Retraction

Retraction: Analysis of the Impact of the Internet on Farmers’ Intelligent Selection under the Era of Big Data and Cloud Computing (J. Phys.: Conf. Ser. 1982 012025)

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This article has been retracted by IOP Publishing following an allegation that raises concerns this article may have been created, manipulated, and/or sold by a commercial entity. In addition, IOP Publishing has seen no evidence that reliable peer review was conducted on this article, despite the clear standards expected of and communicated to conference organisers.

The authors of the article have been given opportunity to present evidence that they were the original and genuine creators of the work, however at the time of publication of this notice, IOP Publishing has not received any response. IOP Publishing has analysed the article and agrees there are enough indicators to cause serious doubts over the legitimacy of the work and agree this article should be retracted. The authors are encouraged to contact IOP Publishing Limited if they have any comments on this retraction.

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Analysis of the Impact of the Internet on Farmers' Intelligent Selection under the Era of Big Data and Cloud Computing

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Abstract. With the advent of the era of big data, many industries have become deeply integrated with Internet technologies. Farmers using the Internet for entrepreneurship can promote the reform of agricultural development, optimize the entrepreneurial mode of farmers, drive farmers to increase their income, and inject new strength into the construction of the new socialist countryside. By reviewing relevant literature and data, this paper reviews the development trend and opportunities of farmers' Internet entrepreneurship in the era of big data, analyzes the problems in the process of entrepreneurship and the corresponding solution strategies, in order to provide some reference value for the development of farmers' Internet entrepreneurship.

Keywords: big data, internet, farmer entrepreneurship, rural development

1. Preamble

In the context of "mass entrepreneurship and innovation", encouraging farmers to start their own businesses has become an important initiative to solve the "three rural problems" in China, and has attracted the attention of all sectors of society. The spread of Internet technology in rural areas is changing the disadvantages of farmers in the entrepreneurial process and driving a boom in farmer entrepreneurship. The 2015 Migrant Worker Detection Survey Report published by the National Bureau of Statistics shows that the self-employment rate of migrant workers in China reached 16.6% [1]. The majority of rural farmers' entrepreneurship is "survival" entrepreneurship, and the key elements of entrepreneurship, such as skills and capital, cannot be met, resulting in less than ideal results. Therefore, in the process of farmers' entrepreneurship needs to take advantage of a new entrepreneurial model in the context of the big data era - the Internet entrepreneurship model O2O (Online to Offline), which combines offline physical operations and the Internet to achieve rapid development of the new countryside. China has entered the era of agriculture 4.0 with information technology such as big data, cloud computing and the Internet of Things as the cornerstone, and Internet technology can provide more conditions and channels for farmers to start their own businesses and promote the development of the new socialist countryside.

2. Importance of promoting farmer entrepreneurship development

As a large agricultural country, the issue of rural development is of vital importance, and is closely related to economic development, social stability and national prosperity, and is a key point in the overall building of a moderately prosperous society. Promoting the entrepreneurial development of
farmers, building their homes and enabling them to lead a more affluent life can in turn ensure that all people share the fruits of socialist economic development and continuously promote the sustainable and healthy development of the national economy. With the continuous application of Internet technology and the modernization of agriculture, the change in the rural entrepreneurial environment and entrepreneurial philosophy has come with it. In the era of big data, the use of Internet technology to encourage farmers to start their own businesses can promote the structural reform of the agricultural supply side, revitalize the development of the countryside as well as increase the income of farmers, ensure that the majority of farmers live in peace and work happily, and lay a solid foundation for the long-term stability of the country.

3. Trends in farmer entrepreneurship in the era of big data

3.1. Continuous expansion of farmer entrepreneurs

In the past, the concept that entrepreneurs need to have high capital, strong ability, will operate and so on many factors, which will directly affect the determination and pace of farmers to start a business, so that few entrepreneurs. However, the "Internet+" era can lead to the expansion of the ranks of rural entrepreneurs, with more and more farmers entering the ranks of entrepreneurs, such as college students returning to their hometowns to start businesses, returning migrant workers and rural housewives. The Internet has lowered the threshold for rural entrepreneurship by giving farmers who lack the ability to sell, lack access to sales, or do not have the physical start-up capital the opportunity to start a business. For farmers who have agricultural business but lack the ability to operate, the Internet can provide them with market promotion and sales channels, eliminating the disadvantage of "the fragrance of wine is also afraid of the alley"; at the same time, it also reduces the link of intermediaries for sales, effectively improving the price difference between production and the sales terminal, and increasing the profit of farmers' business.

3.2. Upgrading the farmer entrepreneurship model

The era of big data is an era of global network interoperability, realizing the state of life of "the showman knows the world without going out", while the business model of rural entrepreneurs is also undergoing radical changes, gradually being optimized and upgraded. Using Internet technology, farmers' entrepreneurial model has shifted from a survival model to an embodied value model, from a closed model to an open entrepreneurial model. The upgrade of the entrepreneurial model is accompanied by a change in the way farmers communicate with the outside world. In the era of big data, people's ideas become more open and innovative, the previous sense of small farmer economy is gradually forgotten, and the embodiment of personal value becomes the development concept of farmers' entrepreneurship, allowing more farmers to broaden their horizons while solving their survival problems, transcending the boundaries of social relations and breaking the lower boundaries of the countryside. In addition, the Internet trading platform also provides farmers' entrepreneurs with more publicity media and means of communication, so that farmers are also aware of the mainstream direction of the development of the times and foresighted judgment to achieve the development of diversified entrepreneurial models.

3.3. Continuously broadening the channels for farmers' entrepreneurship

Farmers do not start their own businesses overnight, but require a variety of resources and channels, such as talent, technology, information and marketing methods. Generally speaking, the access to resources for farmer entrepreneurs is mainly through social networks, mainly geographical, relatives, hometown and friends. The resources they have are too homogeneous and limited to enable highly profitable development. However, the Internet can broaden the avenues for farmers to start more businesses. The era of big data provides farmers with vast data information, and various industry platforms provide farmers with access to capital and talent, allowing farmer entrepreneurs to access heterogeneous information resources from the Internet. Access to these entrepreneurial resources is
not only available in large quantities but also at a lower cost, which can lower the resource threshold for farmers' entrepreneurship. For example, financial insurance and crowdfunding have entered the countryside and can provide protection against financing and financial risks in the process of farmers' entrepreneurship. In terms of product sales, the Internet provides a broader platform, making transactions unrestricted by geographic location and providing after-sales services that greatly protect the interests of consumers and entrepreneurs.

4. Opportunities for farmers' entrepreneurship in the era of big data

4.1. Policy environment to safeguard farmers' entrepreneurship

In the process of promoting new rural development and transforming the agricultural development mode, the State has introduced a series of policies to promote farmers' use of the Internet for entrepreneurship. In the "Guiding Opinions on Promoting the Accelerated Development of Rural E-Commerce" issued by the General Office of the State Council in 2015, a series of policy measures to promote the development of rural entrepreneurs, such as strengthening policy support for rural e-commerce, encouraging and supporting innovative development, and vigorously training rural e-commerce talents, were proposed to promote agricultural upgrading, rural development, and farmers' income. Governments in various regions have also introduced relevant policies to encourage farmers' Internet entrepreneurship, to stimulate the passion of farmers' Internet entrepreneurship, and to provide protection for farmers in their entrepreneurship.

4.2. E-commerce platform provides important vehicle for farmers' entrepreneurship

The promotion of "Internet + agriculture" has set clear goals for the development of rural e-commerce and activates the potential of rural economic development. Nowadays, e-commerce is a pioneering and forward-looking industry that can reflect timely socio-economic development trends. In the development of the rural industry chain, the e-commerce platform is a very important link, and is an important carrier to drive the development of local special industries. Farmers place their experience in product development and brand building, while the e-commerce platform provides technical support in sales, information and channels, greatly increasing the success rate of their entrepreneurship. With the strong support of national policies, more and more e-commerce enterprises have entered the countryside, improving the construction of e-commerce platforms and providing the basic guarantee for rural areas to carry out Internet entrepreneurship. For example, Alibaba's "Taobao Village" and Jingdong Rural E-Commerce Ecology Center have enabled some local specialties of rural products to be sold around the world, driving the economic development of farmers.

The Internet penetration rate in urban and rural areas from 2014 to 2020 is shown in Table 1

| particular year | Internet penetration rate in urban areas | Internet penetration in rural areas |
|-----------------|-----------------------------------------|-----------------------------------|
| 2014            | 62.8%                                   | 28.8%                             |
| 2015            | 65.8%                                   | 31.6%                             |
| 2016            | 69.1%                                   | 33.1%                             |
| 2017            | 71.0%                                   | 35.4%                             |
| 2018            | 74.6%                                   | 38.4%                             |
| 2019            | 77.3%                                   | 42.8%                             |
| 2020            | 80.2%                                   | 46.2%                             |

4.3. Technological developments offer farmers more ways to trade in entrepreneurship

The development of Internet technology increases the feasibility of success for farmer entrepreneurs. The Internet provides more trading opportunities and lowers the threshold for starting a business for
farmers who have insufficient start-up capital, lack marketing capacity or have insufficient marketing channels. Using Internet technology, the farmer entrepreneur's market reach has expanded infinitely, and he or she can sell to anyone in any corner of the world. And this direct transaction with the consumer reduces the middleman's spread and lowers transaction costs, making it possible to maximize profits. In addition, farmers can look for partners to cooperate on the Internet to start a business, form a modern rural agricultural chain and expand their production transactions.

5. Analysis of the difficulties and countermeasures of farmers' Internet entrepreneurship

5.1. Improvement of the legal system related to e-commerce
The state has been encouraging farmers to start Internet businesses and has introduced a series of support policies, but the laws and regulations related to Internet entrepreneurship are relatively lacking, which makes farmers will face higher legal risks when starting a business. For example, the quality of agricultural products, before the delivery of buyers and sellers can determine the quality evaluation standards on the Internet, but after the receipt of goods and quality errors or grade distinction problems are difficult to accurately determine the responsibility; in the logistics and distribution process may also cause the loss of quality of goods, the related regulations and standards are relatively lacking; for the Internet financial regulation and the establishment of laws and regulations on network lending are deficient, farmers are vulnerable to higher risks in terms of business capital. In response to the imperfect legal and regulatory system and other aspects of the problem, the local government needs to implement the national policy step by step to improve the policy system of farmers' Internet entrepreneurship, such as, in the initial stage of entrepreneurship, the introduction of some small loans, angel investment and other policies to provide financial support for entrepreneurs; in addition, to strengthen the development of product quality standards system and after-sales quality issues of detailed evaluation index planning, and constantly optimize the rural e-commerce market order.

5.2. Construction of network infrastructure
The first requirement for Internet entrepreneurship is the construction of an informational marketplace. Nowadays, the demand for Internet in rural areas is increasing day by day, but its infrastructure is not well enough developed to meet the needs of farmers. Compared to urban areas, there is a large "digital divide" in rural areas, and a basic information market has not yet been established. Such as data sharing and interaction platform, innovation and entrepreneurship platform, market information APP, etc. There is no systematic construction; the construction of agricultural and commercial networks requires a sound communication system and logistics and distribution services, while some villages are without logistics and distribution points, which will directly affect the external sales of products. Therefore, the Internet construction in rural areas must increase the investment in infrastructure to achieve comprehensive coverage of rural broadband, and the government needs to introduce relevant subsidy policies to encourage more social forces to carry out rural Internet construction and promote the development of rural informatization. For logistics and distribution, there is a need to guide logistics companies into rural areas and to increase cold chain logistics technology to solve some agricultural logistics problems.

5.3. Professional capacity building for farmer entrepreneurs
Farmers need to be bold and innovative in the new era, and using the Internet to start a business requires three basic conditions: capital, technology and markets. In rural areas, people are not yet aware of and understand the Internet, and are not familiar with the concept of "Internet + entrepreneurship", so it is more difficult to promote Internet entrepreneurship. At the same time, most farmers are more conformist in their thinking, resisting new things and new ideas in the era of big data, and are not active in learning how to operate and trade on Internet platforms. In the process of starting a business, many farmers have little legal awareness and do not understand product quality
laws, consumer rights protection laws, contract laws, etc. thoroughly enough to get to the root of the problem. Therefore, with regard to the entrepreneurial qualities and capabilities of farmer Internet entrepreneurs, the government and regions need to provide professional training and guidance, strengthen the awareness and exploration of farmers' own capabilities and strengths, build entrepreneurship training systems, provide basic training (such as SYB entrepreneurship training), and carry out personalized entrepreneurship coaching. At the same time, there is a need for training in legal knowledge, marketing, business operation and management, and other professional knowledge to continuously improve farmers' own literacy and capabilities.

6. Concluding remarks
In the context of the big data era, the use of the Internet by farmers for entrepreneurship is an effective way to solve the problems of the "three rural areas" and a necessary way to promote the development of agricultural modernization. Above the road of rural development, Internet technology can provide very much help, whether it is the future development trend or development opportunities, the Internet will be the very platform. With the development of this new entrepreneurial model, farmers' earnings will become higher and higher, people's living standards will be greatly improved, and the pace of building a new socialist countryside will become faster and faster.

Acknowledgments
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