact of Internet Application on Entrepreneurship of Farmers with Different Education.

variable	Low education			High education		
	(1)	(2)	(3)	(4)	(5)	(6)
Internet usage frequency	0.176***			0.045		
	(3.01)			(0.41)		
Internet dependence		0.051			0.132	
		(0.92)			(1.64)	
Scope of internet use			0.161***			0.232*
			(3.02)			(1.79)
Control variable			Yes			
N	595	595	595	327	327	327

4.5.4. Sick people

According to the questions about farmers' health in the questionnaire, the farmers who answered very unhealthy questions were divided into sick people and the rest were healthy people. The regression results are shown in Table 8. As far as the frequency of internet use is concerned, it has a

significant impact on the entrepreneurship of rural sick people and healthy people, but from the perspective of marginal effect, the frequency of internet use has a greater impact on the entrepreneurship of rural sick people. Internet dependence only has a significant positive impact on the entrepreneurship of the sick people. The frequency of Internet use and the degree of dependence reflect the inclusiveness of Internet entrepreneurship. However, the scope of interconnection only has a significant impact on the entrepreneurship of rural healthy people. The possible reason is that the conventional entrepreneurial employment channels have many barriers to the sick people, while the Internet has great inclusiveness, convenient operation, breakthrough in time and space constraints, and low cost to alleviate the entrepreneurial dilemma of the sick people. However, due to the limitation of previous experience and cultural knowledge, the rural sick people do not fully understand many application functions of the Internet, so it is necessary to further strengthen the frequency of Internet application and explore the application functions of the Internet. It is also possible that the sick people in rural areas have less social capital, which leads to less functions applied to the Internet. Therefore, compared with the healthy people in rural areas, the scope of Internet use can not affect the entrepreneurship of the sick people.

Table 8. Analysis of the Impact of Internet Application on Entrepreneurship of People with Different Health Levels.

variable	Sick			Health		
	(1)	(2)	(3)	(4)	(5)	(6)
Internet usage frequency	0.376**			0.132**		
	(2.08)			(2.45)		
Internet dependence		0.327**			0.052	
		(2.12)			(1.11)	
Scope of internet use			0.274			0.165***
			(1.56)			(3.21)
Control variable			Yes			
N	102	102	102	816	816	816

There are too few samples of rural elderly in the survey (only 35 samples), so it is impossible to explore which way of Internet use has achieved inclusive entrepreneurship. However, according to the impact of Internet application on the entrepreneurship of vulnerable groups, it is likely that the frequency of Internet use has a greater impact on the entrepreneurship of rural elderly, and the scope of Internet use has no significant impact or a very small impact.

According to the analysis of entrepreneurship of rural vulnerable groups in different internet applications, it is found that the frequency of internet use can promote rural women, low-income, low-educated and sick people to start businesses, but the promotion effect is weak or even absent for rural men, high-income, highly educated and healthy people; On the other hand, the scope of Internet use can better promote rural men, high-income and healthy people to start businesses. The degree of internet dependence has no significant relationship with most groups' entrepreneurship, but only promotes rural sick people and men. This paper holds that the Internet brings inclusive entrepreneurship, which brings more entrepreneurial possibilities to rural residents, and these possibilities are obtained and transformed by farmers' use of the Internet. In fact, the frequency of Internet use to the range of Internet use is a measure of the process from simple operation to in-depth use of the Internet by individuals. The basic operation of the Internet is simple. You can browse information, contact friends, watch short videos and live broadcasts when you open the app, which is very impactful for the weaker vulnerable groups such as human capital, social capital and material capital. Vulnerable groups can continuously absorb these resources by increasing the frequency of use, thus promoting entrepreneurship. Compared with the disadvantaged groups, other farmers have quickly mastered more Internet skills by relying on previous experience and knowledge level, and can use the Internet to search valuable information and improve consumer stickiness. Therefore, the empirical results show that the scope of Internet use is better for other groups to promote entrepreneurship. This also proves that the use of the Internet will lead to the emergence of the digital divide in rural areas. If the disadvantaged groups only stay at the level of knowing how to use the Internet and do not develop other functions of the Internet, the promotion effect obtained at the beginning will be weakened until it is gone, while the mainstream groups will keep up with the new functions of the Internet and increase the promotion effect, thus widening the inequality of entrepreneurial opportunities between men and women, different educational backgrounds, incomes and different health levels.

5. Conclusions and Suggestions

With the continuous sinking of Internet resources into rural areas, it has brought greater resource sharing to farmers, greatly improved the availability and convenience of resources for vulnerable groups, and deeply stimulated the entrepreneurial employment potential of relatively poor people, which has an important role in consolidating and expanding the achievements of poverty alleviation. In this paper, we use the data of China Comprehensive Social Survey (CGSS2017), which is representative of the whole country, to build an empirical framework and analyze the inclusiveness of Internet development to farmers' entrepreneurship. The findings are as follows: firstly, Internet application is helpful to promote individual entrepreneurship, and it is more effective to promote rural residents' entrepreneurship. Therefore, the development of Internet is helpful to realize the equalization of entrepreneurial opportunities in urban and

rural areas of China. Second, compare the impact of three applications, namely, the frequency of internet use, the degree of internet dependence and the scope of internet use, on the entrepreneurship of rural vulnerable groups. The frequency of internet use has a greater promotion effect on rural women, low income, low education and sick people's entrepreneurship; However, the scope of internet use has a greater promotion effect on rural men, high-income and healthy people to start businesses; The degree of internet dependence is only more obvious for rural men and sick people to promote entrepreneurship. It is proved that under the background of inclusive entrepreneurship based on the Internet, different skills of using the Internet will lead to a "mathematical gap" in rural areas and widen the inequality of entrepreneurial opportunities between vulnerable groups and mainstream groups.

Based on the above research conclusions, in order to further deepen the inclusiveness of the Internet to farmers' entrepreneurship, the following suggestions are put forward:

First, improve the Internet usage rate in rural areas. Increase investment in the Internet in remote rural areas, accelerate the construction of Internet infrastructure in remote rural areas, open up the "last mile" of fiber-optic broadband, and achieve full coverage of 4G and fiber-optic networks in rural areas. Taking the "Broadband China" project as an opportunity, we will jointly implement rural network speed-up and fee-reduction, improve the quality of network coverage in natural villages, and implement preferential activities such as free broadband speed-up and mobile phone traffic charges for poor special families to improve the Internet usage rate in remote rural areas. On the other hand, for farmers who have no financial ability to buy computers and other hardware facilities, the government should appropriately improve the capacity of township or village information service stations and improve the ownership rate of network equipment for farmers in remote areas.

Second, popularize information technology education and strengthen the internet operation ability of rural vulnerable groups. The government should make full use of social education resources such as universities and trade associations, actively carry out Internet-related operation training, focus on strengthening the theoretical understanding and practical operation ability of rural vulnerable groups on the Internet, organize Internet skill competitions, reward outstanding people and stimulate their learning motivation. Actively publicize the knowledge related to Internet application, and encourage farmers to take a ride in "internet plus" to lead a "smart life".

Third, improve the Internet standard system and create a good cyberspace. Farmers' residents' cognitive ability and discrimination ability are not strong, and their ability to resist risks is poor. However, network information is anonymous, which is easy to cause them to be hurt or become the disseminator of rumors. The government has further improved the network supervision system, strengthened information security supervision, optimized and purified the network environment, and provided a safe network environment for residents in rural areas.

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