

# Study on the Effect of Education on Poverty Alleviation of Rural Inclusive Finance

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**Abstract:** For a long time, there has been an imbalance in rural credit supply in China. Meanwhile, due to the limited education level in rural areas, peasant households have a strong resistance to the financial industry, which restricts the development of inclusive finance. This paper argues that the average educational year in rural areas will affect the development of rural inclusive finance from the aspects of learning ability of financial knowledge, acceptance capability of financial products, the demand preference of inclusive finance and the repayment ability of credit finance. Based on a fixed effect model, the empirical studies in this paper shows that the average educational year in rural areas have a significant effect on promoting rural inclusive finance, and this effect may have non-linear effects of increasing marginal effects. After comparing the sub-samples of the eastern, central and western regions in China, it is found that the impact of average educational year in western rural region on rural inclusive finance is the strongest, followed by the eastern region, and not significantly in the central region. Combining with the empirical conclusion, this paper puts forward some suggestions on rural financial education and rural inclusive finance, in order to provide ideas for the development of rural inclusive finance in China.

## 1. Introduction

Since the 19th National Congress of the Communist Party of China, tasks related to the “issues relating to agriculture, rural areas, and rural people” and “rural poverty alleviation” have been further emphasized, which has made the rural economy become the major work of the government. More and more poverty-alleviation models have been developed, with the proportion of out-of-poverty rural households gradually increasing. As a saying goes, "it is better than to teach a man to fish than give him a fish ". Financial poverty alleviation has become an indispensable link in rural poverty alleviation, because financial services are the core force for optimizing rural entrepreneurship links, market transaction costs and rural income growth, which has created more plentiful and more affordable financial services for peasant households. However, the rural credit supply is still imbalanced in China. What's worse, peasant households have a strong resistance to the financial industry due to the information isolation, backwardness of economy, low income and limited education level in rural areas, which restricts the development of inclusive finance. In fact, the level of education determines the individual financial cognitive ability, while the financial cognitive ability determines people's willingness to accept the financial market and affects the poverty alleviation effect of inclusive finance. Therefore, this paper adopts the provincial panel data of 31 provinces and regions in China to investigate the impact of the average number of years of education of rural residents on the development level of rural inclusive finance, so as to put forward development suggestions for rural inclusive finance according to the empirical conclusion.

## 2. Literature Review

### 2.1 Research on the development of inclusive finance

Demirguc-Kunt and Klapper (2012) analyzed the definition of modern inclusive finance. They believe that inclusive finance is not only inclusive loans, but also should include insurance, settlement

and financial management, etc.. Jukan and BabajicA (2017) also believe that inclusive finance includes both aspects of savings and loans. Chakravarty and Pal (2010) proposed a set of inclusive finance development indicators, including loan size, deposit interest rate, number of people, low-income insurance and other factors. Zhang Danjun (2016) believes that it is necessary to vigorously develop rural inclusive finance, involving all financial elements that enhance rural productivity, due to the serious imbalance in the allocation of financial resources in China, especially the lack of financial supply in rural areas. Qiao Luping and Liu Li (2018) believe that the development of inclusive finance is closely related to financial coverage, availability and use, and have put forward a evaluation system of inclusive finance. Jiang Qingzheng (2019) took the use of rural online banking as an evaluation index of inclusive finance.

## **2.2 Research on the impact factors of inclusive finance**

Khaki and Sangmi (2017) studied the influencing factors of the level of inclusive finance development. They believe that support policies from the state are the main factor in its development process, especially financial support that can eliminate the problem of rural financial exclusion. Diniz et al. (2012) used a case study to conclude that information technology can promote the development of inclusive finance because technology can lower the threshold of financial services and eliminate financial transaction costs in remote areas. Evans and Adeoe (2016) researched on Africa and believe that the development of Internet has promoted the development of inclusive finance.

Chinese scholars have reached similar conclusions as well. Li Yunna and Wu Wenting (2018) used empirical research and found that the development of Internet finance can reduce the difficulties in developing rural inclusive finance, which allows to provide credit for rural residents with more affordable prices since the service cost can be reduced accordingly. Yao Fengge et al. (2020) adopted empirical research to find that the education level of residents can provide support for inclusive finance.

## **2.3 Research on the impact of rural financial education on financial development**

Wu Weixing et al. (2018) used the CFPS data of Southwestern University of Finance and Economics and found that the stronger the residents' awareness of finance, the more likely they are to adopt debt behavior and prevent excessive debt behavior. Song Quanyun et al. (2017) found that the stronger the residents' financial awareness, the more likely they are to seek formal loans from commercial banks and the easier it is to obtain inclusive financial services. Yin Zhichao et al. (2014) concluded that rural residents who have more financial knowledge will increase the proportion of risky assets held. The research by Yin Zhichao et al. (2015) found that the higher the level of residents' financial knowledge, the greater the promotion of participation in the financial market and the development of the regional financial industry. Cao Yuan and Luo Jianchao (2019) used empirical research to find that financial literacy can provide more financing support for entrepreneurial activities of peasant households. Wang Zhong et al. (2020) used a survey research and empirical analysis to find that the higher the level of financial cognition of rural residents, the greater the satisfaction of rural housing mortgage loans.

## **2.4 Brief summary**

According to previous research findings, the uniformity in the definition of inclusive finance is inadequate among scholars, which also shows that the focus of the definition of inclusive finance is different based on different research perspectives. From the perspective of research, most scholars examine the factors affecting the development of inclusive finance in rural areas in terms of macroeconomics, fiscal policy and financial industry development. Few scholars conduct research from rural areas, but very few scholars examine individual factors in rural areas. Regarding the educational factors of rural residents, most scholars use financial cognitive ability, financial literacy level, and financial knowledge level to examine the individual factors of rural residents, but they have not yet examined the impact of average educational years on the development of inclusive finance. No scholars have studied the non-linear effect of them. In this paper, an innovative points will be adopted based on the linear and non-linear coefficients of the impact of rural residents' average

educational years and the level of rural inclusive finance development, improving the practical significance of the empirical conclusions.

### **3. The Mechanism of the Influence of Rural Residents' Average Educational Years on the Development of Inclusive Finance**

#### **3.1 Learning ability of financial knowledge**

With longer average educational years, rural residents have better learning ability of financial knowledge, which can help peasant households' financial decision-makers to understand financial products and to integrate more financial knowledge into the operation and production, and can help improve their financial needs. First, if there is a shortage of funds in the process of production and operation, peasant households with longer educational years will immediately think of credit financing channels, instead of excluding it. Second, when a demand for credit is formed, peasant households with longer years of education will collect and process credit information with less time and energy, reducing resistance to applying for inclusive finance credit. Last, the longer of average educational years, the better cognitive ability of rural residents on the credit process of inclusive financial, by which they can better understand whether they meet the criteria for applying a loan from inclusive finance, and can choose the mortgage and credit measurement with highest pass rate and reduce the credit cost for the development of inclusive finance.

#### **3.2 Acceptance capacity of financial products**

In addition, peasant households with longer years of education have a stronger ability to accept innovative things, which brings convenience to the promotion of new inclusive finance. First, they can spend more time to collect relevant information about financial products, and then further compare inclusive financial products of different banks, better understand the functional value of new products, and create the market environment for inclusive financial innovation in rural areas. Second, peasant households will be able to flexibly compare the different characteristics of inclusive credit, use the optimal application structure, optimize cost and income, and plan the cycle and frequency of applications.

#### **3.3 Demand preference of inclusive finance**

In recent years, with the rapid development of Internet finance, there are various kinds of credit finance business based on Internet finance in the financial markets. The most well-known business is the online petty loan. Alipay uses Huabei and Jiebei to provide petty loans to peasant households with confusing credit resources. However, these financial information exceeds their cognitive threshold, which distracts peasant households' attention from inclusive finance, and lead them to financing channel deviation. If the average educational years are longer, it is more possible for rural residents to understand correctly the value of inclusive finance of banks and improve peasant households' financing preference for formal financial channels.

#### **3.4 Repayment capability of credit finance**

If the peasant households in a region have longer average educational years, they will more agree with the general trend of national construction of a "credit society", and care about the construction of their own credit status. Generally speaking, inclusive financial institutions will not only lower the threshold of peasant households credit business, but also will control credit risk, which makes the region with good credit status become the "golden zone" of inclusive financial development, promoting credit success rate, improving the matching of loan and lending conditions, promoting peasant households repayment ability, reducing the credit risk of financial institutions, and creating a good environment for local inclusive finance. In addition, the good repayment ability of the better educated peasant households will further improve the credit granting scale of financial institutions and the supply of inclusive finance in rural areas.

## 4. Analysis on the Current Status of the Average Educational Years and Financial Development in Rural Area

### 4.1 The current average education years of rural residents

#### 4.1.1 Scale data

The following table presents data on the average number of years of education of rural residents across the country from 2009 to 2019. It can be found that the majority of rural residents in China have been educated in primary school and junior middle school. In 2019, there were 188 million people with high school education and 152 million people with primary education. In terms of historical trends, the population with a college degree and above has been increasing. In 2019, it reached 152 million, an increase of 130.12% compared to 2009. The number of primary and middle school education populations has fallen by 36.42% and 26.00% respectively compared with 2009. The population of these who never been to school fell from 649 million to 359 million, a decrease of 44.61%. This also shows that the average number of years of education for rural residents in China is increasing year by year, and higher education has deepened its penetration in rural areas.

Table 1: Years of education per capita of rural residents in China from 2009 to 2019 (1000 people)

Year	Population of 6 years old and below	Never been to school	Primary school	Middle school	High school	College degree or above
2009	612571	64872	239494	253969	47603	6634
2010	594974	58815	228519	252248	48366	7027
2011	573720	54523	214181	249218	47409	8390
2012	609709	44175	232068	273812	47100	12553
2013	509368	41636	184643	228809	42727	11554
2014	485450	38322	174538	218674	42986	10929
2015	471470	35229	168473	212191	44272	11305
2016	462521	37734	162090	205349	45700	11650
2017	466143	44929	156279	206225	46437	13097
2018	457552	40296	158770	196739	47539	14207
2019	439903	35934	152252	187939	48514	15266

Source: "China Population and Employment Statistical Yearbook"

Furthermore, from the perspective of the proportion of various academic qualifications, the proportion of college education in the rural population increased from 0.54% to 1.74%, a relatively significant increase. In 2019, the proportions of high school and middle school were 5.51% and 21.36%, which further confirmed the situation of increased years of education per capita in rural areas.

Table 2: The proportion of years of education per capita of rural residents in China from 2009 to 2019

Year	Population of 6 years old and below	Never been to school	Primary school	Middle school	High school	College degree or above
2009	50.00%	5.30%	19.55%	20.73%	3.89%	0.54%
2010	50.00%	4.94%	19.20%	21.20%	4.06%	0.59%
2011	50.00%	4.75%	18.67%	21.72%	4.13%	0.73%
2012	50.00%	3.62%	19.03%	22.45%	3.86%	1.03%
2013	50.00%	4.09%	18.12%	22.46%	4.19%	1.13%
2014	50.00%	3.95%	17.98%	22.52%	4.43%	1.13%
2015	50.00%	3.74%	17.87%	22.50%	4.70%	1.20%
2016	50.00%	4.08%	17.52%	22.20%	4.94%	1.26%
2017	49.96%	4.81%	16.75%	22.10%	4.98%	1.40%
2018	50.00%	4.40%	17.35%	21.50%	5.19%	1.55%
2019	50.00%	4.08%	17.31%	21.36%	5.51%	1.74%

Source: "China Population and Employment Statistical Yearbook"

#### 4.1.2 Structured data

By analyzing the average years of education of rural residents in different provinces of China in

2019, it can be found that there are more highly educated populations in rural areas of Jiangsu Province, reaching 1,262 people, accounting for 8.27% of the total, followed by Sichuan Province and Guangdong Province. On the whole, the rural labor force is the common majority in the second-tier economic development areas, while there are smaller highly educated population in the rural areas of Shanghai City, Tianjin City, and Beijing City. In Ningxia, Qinghai, and Tibet, there are even less people with high education, ranking at the bottom. This may be because the highly educated population in the developed regions is concentrated in the service industry, while the rural population in the underdeveloped regions is relatively low.

Table 3: Education years of per capita of rural residents in different provinces in China in 2019

Area	Population of 6 years old and below	Never been to school	Primary school	Middle school	High school	College degree or above
Nationwide (China)	439903	35934	152252	187939	48514	15266
Beijing	2290	85	387	998	499	322
Tianjin	2098	125	519	1073	257	124
Hebei	26117	1515	7658	13447	2806	692
Shanxi	12420	429	3015	6570	1812	594
Inner Mongolia	7659	777	2598	3050	912	320
Liaoning	11437	436	3726	5831	1147	296
Jilin	9429	602	3272	4763	602	191
Heilongjiang	12513	636	4452	6451	729	245
Shanghai	2424	169	572	1216	343	125
Jiangsu	19797	2113	5724	8134	2564	1262
Zhejiang	14404	1302	5121	5279	1833	868
Anhui	22077	2375	7688	9319	1971	725
Fujian	10416	991	4119	3945	946	417
Jiangxi	16103	1027	6096	6501	1942	537
Shandong	30597	2758	9752	14012	3237	836
Henan	36462	2565	11075	17942	3996	885
Hubei	18461	1665	6528	7682	2019	566
Hunan	23946	1214	7744	9902	4280	806
Guangdong	25648	1521	8077	10843	4299	908
Guangxi	18782	974	6600	9061	1776	371
Hainan	2980	168	736	1538	338	200
Chongqing	8633	548	4159	2913	777	236
Sichuan	31992	3361	13418	11295	2906	1012
Guizhou	14728	1962	5919	5066	1268	513
Yunnan	19663	2122	8743	6736	1510	553
Xizang	1727	670	660	283	64	49
Shaanxi	12852	1198	3993	5728	1425	507
Gansu	10864	1550	4474	3290	992	557
Qinghai	2131	307	1042	548	153	82
Ningxia	2202	283	823	814	196	85
Xinjiang	9051	489	3561	3711	915	377

Source: "China Population and Employment Statistical Yearbook"

It is further found in the following table that there are also major differences in the structure of

rural residents in different provinces. It can be found that the proportion of rural highly-educated population in Beijing City, Hainan Province, Zhejiang Province, Jiangsu Province and Gansu Province is higher. The main reason for this result lies in different local rural cultures.

Table 4: Structure of average educational years of rural residents in different areas of China from 2009 to 2019

Area	Population of 6 years old and below	Never been to school	Primary school	Middle school	High school	College degree or above
Beijing	49.99%	1.86%	8.45%	21.79%	10.89%	7.03%
Tianjin	50.00%	2.98%	12.37%	25.57%	6.12%	2.96%
Hebei	50.00%	2.90%	14.66%	25.74%	5.37%	1.32%
Shanxi	50.00%	1.73%	12.14%	26.45%	7.29%	2.39%
Inner Mongolia	50.01%	5.07%	16.96%	19.91%	5.95%	2.09%
Liaoning	50.00%	1.91%	16.29%	25.49%	5.01%	1.29%
Jilin	50.00%	3.19%	17.35%	25.26%	3.19%	1.01%
Heilongjiang	50.00%	2.54%	17.79%	25.78%	2.91%	0.98%
Shanghai	49.99%	3.49%	11.80%	25.08%	7.07%	2.58%
Jiangsu	50.00%	5.34%	14.46%	20.54%	6.48%	3.19%
Zhejiang	50.00%	4.52%	17.78%	18.33%	6.36%	3.01%
Anhui	50.00%	5.38%	17.41%	21.11%	4.46%	1.64%
Fujian	50.00%	4.76%	19.77%	18.94%	4.54%	2.00%
Jiangxi	50.00%	3.19%	18.93%	20.19%	6.03%	1.67%
Shandong	50.00%	4.51%	15.94%	22.90%	5.29%	1.37%
Henan	50.00%	3.52%	15.19%	24.60%	5.48%	1.21%
Hubei	50.00%	4.51%	17.68%	20.81%	5.47%	1.53%
Hunan	50.00%	2.53%	16.17%	20.68%	8.94%	1.68%
Guangdong	50.00%	2.97%	15.75%	21.14%	8.38%	1.77%
Guangxi	50.00%	2.59%	17.57%	24.12%	4.73%	0.99%
Hainan	50.00%	2.82%	12.35%	25.81%	5.67%	3.36%
Chongqing	50.00%	3.17%	24.09%	16.87%	4.50%	1.37%
Sichuan	50.00%	5.25%	20.97%	17.65%	4.54%	1.58%
Guizhou	50.00%	6.66%	20.09%	17.20%	4.30%	1.74%
Yunnan	50.00%	5.40%	22.23%	17.13%	3.84%	1.41%
Xizang	50.01%	19.40%	19.11%	8.20%	1.85%	1.42%
Shaanxi	50.00%	4.66%	15.54%	22.29%	5.54%	1.97%
Gansu	50.00%	7.13%	20.59%	15.14%	4.57%	2.56%
Qinghai	49.99%	7.20%	24.44%	12.85%	3.59%	1.92%
Ningxia	50.01%	6.43%	18.69%	18.49%	4.45%	1.93%
Xinjiang	49.99%	2.70%	19.67%	20.50%	5.05%	2.08%

Source: "China Population and Employment Statistical Yearbook"

#### 4.1.3 Calculation of average educational years of rural residents

For the rural population of each province, the number of those who have not attended school, primary school, middle school, high school, college and above are counted as having received 1, 6, 9, 12, and 16 years of education, respectively. According to the population weight of each educational background, the results of the following table are obtained, that is, the average number of years of education of the rural residents. It can be found from the table that the average number of years of education per person in rural areas in various provinces, municipalities and regions in China is increasing year by year, with the largest increase in Beijing City, Hainan Province and Yunnan

Province. In addition, in 2019, rural residents in Beijing, Hainan Province, Shanxi Province, Tianjin City, Shanghai City, Hebei Province, Hunan Province, Henan Province and other places have had more than 8 years of education per capita. The rural population in Beijing has even more middle school education and above. This shows that the educational resources in the eastern region are very substantial, but the education years in the central and western rural regions are relatively low.

Table 5: Estimated number of years of education per capita of rural residents

Area	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	increase
Beijing	8.71	8.69	8.80	9.19	9.05	9.44	8.99	9.35	9.47	9.48	9.84	1.13
Tianjin	7.86	8.06	8.17	8.16	8.12	8.18	8.38	8.44	8.41	8.44	8.56	0.7
Hebei	7.78	7.97	7.90	8.06	8.10	8.23	8.10	8.16	8.07	7.95	8.16	0.38
Shanxi	7.93	8.06	8.11	8.27	8.17	8.31	8.34	8.32	8.52	8.60	8.77	0.84
Inner Mongolia	7.28	7.33	7.47	7.78	7.82	8.03	7.93	7.70	7.81	7.89	7.82	0.54
Liaoning	7.66	7.64	7.79	7.92	7.88	7.81	8.04	8.03	8.08	8.06	8.20	0.54
Jilin	7.52	7.63	7.71	7.92	7.87	8.01	7.91	7.82	7.91	7.97	7.78	0.26
Heilongjiang	7.64	7.66	7.64	7.85	7.81	7.71	7.99	7.91	7.85	7.72	7.84	0.2
Shanghai	7.76	7.93	8.03	8.22	8.33	8.81	7.34	8.18	8.36	8.71	8.52	0.76
Jiangsu	7.51	7.71	7.76	7.97	7.92	7.95	8.21	8.01	8.13	8.13	8.11	0.6
Zhejiang	7.10	7.19	7.26	7.47	7.41	7.75	7.83	7.70	7.81	7.75	8.01	0.91
Anhui	6.72	6.87	6.99	7.23	7.35	7.33	7.52	7.68	7.72	7.61	7.59	0.87
Fujian	6.92	6.98	7.61	7.82	7.73	7.75	7.65	7.57	7.65	7.38	7.61	0.69
Jiangxi	7.58	7.44	7.70	7.73	7.93	7.96	8.22	8.01	7.87	7.81	7.95	0.37
Shandong	7.52	7.59	7.63	7.70	7.66	7.80	7.82	7.96	7.77	7.88	7.83	0.31
Henan	7.76	7.84	7.88	7.89	7.88	7.88	7.95	8.02	7.95	7.85	8.02	0.26
Hubei	7.35	7.42	7.47	7.88	7.82	7.89	7.92	7.79	7.85	7.83	7.76	0.41
Hunan	7.60	7.66	7.74	8.05	7.97	7.91	8.20	8.25	8.23	8.30	8.40	0.8
Guangdong	7.66	7.75	7.88	7.98	8.08	8.07	8.05	7.93	8.29	8.14	8.33	0.67
Guangxi	7.44	7.47	7.50	7.60	7.67	7.56	7.65	7.71	7.66	7.85	7.95	0.51
Hainan	7.52	7.52	7.65	7.94	7.87	8.10	8.27	8.14	8.30	8.19	8.62	1.1
Chongqing	6.98	7.07	7.25	7.19	7.14	7.11	7.22	7.20	7.40	7.54	7.51	0.53
Sichuan	6.78	6.86	6.94	7.18	7.39	7.32	7.07	7.11	7.26	7.21	7.40	0.62
Guizhou	6.31	6.58	6.64	6.64	6.56	6.69	6.97	6.90	6.92	6.92	7.23	0.92
Yunnan	6.17	6.36	6.38	6.80	6.75	6.79	6.98	6.94	7.00	7.02	7.23	1.06
Xizang	4.71	4.94	4.74	4.73	5.11	4.85	4.51	4.30	4.88	4.91	5.05	0.34
Shaanxi	7.45	7.53	7.69	7.99	8.05	8.03	8.27	8.20	8.19	8.16	7.93	0.48
Gansu	6.43	6.52	6.61	6.94	7.16	7.41	7.27	7.23	7.14	7.31	7.26	0.83
Qinghai	5.95	6.16	6.17	6.25	6.33	6.23	6.45	6.47	6.12	6.58	6.87	0.92
Ningxia	6.74	7.07	7.11	7.26	7.42	7.31	7.34	7.33	7.32	7.53	7.38	0.64
Xinjiang	7.65	7.66	7.79	7.86	7.66	7.72	7.98	8.06	7.98	7.85	7.98	0.33

Source: "China Population and Employment Statistical Yearbook"

## 4.2 The development status of rural credit

### 4.2.1 Scale analysis

The following table shows the scale data of agriculture-related loans from 2002 to 2019. It can be found that China's agriculture-related loans have maintained a rapid growth rate in the past 18 years. In 2019, agriculture-related loans reached 3,0954.699 billion yuan, up to a year-on-year growth of 9.64%. Through the data, it can be seen that 2003-2015 is a period of rapid growth of agriculture-related loans, especially in 2011 when the year-on-year growth reached 416.52%. It may be because of the implementation of the "four-trillion strong stimulation" plan in China in order to get out of the financial crisis, which put forward the inclusive financial concept, guided commercial banks to develop and provide diversified inclusive credit, inspired a large number of commercial banks to provide loans for peasant households.

Table 6: Development scale of agriculture-related loans

Year	Agriculture-related loans (RMB 100 million yuan)	Year-on-year Growth
2002	4889	/
2003	5711.5	16.82%
2004	6884.58	20.54%
2005	8411.35	22.18%
2006	9843.11	17.02%
2007	11592.93	17.78%
2008	13208.19	13.93%
2009	15429	16.81%
2010	17629	14.26%
2011	91056.81	416.52%
2012	117657.54	29.21%
2013	145085	23.31%
2014	174020	19.94%
2015	208851.3	20.02%
2016	236002	13.00%
2017	263522	11.66%
2018	282335.67	7.14%
2019	309546.99	9.64%

Source: "China Financial Yearbook"

#### 4.2.2 Structure analysis

The following table shows the distribution of different loan types in China. It can be found that agriculture-related loans in Zhejiang Province and Jiangsu Province rank among the best, reaching 3257.294 billion yuan and 3107.976 billion yuan, respectively. In addition, Henan Province ranked first in agriculture, forestry, animal husbandry and fishery loans, reaching 331.954 billion yuan. The rural loans and peasant households loans in Zhejiang province reached 2990.188 billion yuan and 1108.219 billion yuan, respectively. In contrast, agriculture-related loans in Beijing City and Tianjin City are lower-ranking, and the scale of agriculture-related loans in remote areas such as Tibet, Qinghai, Ningxia, Hainan and Gansu is also relatively low. The reason may be related to the industrial structure of first-tier cities. It indicates that rural inclusive credit is concentrated in the development of second-tier cities.

Table 7: Distribution of the development scale of agriculture-related loans in 2019

Area	Agriculture, forestry, animal husbandry and fishery loans (100 million yuan)	Rural (county and below) loans (100 million yuan)	Peasant household loans (100 million yuan)	Agriculture-related loans (RMB 100 million yuan)
Beijing	463.6	686.58	29.74	1990
Tianjin	191.24	538.32	197.3	2358.62
Hebei	977.16	12771.93	4045.08	14196.12
Shanxi	954.54	8182.15	1777.77	9752.67
Inner Mongolia	2043.08	6700.46	1809.21	8363.03
Liaoning	1645.01	5928.16	1382.98	7738.59
Jilin	834.53	4949.73	650.51	6039.3
Heilongjiang	1410.34	5975.9	1165.45	8518.26
Shanghai	143.35	628.01	192.49	1838.08
Jiangsu	2114.37	27247.23	6035.58	31079.76
Zhejiang	1497.14	29901.88	11082.19	32572.94
Anhui	903.66	8345.59	3777.07	11118.47
Fujian	1151.72	11339.77	3631.75	12586.67
Jiangxi	2359.44	8592.47	3908.26	10357.6
Shandong	1608.09	22481.81	4948.1	25819.4
Henan	3319.54	14311.38	4659.1	16656.64

Hubei	1368.99	7307.02	2441.85	10322.24
Hunan	1401.28	8932.1	4061	10386.69
Guangdong	856.57	8222.19	3645.7	10840.23
Guangxi	1861.85	5199.17	2623.64	7798.48
Hainan	272.58	932.34	221.42	1471.7
Chongqing	289.22	3557.89	1476.1	5071.34
Sichuan	1920.59	12664.76	4722.26	16047.56
Guizhou	1399.92	7610.66	2855.9	8747.1
Yunnan	1229.55	7010.46	2189.73	8996.48
Xizang	238.53	306.77	216.7	1177.36
Shaanxi	1199.75	5273.15	2359.88	6594.58
Gansu	2586.83	5387.66	2797.53	6692.56
Qinghai	184.47	1508.15	193.32	2255.34
Ningxia	453.83	1770.3	631.37	2160.04
Xinjiang	1765.3	6926.59	1289.93	7489.01

Source: "China Financial Yearbook"

### 4.3 The relationship between the average educational years and the development of inclusive finance in rural areas

Judging from the line chart, the college degree and scale of agriculture-related loans in China's rural areas showed the same direction of a steady growth from 2009-2019.

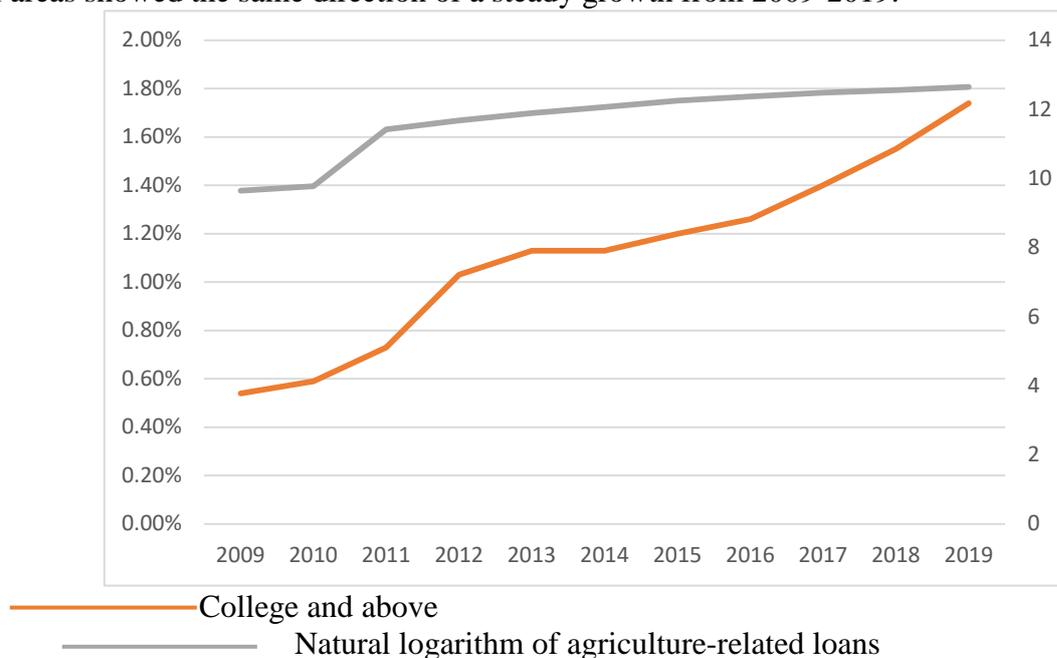


Figure 1: College degree or above and the scale of agriculture-related loans

Meanwhile, through the data of college degree or above and the scale of agriculture-related loans from different provinces, cities and regions, it can be found that the two groups of data showed a certain positive association in the scatter diagram calculations, indicating the existence of a positive effect.

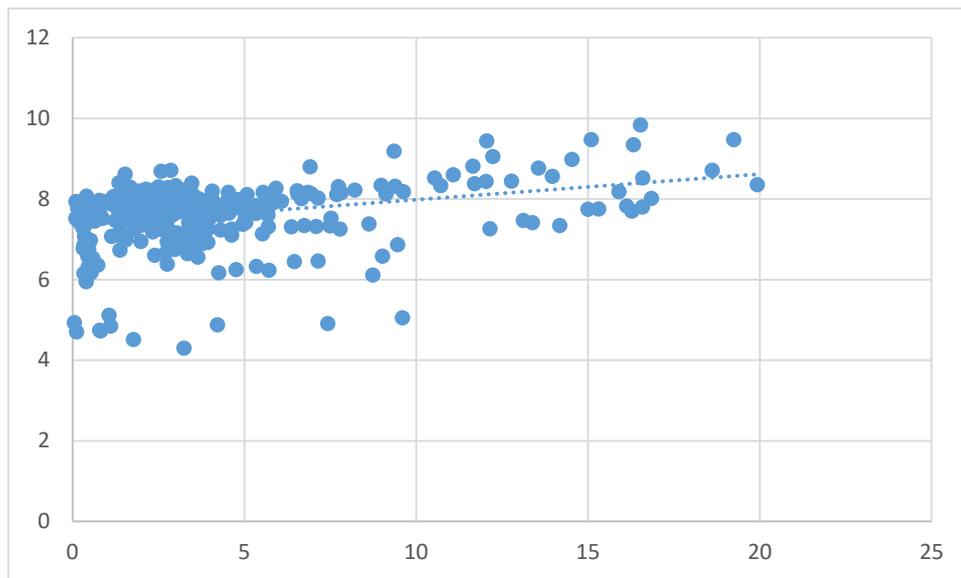


Figure 2: Scatter plot relationship

## 5. Conclusion and Suggestion

### 5.1 Research conclusion

From the perspective of rural education, this paper examines its quantitative impact on rural inclusive finance. Through review of previous literature, it is concluded that the average years of education in rural areas will affect the development of rural inclusive finance from four aspects, namely, the learning ability of financial knowledge, the acceptance capability of financial products, the demand preference for inclusive finance, and the repayment ability of credit finance. Through the analysis of the current status, it is found that the average educational years per capita in China's rural areas and the scale of agriculture-related loans have been increasing year by year. The average number of educational years per capita in rural areas in the east is larger than that in the central and western regions. The scale of agriculture-related loans in second-tier provinces and cities such as Zhejiang Province and Jiangsu Province is larger than that of the first-tier cities and lower-tier cities. There a certain degree of positive relevance between the average number of years of education in rural areas and the scale of agriculture-related loans.

### 5.2 Research suggestions

#### 5.2.1 Suggestions on financial education for rural residents

First of all, this paper finds that the average number of years of education in rural areas has a positive effect on rural inclusive finance, indicating that China should speed up the universalization of nine-year compulsory education nationwide, provide more financial subsidies for middle schools and primary schools, and increase the supply of educational facilities for rural residents. It is also necessary to encourage private capital to build Hope Primary Schools, to completely eliminate the proportion of the population with primary education and below, and to provide a good financial literacy environment for the promotion of inclusive credit. What's more, towns and villages are encouraged to build vocational colleges and higher education institutions with a financial background to further strengthen the popularization of financial knowledge in local higher human capital.

Secondly, the economic environment in rural areas is relatively closed and financial exclusion tends to hinder the willingness of inclusive credit to be accepted in rural areas. Therefore, local commercial banks should make targeted financial education plans to enter rural areas in a way that is close to the rural residents, e.g. conducting regular financial education lectures in conjunction with local village committees, agricultural trade associations, and agricultural business organizations, using posters, lectures, self-media, road shows, financial competitions, etc., to arouse the interest of local rural residents, and popularizing the knowledge that inclusive credit are conducive to the

"agriculture, rural areas and rural residents". At the same time, the rural government should also develop in-depth cooperation with village and township banks. The government can organize bank personnel to provide consulting services for local rural residents and co-organizes recognition activities for inclusive finance characters with the party branch of the village and township bank to establish a model figure of inclusive financial knowledge.

### 5.2.2 Suggestions for the development of inclusive finance in rural areas

First, rural inclusive financial products should focus on targeted poverty alleviation, respond to the national call for inclusive finance, and launch some inclusive credit products that are easy for customers to understand and accept based on the characteristics of the learning ability of people in rural areas. It is not appropriate to launch Internet financial inclusive credit products too early since the mobile Internet penetration rate in rural areas has not yet reached the urban level. Instead, it should be based on the average years of education in rural areas, and gradually progress in market acceptance with a moderate speed of introducing smart financial formats.

Second, the reason why the average educational years can't make significant improvement in the development of inclusive finance scale in central China may be that the market acceptance of inclusive financial products in the local rural areas is not high. It requires the local government to pay attention to the development situation of rural entrepreneurship, to investigate the views of local rural residents on the existing inclusive financial services, and to urge the optimization of inclusive financial services of rural commercial banks in a targeted manner, or to establish a long-term mechanism to coordinate development of agricultural production and inclusive finance, ensuring the role of financial education in promoting inclusive finance.

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