Research on the Implementation Path of Rural Revitalization Strategy Based on Computer Big Data and Industrial Revitalization

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Abstract. With the advancement of science and technology in modern society, big data has more and more profound impact on our lives, big data has played an unparalleled role in all areas of society. In the process of realizing China's rural revitalization and industrial development, it is bound to get great help by making full use of the advantages of big data in the digital age. Based on this purpose, this paper does a research on rural revitalization based on computer big data, the main research areas are e-commerce, smart agriculture and rural governance platform.

Keywords: Digital Economy, Big Data, Rural Revitalization

1. Introduction
Against the background of the global economic slowdown and sluggish growth, the digital economy has shown excellent results in enhancing total factor productivity and promoting the quality and efficiency of traditional industries, showing a trend of reverse economic growth, showing great vitality, and is generally considered to be a new source of global economic growth and a new lever leveraging economic progress. The progress of the economy has become a global consensus. The major developed countries have shown the common characteristics that the growth rate of the economy is higher than the growth rate of their domestic GDP during the same period. For example, the growth rates of the digital economy in the United States in 2016 were 6.8%, while the GDP growth rate during the same period was 1.6%, 0.9% and 2% the U.S. digital economy ranked first in the world in 2018, reaching 12.34 trillion US dollars, accounting for 60.2% of GDP[1]. The continuous evolution and comprehensive innovation of emerging technologies has accelerated the in-depth integration with various fields of the economy, driven the digital changing and upgrading of agriculture, industry and service industry, and triggered changes in the business form of related industries and fields and adjustment of the industrial structure.
The digital economy promotes changes in the entire society and generates more industry advantages. Data from the report shows that, China's digital economy in agriculture accounted for 7.3% of the industry's added value, an increase of 0.72 percentage points from its previous year, and the level of agricultural digitalization has increased year by year, showing great development potential. As the foundation and key production factor of the great progress in the digital industry, big data is an significant starting point for the digital economy to promote significantly operating efficiency and optimize economic layout. The integration of big data with other industries has spawned new formats and new models\cite{2}, which is an important embodiment of industrial transformation and upgrading driven by the digital economy. In the context of implementing long-term rural development plans,, deep integration of big data and rural revitalization will play a role as a "booster" of big data, promote the intelligentization of agricultural production, the efficiency of agricultural management, and the convenience of agricultural information, etc. Promoting the implementation of the rural revitalization strategy to provide a full range of strong support is also what it means to implementation of a long-term rural development policy.

2. Big data promotes the development of rural e-commerce
Under the vigorous promotion of the government, a policy system has basically been formed, the e-commerce ecosystem has been initially improved, e-commerce gameplay has been continuously updated, and rural e-commerce has developed quickly. As shown in Figure 1, Rural e-commerce development process:

![Figure 1. Timeline of rural e-commerce development](image)

In the course of development, the rural e-commerce ecosystem has gradually improved and formed. Rural e-commerce composite example now covers 737 demonstration counties and 590 poor counties\cite{3}. The distribution is shown below: As shown in Figure 2.
Figure 2. Distribution of comprehensive demonstration of e-commerce in rural areas

Through the Internet and the application of big data, the production and consumption methods in the field of agriculture, rural areas and peasants have also undergone fundamental changes. In 2018, there were more than 9.8 million rural e-commerce companies in the country, and more than 30,000 townships and townships have been covered by express delivery outlets. Proportion of areas covered by express delivery outlets in towns and villages reached 96.36%, forming a three-tier logistics distribution system covering counties, townships and villages. The popularity of big data applications in the configuration of commodity distribution, dispatch logistics, etc., further provides scientific and technological support for rural network production and consumption, can efficiently predict and judge market supply and demand, and promote the efficient allocation of market elements in a wider range. Agricultural and rural e-commerce can play its unique advantages in promoting agricultural product sales, promoting poverty alleviation, promoting agricultural supply-side structural reforms, expanding agricultural industry value chains, improving rural public service levels, and promoting rural governance improvements. The order helped the five rural revitalization projects of rural industry, talents, culture, ecology and organization play an irreplaceable role.

3. Big data promotes the transformation and upgrading of smart agriculture
The rapid progress of modern technology, such as, 5G, and the Internet of Things, the use of agricultural big data to provide accurate services for the agricultural sector has become a key factor in promoting the transformation of agriculture. The construction of digital villages is a long-term process of continuous upgrading from traditional experience agriculture to modern smart agriculture and smart agriculture. The development of agricultural big data should not only focus on the latest frontiers of international digital agriculture, but also based on the realistic conditions of my country’s long agricultural production, backward facilities, late start of the big data industry, regional imbalances, and complex conditions. It is planned to advance step by step[4].

For example, the active role of Internet big data in promoting the sales of agricultural products, such as Douyin brought goods, the number of users of Douyin Village has grown rapidly from 2018 to 2019. The 2019 report shows that the number of active users on Douyin daily exceeds 400 million, and the users punched 660 million times throughout the year.( As shown in Table 1 )

| Area  | Percent(%) |
|-------|------------|
|       |            |

Table 1. Distribution of TikTok users in 2018
Among them, Douyin promotes the sale of agricultural products by bringing goods and provides more development space for agricultural development. It has played a major role in alleviating the disconnection between production and sales.

With the support of the state, the use of various advanced equipment and technical methods to assist rural construction can ensure the scientificity of the construction and the correctness and timeliness of policy guidance. It is necessary to make breakthroughs in optimizing the updating of basic agricultural resource data, developing new intelligent agricultural data sensing equipment, and forming a "sky field" integrated agricultural condition monitoring system, and carry out core improvements such as soil improvement, agricultural pest control, crop growth monitoring, and yield assessment. Tackling technical research, forming innovative agricultural big data research results as soon as possible, and accelerating the promotion and application. New technologies are changing with each passing day, and big data technologies are also maturing. Digital agriculture construction will move towards the integration, integration, and systematization of a nationwide network, and connect with the international farming system to provide more efficient agricultural transformation and rural revitalization. Efficient technical support.

4. Using big data to build a rural governance platform
Driven by big data, digitalization has become a form of economic and social development in my country. The key to digitalization is reconstruction, that is, reconstruction of the existing system, which is by no means a traditional concept of informatization. Informatization emphasizes the improvement of efficiency, while digitalization emphasizes the reconstruction of the system and the change of the way of thinking. As a resource, big data plays a major role in governments, large enterprises and institutions[5]. National policy made it clear that my country should implement the strategy of rural revitalization. Digital village was proposed as a sub-strategy and became an important support for rural revitalization. At present, digitization has become the development trend of all walks of life. Massive data, high-speed computing, and fast networks have spawned rich applications of big data.

While big data applications have played an major role in changing agricultural production methods and farmers' lifestyles, they are also accelerating the transformation of rural governance[6]. As shown in Figure 3.

| First-tier cities | 8.23 |
|-------------------|------|
| Second-tier cities| 34.39|
| Third tier cities | 21.51|
| Four lines and below | 35.87|
5. Conclusion

In order to promote the implementation of the rural revitalization strategy and the development of agriculture and rural areas, it is necessary to establish a unified rural big data platform, collect and manage relevant agricultural data, and form a comprehensive and multi-functional big data platform. Big data will better serve the transformation of the agricultural industry and the implementation of the rural revitalization strategy. The construction of information infrastructure is the foundation of the development of big data. The construction of big data infrastructure in rural areas should be promoted quickly to meet the needs of hardware.

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