

Analysis on the Efficient Construction Mode of Rural E-commerce Platform

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Abstract: Nowadays, China's rural development Internet has become the mainstream in the information age, and there are more and more rural netizens. Under the promotion of rural Internet, the sales and sales of agricultural products are obviously provided and increased. The development of e-commerce in rural areas is of great significance. It is feasible to develop e-commerce in rural areas. This paper expounds the development status of rural e-commerce platform in recent years, and discusses the efficient construction mode of rural e-commerce platform for readers' reference.

1. Introduction

Agriculture is the pillar of China's national economy. Agricultural informatization is an important part of the informationization of economic and social development, and it is also an important part of agricultural modernization. Traditional agriculture is less automated, and its operations are mostly done manually, which consumes a lot of manpower and resources. With the continuous improvement of the scale of the agricultural industry, the continuous growth of agricultural product varieties, and the large-scale implementation of centralized land cultivation, traditional manual control measures have shown great limitations.

2. Construction background of rural e-commerce platform

In January 2016, the Central Committee of the Communist Party of China and the State Council pointed out in the "Central No. 1 Document" that it supports the construction of a public service platform for agricultural products marketing. Carry out actions to reduce the cost of agricultural products logistics. Promote the accelerated development of rural e-commerce, and form a two-way circulation pattern of online and offline integration, agricultural products entering the city and agricultural materials and consumer goods going to the countryside. Encourage large-scale e-commerce platform enterprises to carry out rural e-commerce services and support local and industry-sound rural e-commerce service systems. Establish and improve the standard system of agricultural product quality classification, post-harvest handling, packaging and distribution to meet the development of rural e-commerce.

3. Overall design of college construction mode in rural e-commerce platform

3.1 Analysis of rural e-commerce data

According to the "2016 China E-Commerce Report" released by the Ministry of Commerce recently, as of the end of 2016, the number of registered online stores in rural areas (including counties) was 1,632,600, of which 599,700 were registered in villages and towns. "In 2017, rural netizens reached



217 million, accounting for 28.6% of the network; in 2014, the national rural online shopping market reached 180 billion Yuan, and it is expected to exceed 460 billion Yuan in 2018, becoming a new point in the online shopping market; online shopping users online shopping The acceptance rate is over 80%, the average age of online shoppers is 20 to 29 years old; the proportion of mobile Internet users in rural areas has reached 84.6%, 5 percentage points higher than towns.

Table 1: Statistical analysis of the current development of rural e-commerce platform

	E-commerce development direction	Average (number of people)	Standard deviation	t	df	P
Online shopping direction	To meet their own needs	19.556	1.891	0.971	294	0.326
	Driving rural development	18.808	2.213			
Entrepreneurship direction	To meet their own needs	24.187	2.322	0.568	291	0.565
	Driving rural development	26.286	2.462			

The results of t-test indicate that the construction direction of rural e-commerce platform is partly for the development of merchants that meet their online shopping and entrepreneurial needs ($t(294)=0.971$, $P=0.326$); the merchants who aim to drive the overall development of the countryside account for ($t(291)=0.568$, $P=0.565$); the factor difference was not significant. The above data shows that the number of rural netizens is constantly rising. There are a large number of potential online shoppers in the third and fourth-tier regions such as urban and rural areas, and rural areas will provide a broader “blue ocean” market for e-commerce companies and Internet retailers.

3.2 Platform structure for efficient construction of rural e-commerce platform

The architecture of the rural e-commerce platform consists of four layers and two systems. The “four layers” are: application layer, support layer, resource layer and base layer; the two systems are: identity authentication and security system, operation and maintenance guarantee system. The application layer provides a unified information portal at the top level, providing a window for customers to provide services, and is also an entry for platform management; the support layer provides search services, and conducts mining and evaluation of product data, such as product sales and reviews, to obtain platform development. mail services, and document management; the resource layer provides basic data resources for customer service and manager analysis; It is the basic architectural environment of the platform, including database server, application server/web server, switch, storage device, computer network, call center access, and/wireless communication service.

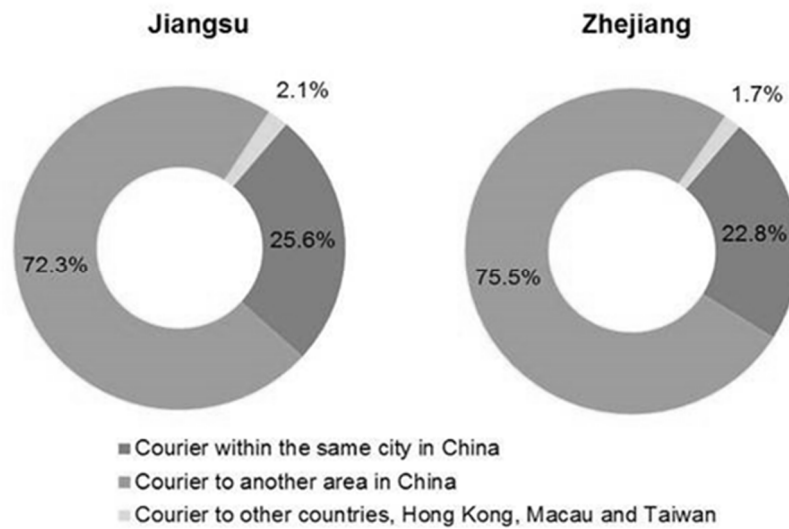


Figure 1: Construction of e-commerce platform in Jiangsu and Zhejiang rural areas

As shown in Figure 1, cooperative social workers in Jiangsu and Zhejiang regions publish information such as product introduction and online cargo volume on the e-commerce trading platform. Consumers access the trading platform through the Internet and order online after finding satisfactory products. The bank pays, the order information is sent to the logistics provider system, and the goods are delivered. Consumers can also communicate with service personnel through the call center, and the platform can also contact consumers via email or SMS.

4. Rural E-commerce platform efficient construction mode technology line

4.1 object-oriented analysis design method

The object-oriented approach is the main design, analysis, and implementation method used in the development of large-scale software systems today. The object-oriented approach can well grasp the essence of the system and ensure the relative stability of the system. An object-oriented approach can increase the efficiency and quality of development.

4.2 Development goals of the efficient mode of rural e-commerce platform

As of June 2016, the number of netizens in China reached 710 million. The total number of new netizens increased by 21.32 million in the first half of the year, with a growth rate of 3.1% in the first half of the year, which was higher than the growth rate in the second half of 2015. The Internet penetration rate was 51.7%, an increase of 1.3 percentage points from the end of 2015. For example, when the user publishes the purchase information, the corresponding supply information can be quickly matched and provided to the user for selection. The similarity of products using the information interaction platform can also show the similarity between rural e-commerce platforms. Its formula is expressed as:

$$S^P(ij, k) = \left\{ \sum_l \left[\left(\frac{(X_{ik}^l/X_{ik}) + (X_{jk}^l/X_{jk})}{2} \right) \times \left(1 - \left| \frac{(X_{ik}^l/X_{ik}) - (X_{jk}^l/X_{jk})}{(X_{ik}^l/X_{ik}) + (X_{jk}^l/X_{jk})} \right| \right) \right] \right\} \times 100 \quad (1)$$

Where $S^P(ij, k)$ indicates that the product similarity index i and j of the i platform and the j platform developed to the market k indicate any two countries to be compared, k represents the third market, and X represents the exit, X_{ik}^l/X_{ik} represents the share of the i -platform export to the first product in the k market, X_{jk}^l/X_{jk} represents the share of the first product in the products exported from the j platform to the k market. Users also have three ways to obtain information, browse through the website, obtain and receive information through We Chat public number or subscription number through mobile APP display and message push.

4.3 Agricultural Products Online Trading System

The agricultural product trading system is the core of the entire rural e-commerce platform, providing functions such as “order quotation”, “online payment”, “logistics tracking”, “return management” and “order evaluation”. At the same time, through the online trading page of rural products, it can be View agricultural products and provide sub-pages for new products and hot items.

The platform administrator accepts returns requests made through the phone or platform website. If it is a telephone application, register the identification code of the returned goods and the reason for the return, etc., and record the reply to the buyer, it is necessary to explain the expenses that the responsible party needs to bear; if it is the return application submitted through the platform website, check the application form and judge that Buyers, sellers or logistics responsibilities, give buyers a reply.

5. Conclusions

From the above, it can be concluded that the efficient construction of rural e-commerce platform is very beneficial to the development of rural areas in the new era. Carry out actions to reduce the cost of agricultural products logistics. Promote the accelerated development of rural e-commerce, and form a two-way circulation pattern of online and offline integration, agricultural products entering the city and agricultural materials and consumer goods going to the countryside. Accelerating the agricultural and rural informationization and making full use of information technology to transform traditional agriculture have become an inevitable choice for accelerating the transformation of agricultural development methods, realizing agricultural modernization, and benefiting farmers and the countryside.

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