The Application of DIR Agricultural Supply-side Reform Thinking Model based on Computer Media Marketing in Northwest Shandong Province

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Abstract. The core of DIR agricultural supply-side reform thinking model from the perspective of computer multimedia marketing is to change the traditional agricultural model, reshape the mechanism with market-oriented services as the core, and promote the development of the agricultural industry. The deep connotation behind it is to use computer multimedia marketing to promote agricultural efficiency, agricultural modernization and information technology and a series of agricultural industry development trends. At present, more and more advanced technologies such as "Internet plus", the Internet of things, cloud computing, big data and multimedia marketing have been applied in China's agricultural production. To some extent, this has accelerated the transformation of agricultural production mode and reconstructed the operation mode of agricultural industry chain in various fields. In the future, the computer multimedia platform will provide a series of supporting services for large operators, forming a perfect, highly open and Internet eco-sphere symmetrical agriculture[1]. The integration of the development of agricultural multimedia marketing will become an inevitable trend of comprehensive development.

Keywords: DIR, Computer Media Technology, Agricultural Supply-side Reform, Social Marketing

1. Introduction
Agricultural supply-side structural reform is the driving force of agricultural development and agricultural modernization, and the main line of rural modernization and new urbanization in Northwest Shandong. Rural areas in Northwest Shandong are in the critical period of agricultural transformation, peasant transfer and rural transformation, and are facing many new difficulties and challenges. Through the implementation of DIR (Differentiation, Internet+, Reform) thinking mode of agricultural supply-side reform, we can improve agricultural income and realize the adjustment of agricultural structure, further promote the structural reform of rural agricultural supply-side in Northwest Shandong, improve agricultural innovation and promote the prosperity of rural industry.

2. Structural problems in the development of new modern agriculture in rural north-western Shandong from the perspective of supply side

2.1. Significance of developing DIR modern agriculture
Modern agriculture is based on modern industry and science and technology, through strengthening the
construction of agricultural infrastructure, using modern science and technology and industrial equipment, and adopting modern management concepts and methods to realize the standardization, commercialization and industrial systematization of agricultural production. In the process of modern agricultural industry construction, the integration of DIR and modern agriculture is of great significance to optimize and upgrade traditional agricultural industry chain, restructure industrial structure, improve production efficiency and change backward production mode. As shown in Figure 1 below[2].

Figure 1. Significance to integrate and modern agriculture based on DIR

2.2. Main problems in the development of dir modern agriculture in rural areas of northwest Shandong
DIR agriculture has transformed traditional agriculture into digital modern agriculture, and provided important support for the improvement of agricultural production level in backward areas of agricultural development. But DIR modern agriculture is not omnipotent. The core problem of DIR modern agriculture development mode is to realize agricultural informatization, that is, to realize the high integration of Internet thinking and traditional agriculture in industry chain, agricultural products circulation, rural commercial consumption mode and rural Internet finance. Due to the obvious characteristics of urban-rural dual structure, agricultural production may face the problems of relatively abundant supply of agricultural products and the continuing low price of agricultural products for a long time in the future. In addition, the overall competitiveness of China's agriculture is not strong, which is greatly affected by the supply of imported agricultural products and the changes in the consumption structure of domestic residents. Agriculture must accelerate its transformation and development[3]. As a traditional agricultural area, the rural areas in Northwest Shandong Province, like the general situation of agricultural production in the whole country, also have the problems of "unsuitability of products and markets", "unsuitability of costs and prices", "unsuitability of resources utilization and environmental demand". The supply of agricultural products is in excess of supply and demand, and the structural reform of agricultural supply side is imperative.

3. The Business system framework of rural agricultural products in northwest Shandong from the perspective of social marketing

3.1. Social marketing theory
According to the theory of social marketing, social marketing refers to a kind of behavior that the target group voluntarily accepts, rejects, changes or abandons by adopting the principles and techniques of marketing for the benefit of individuals, groups or the whole society. It is a marketing activity with the principle and method of marketing as the means, the voluntary action of the target group as the criterion, the change of the behavior of the target group as the main line, and the improvement of the overall interests of individuals, collectives and society as the goal.

3.2. Reconstruction of innovation system of rural agricultural products marketing in northwest Shandong
At present, DIR gradually promotes the form of "farmer + trading platform", "farmer + information platform", "farmer + value chain integration platform" to be more and more perfect. Virtual agriculture, taking e-commerce economy as an example, has just risen with the use of virtual information network system to provide "unified" information services, commercial circulation, production cooperation and other
infrastructure for scattered and small farmers. The concept of DIR can not only reduce the cost of linking and serving all kinds of agricultural operators and solve the problem of lack of industrial chain resources in this region, but also promote the direct docking and integration of industrial chain resources across regions, industries and departments, and build a dynamic, open and self-organizing agricultural chain ecosystem. Due to the gradual change of consumer Internet to industrial Internet in recent years, various decentralized agricultural operators will accelerate the realization of interconnection and access, using cloud computing, Internet of Things, big data, mobile Internet and other information technologies to imitate virtual home farms, agricultural enterprises, farmers' cooperatives and other network nodes. Such as Figure 2.

![Figure 2. Computer multimedia field data acquisition system module diagram](image)

3.3. Construction of business ecosystem for social marketing of agricultural products in northwest Shandong

At present, the era of shared economy has come. Using the concept of DIR to promote the construction of big data, build a platform for circulating enterprises to share economic information, build an Ecosphere of cross-border marketing of agricultural products with cross-border marketing platform as the core, integrate online and offline resources, realize the reallocation of fragmented idle resources, reshape the business model of marketing of agricultural products enterprises, promote the integration of entity and network market, and realize the integration of Internet and online products, platform digitization. With the iteration of traditional business forms and the continuous innovation of business models, the pace of reform of circulation enterprises has accelerated, but the role of service producers and consumers of circulation enterprises has not changed. At the same time, the economic transformation and upgrading and social development have created a new major market demand[4]. Therefore, agricultural products enterprises should find a correct position in the contradiction between supply and demand. Through cross-border integration with logistics industry, tourism, financial industry, service industry and manufacturing industry, they should build a diversified "one-stop cross-border marketing ecosphere" platform to realize the innovation, individualization and diversification of social marketing business model of agricultural products.

4. The realization path of supply-side reform in northwest rural areas of DIR in the perspective of social marketing

The core problems of DIR agricultural supply-side reform in the perspective of social marketing are still the mismatch between supply and demand, structural surplus and inadequate supply of middle and high-end products. DIR has brought a profound revolution in information technology to all fields of our economy and society. The integration of new generation information technology such as Internet of Things and big data with agriculture can help the structural reform of agricultural supply side and promote the development of agricultural modernization. First of all, we should strengthen top-level design and improve rural Internet infrastructure. Secondly, we should cultivate new farmers in the Internet era and promote the intellectualization of agricultural production and data-based decision-making. In addition, we should speed
up the transfer of rural land and explore a variety of new models of agricultural e-commerce. Finally, the new agricultural retail ecological chain should be constructed[5].

5. Conclusion
Faced with the problem that DIR agricultural supply-side reform thinking mode is applied in rural areas of Northwest Shandong in the perspective of social marketing, innovating agricultural marketing channels is the key way to solve the problem. Integrating innovation around the agricultural industry chain, accelerating the innovation of agricultural business model, using Internet thinking, using DIR concept, widening the boundary of agricultural production and marketing, or using cross-border thinking, combining agricultural production with agricultural products processing, circulation and agricultural leisure tourism, cultivating and strengthening new rural industries, meeting the diversified needs of the market, and alleviating the imbalance of supply-side structure situation. Besides, it should accelerate cross-border marketing of agricultural products, integrate social idle resources, reduce information asymmetry, take consumer demand as the center, innovate the value chain system of agricultural products marketing, build the commercial ecosystem of agricultural products, improve the competitiveness of agricultural enterprises, and improve more accurate, diversified and personalized services for customers[6].

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