

# Mechanism Analysis of the Value Reconstruction of Agricultural Products Upturn by Digital Economic Situation Construction Theory

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## **Abstract:**

The "14th Five-Year Plan" for the development of digital economy points out that the digital economy is promoting profound changes in the mode of production, lifestyle and governance, and it has become the key force to reorganize the global factor resources, reshape the global economic structure and change the global competition pattern. Based on the theory of situation construction in digital economy, this paper constructs an analysis framework of "situation innovation-value reconstruction" to guide the analysis of the internal mechanism of the e-commerce shaped agricultural products upturn. Compared with the traditional offline mode, e-commerce promotes the value reconstruction of agricultural products upturn by creating a highly empowered network servicescape, which is embodied in that e-commerce mode makes agricultural products upturn change from long-chain value delivery to short-chain value delivery, from single value output to multi-value output and from one-way value originality to multi-value co-creation. Based on the research of the situation construction theory of digital economy, this paper discusses the influence on the upturn development of agricultural products, the mechanism and realization path of the value reconstruction of agricultural products upturn.

**Keywords:** *Digital economy, Situation construction, Agricultural products upturn, Agricultural products e-commerce, value reconstruction.*

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## I. INTRODUCTION

For a long time, the problems such as weak facilities, few channels, excessive links, high cost, large loss and low efficiency in agricultural products upturn in China have been widespread (Liu Tianjun et al., 2013; Zhao Xiaofei et al., 2016; Zhao Dawei et al., 2019). To solve the difficulties in agricultural products upturn, it is necessary to innovate the upturn way of agricultural products. The facts have proved that e-commerce is a powerful means to promote the agricultural products upturn (Zeng et al., 2017; Guo et al., 2020; Li et al., 2021). The government has continuously issued relevant policies and made deployment to accelerate the promotion of the agricultural products upturn through Internet. In 2021, the No.1 Central Document *Opinions of the CPC Central Committee and the State Council on Comprehensively Promoting Rural Revitalization and Accelerating Agricultural and Rural Modernization* points out that "we should further promote the process of e-commerce going to rural areas and agricultural products going out villages, and promote the effective connection between urban and rural production and consumption". Under the guidance of policies and market promotion, e-commerce has continuously empowered agricultural

products and achieved certain results. In 2021, the online retail sales of agricultural products in countries nationwide reached 350.76 billion yuan [1], a year-on-year increase of 29.0%; the trading volume of agricultural products on Ali's reached 200 billion yuan; the active merchants of agricultural products (by-products) on Pinduoduo increased by 142% year-on-year, and the active buyers on the platform increased by 174%. The repurchase rate exceeded 70% year-on-year.

In this paper, the theory of situation construction of digital economy is introduced into the field of agricultural product e-commerce, and a general analysis framework of "situation innovation-value reconstruction" is constructed, which enriches the theoretical research of agricultural product e-commerce. At the same time, from the perspective of value reconstruction, the paper reveals the deep significance of e-commerce for the agricultural products upturn, helps to improve the scientific understanding of agricultural e-commerce, and provides some reasons for the popularity of agricultural e-commerce in recent two years. Suggestions for fully releasing the value reconstruction dividend of e-commerce have positive guiding significance in direction, ideas and principles for the healthy and rapid development of e-commerce of agricultural products, and can provide reference for the formulation and improvement of relevant government policies.

## **II. THEORETICAL BASIS AND ANALYTICAL FRAMEWORK**

### **2.1 Theoretical Basis: Digital Economy Situation Construction Theory**

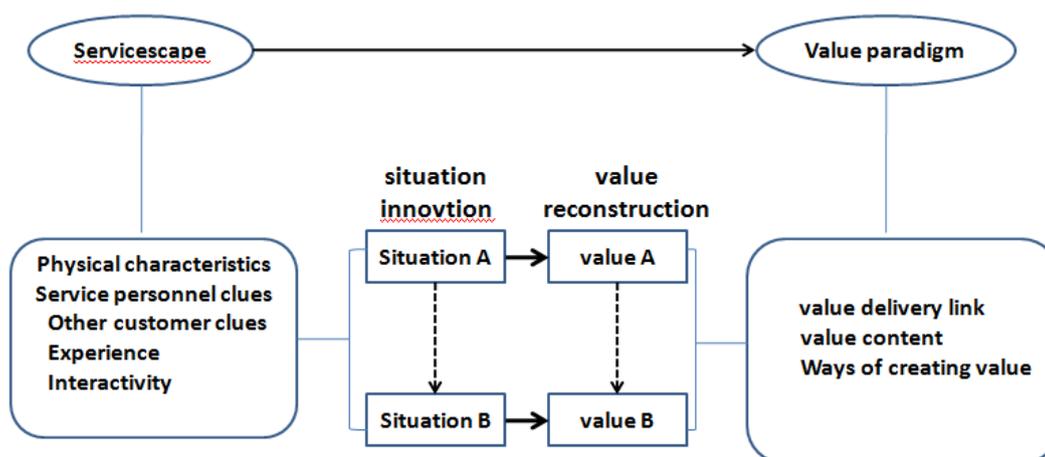
Situation originally refers to scenes or situations in dramas, movies and literary works. It has been applied to social science fields such as communication and marketing, and its connotation has changed greatly. With the continuous progress of business society, people are increasingly aware of the importance of carefully designing a service environment that satisfies customers. Bitner, a service environment researcher, first used the term "Servicescape" to refer to the sum of all kinds of physical environment elements carefully designed and controlled in service places, and divided them into symbolic elements such as atmosphere elements, spatial layout and functional elements and signs. With the rise of e-commerce, scholars began to pay attention to the E-servicescape. Harrise et al. defined the E-servicescape as the sum of all online environmental factors in the process of service delivery from pre-purchase to post-purchase, including aesthetic appeal, functional layout and financial security, and each dimension positively affects customers' network trust. With the continuous integration of digital technology and real economy, network servicescape is increasingly integrated with products, and becomes an important link for business models to realize value creation and delivery. The network servicescape is the trigger point and front line of the interaction between online customers and enterprises, and it is a platform that can provide value proposition for online customers who are full of ideas and participate in value co-creation [2]. Among the many factors affecting the network servicescape, online customer perception interaction is the core. It is the key driver of online customer cognition and behavior [3].

The theory of digital economy situation construction proposed in this study emphasizes the driving effect of digital economy on situation construction and the supporting effect of data as a factor of production on situation construction. The new situation created by digital economy in turn forces

enterprises to make situation innovation. This requires enterprises to respond positively to the changing situations dynamically and make adaptive innovations according to the changing situations.

## 2.2 Analysis Framework: Situation Construction-Value Innovation

Based on the theory of digital economy situation construction, this paper constructs a general analysis framework of "situation innovation-value reconstruction" (see Figure 1) to guide the analysis of the internal mechanism of the e-commerce shaped agricultural products upturn. Research on the construction of digital economic scenarios has provided a logical framework for the relationship between servicescape and value paradigms. With the development of business society, servicescapes are becoming an increasingly important factor that affect the creation and delivery of customer value (assuming that scenario A corresponds to value A and scenario B corresponds to value B). Servicescape innovation (the evolution from scenario A to scenario B) will inevitably lead to the reconstruction of value paradigm (the evolution from value A to value B). The greater the scenario innovation, the deeper the value reconstruction.



**Fig 1: General analysis framework of "Situation Innovation-Mechanism Reconstruction"**

After integrating the mainstream views of situation construction theory, the deconstruction of a servicescape can mainly start from the aspects of physical characteristics, clues of service personnel, other customer clues, emotional experience, interactivity, etc. That is to say, the difference between situation A and situation B can be analyzed and judged from these perspectives. If there are obvious differences between Scenario A and Scenario B in these dimensions, it means that it is a great situation innovation from Scenario A to Scenario B. This suggests that the transformation from value A to value B is a deep value reconstruction. The investigation of value paradigm can generally be carried out from the perspectives including value delivery link, value content and value creation method. Value delivery link involves the delivery length, delivery subject composition and their relationship, delivery accuracy, delivery cost and delivery efficiency of the value chain. Value content involves the value proposition, value form and value component output by enterprises to customers. Value creation method involves the participants and their participation scope, methods and participation in the process of customer value creation.

### **III. THE MECHANISM OF VALUE RECONSTRUCTION OF AGRICULTURAL PRODUCTS UPTURN BY DIGITAL ECONOMY SITUATION INNOVATION**

#### **3.1 Overall Model**

Value reconstruction is an important perspective to understand the profound impact of e-commerce on the agricultural products upturn[4]. The emergence of e-commerce has changed the logic of circulation and reshaped the value form of agricultural products upturn. With the continuous evolution of e-commerce format, the value reconstruction of agricultural products upturn has been continuously strengthened. Compared with the traditional offline mode, the e-commerce mode makes the agricultural products upturn change from long-chain value delivery to short-chain value delivery, from single value output to multi-value output, and from one-way original value creation to multi-value co-creation by creating a highly empowered network servicescape.

#### **3.2 Mechanism I: from Long-Chain Value Delivery to Short-Chain Value Delivery**

In the traditional offline mode, most agricultural products need to follow the long chain of "producer-purchaser-wholesaler at the place of production-wholesaler of selling places-retailer-customer" to realize value delivery. The whole process includes many circulation subjects and circulation links, which leads to higher physical cost and transaction cost of circulation, scattered information and easy distortion, and even greater loss of fresh agricultural products. E-commerce mode greatly reduces the length of the value chain of agricultural products, and changes the long chain of traditional offline mode into a short chain of "producer-e-commerce-customer", which completely subverts the way of value delivery and significantly improves the accuracy and efficiency of value delivery. E-commerce has greatly shortened customers' purchasing links and supply chain of products, reduced circulation costs and improved the agility of supply.

#### **3.3 Mechanism II: From Single Value Output to Multiple Value Output**

In the traditional offline mode, the value of agricultural products delivered to customers is low and the value form is single. That is, the agricultural products are pure goods on the material level. With the progress of business society, customers' demands are diversified, and have already surpassed the practical functional value of the products themselves. Customers pay more attention to cultural value, emotional value and spiritual value. Service clue is the core component to realize multi-value output. The emergence of e-commerce model has completely changed the dilemma of single value of agricultural products upturn. E-commerce can meet the diversified and deep-seated needs of customers for products, entertainment, leisure, social, learning, consulting, experience and emotion by building and creating servicescapes and atmosphere with strong interaction, rich experience, embedded emotion, temperature, symbolism and immersion. Agriculture is multi-functional, and agricultural products carry not only food value, but also knowledge dissemination value, cultural heritage value, education enlightenment value, health preservation value, and ecological value. E-commerce mode helps to develop the versatility of agriculture, promote the transformation from productive agriculture to functional agriculture, and fully explore the various values

contained in agricultural products.

### 3.4 Mechanism III: from One-Way Original Value Creation to Multi-Party Value Co-Creation

In the traditional offline mode, the product flow and information flow of agricultural products upturn are synchronous. They are long-chain one-way flows from producers to customers, reflecting a kind of thinking that enterprises create one-way value according to experience and ideas. For this kind of supplier-oriented marketing, due to the lack of full communication and interaction with customers, the production of products is easy to stay in a homogeneous and stagnant state. In the rapidly changing Internet environment, it is even more difficult to form customer stickiness [5]. E-commerce mode creatively destroys the way of value creation of agricultural products, and realizes efficient multi-value co-creation. First, the information flow is highly interactive. It is the foundation of information creation. The network servicescape has become a network communication system centered on the anchor. Everyone is an active information node and also becomes a part of information. As the direct interaction of customers, the streamer is naturally endowed with the role and responsibility of opinion leader to promote the realization of value co-creation. Secondly, customers' initiative choice has been promoted to an unprecedented height. This initiative is not only for users to actively choose commodities, but also for streamers to accompany them to complete the consumption process, and to express their views on value propositions through likes, comments, sharing, forwarding and rewarding. E-commerce mode makes the related subjects, especially customers, participate in value co-creation activities in a more active and profitable manner.

## IV. CONCLUSIONS

The agricultural products upturn has always been an important issue related to urban and rural development. E-commerce is developing very rapidly and is increasingly becoming an important way for agricultural products upturn. To deeply understand the internal mechanism of the e-commerce shaped agricultural products upturn, this paper constructs an analysis framework of "situation innovation-value reconstruction" based on the theory of digital economic situation construction. Compared with the traditional offline mode, e-commerce promotes the value reconstruction of agricultural products upturn by creating a highly empowered network servicescape, which is embodied in the live e-commerce mode. This makes the value delivery of agricultural products upturn change from long-chain value delivery to short-chain value delivery, from single value output to multi-value output, and from one-way value originality to multi-value co-creation. The mechanism analysis of value reconstruction has positive guiding significance in the direction, ideas and principles for the healthy and rapid development of agricultural e-commerce, and can provide reference for the formulation and improvement of relevant government policies.

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