

Research on E-commerce boosts the normalized assistance mechanism of rural low-income population under the background of "Internet +"

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Abstract: China has eliminated absolute poverty. Under the new situation, the specific target of assistance for rural revitalization is the rural low-income population. Driven by "Internet plus" technology, rural e-commerce has developed rapidly and played a huge role in the development process of rural economy. In the transitional stage of consolidating and expanding the achievements made in poverty alleviation in coordination with the extensive drive for rural vitalization, e-commerce has provided a convenient way for rural low-income people to improve their lives, and has worked on infrastructure, industry and jobs, all achieved obvious results. According to the development status of rural e-commerce and rural low-income population, the author puts forward the construction ideas of normalized assistance mechanism from endogenous power, "Party building + e-commerce + help" mode, brand building and other targeted assistance.

Keywords: E-commerce; Rural low-income population; Assistance mechanism

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During the 13th Five-Year Plan period, China has successfully completed the arduous task of poverty alleviation in the new era. Under the current standards, the rural poor population has been completely lifted out of poverty and absolute poverty has been eliminated. This is a major historical miracle in the global poverty reduction work. In the new era, according to the new situation of China's rural development, the continuous consolidation and expansion of poverty alleviation has become a new goal of China's "14th Five-Year Plan" development period. To this end, "the CPC Central Committee and The State Council on promoting rural revitalization and accelerating agricultural and rural modernization Opinions" (hereinafter referred to as "Opinions") put forward to "improve the dynamic monitoring and help to prevent poverty return. The "Opinions" proposed to "improve the dynamic monitoring and assistance mechanism to prevent returning to poverty, timely detect and assist people who are prone to return to poverty and lead to poverty", "carry out dynamic monitoring of rural low-income population, and implement hierarchical and classified assistance". At present, the development of digital technology has brought certain convenience to the promotion of the rural revitalization strategy. "Notice on Further Promoting rural business Interconnection to help rural Revitalization" proposed that "to deepen the rural e-commerce channel to help farmers, build regional e-commerce channel to help farmers, Improve the Localized Commodity and Service Circulation System", the "Opinions" also emphasized "to implement the digital rural construction and development project". The assistance mechanism combined with "Internet +" can not only change the production mode and way of life of the rural low-income population, but even further improve their way of thinking, making the assistance effect and results more durable. Judging from the current reality, the development of the rural economy is still in an unbalanced state. The rural low-income groups account for a large proportion. The rural low-income population in need of assistance in China is roughly 10,000- 11,000, and the low-income groups are more likely to return to poverty. Therefore, under the background of digital development, it is of great significance to use the digital technology of the new era to accurately identify the assistance groups, rely on the e-commerce platform, build a normalized assistance mechanism for rural low-income population, and promote the implementation of the assistance mechanism.

1. Identification of rural low-income population

"No. 1 central document" for 2021 clearly states that it is necessary to "improve the dynamic monitoring and assistance mechanism to prevent returning to poverty, and timely detect and assist people who are likely to return to poverty and become impoverished", "carry out dynamic monitoring of rural low-income population, and implement hierarchical and classified assistance". Based on this, to expand the achievements made in poverty alleviation in coordination with the extensive drive for rural vitalization, and to build a normalized assistance mechanism for rural low-income population, we must first clarify the group scope of rural low-income population.

"Low-income" is a concept defined from a relative perspective. It exists in various countries and societies. Generally speaking, low-income groups are mainly divided into two categories: one is that the income level of individuals or families cannot meet their basic needs^[1]. The other part is that the income level can meet their living needs, but the income growth rate is significantly lower than that of other local people, which is a relatively low

income . The focus of the classification of low-income groups at home and abroad is also different. In foreign countries, a certain proportion of the median income is generally used to identify the low-income population. At present, due to the gap between urban and rural development in China, there is no unified low income classification standard. The Ministry of Civil Affairs evaluates rural low-income families from four aspects. Regions are divided into their own standards according to local conditions. Most regions are set based on the ratio of the monthly per capita disposable income of urban residents in the previous year, with reference to the minimum living security standard of local residents and the proportion of households. Also multiple indicators are comprehensively considered.

Some domestic scholars have carried out preliminary research on the identification and identification of low-income population based on the governance of relative poverty. Scholars such as Chen Zongsheng pointed out that the average income level of rural residents is used as the base to calculate the relative poverty standard according to a specific mean coefficient. The mean coefficient is used as the "relative poverty line" [2]. Sun Jiuwen and Xia Tian believe that after 2020, a certain proportion of the median income of urban and rural residents should be used as the relative poverty standard for urban and rural areas, and a certain period of time (such as 5 years or 10 years) should be used as the adjustment period³ [3]. Gao Qiang and Zeng Hengyuan suggested that the identification standard of low-income population should be set from the urban and rural low-income line to the regional low-income line, and finally narrow the gap between the "two lines" between urban and rural areas. 1/3 of the per capita disposable income of rural residents in the current year, or 40% of the median disposable income of rural residents is the lower line of the rural low-income standard in the next year [4]. At present, the identification of rural low-income population in China is under the guidance of the general policy, and each region should do a good job of identifying the low-income population according to the local development situation.

The concept of "rural low-income population" is proposed in the "Proposal of the Central Committee of the Communist Party of China on Formulating the 14th Five-Year Plan for National Economic and Social Development and the Long-term Goals for 2035" (hereinafter referred to as "Proposals") . The "Proposal" calls for "establishing a support mechanism for rural low-income population and underdeveloped areas". Generally speaking, "rural low-income population" refers to the rural families whose per capita income of family members is higher than the minimum living allowance standard, but the income level is still low and the actual living difficulties are caused because they cannot be included in the minimum living allowance. low-income population. From the perspective of various places in China, Zhejiang Province issued the "Low-income Farmer Identification Standards, Identification Mechanisms and Dynamic Management Measures" in 2017, which included the subsistence allowances, marginal subsistence allowances and "4600" low-income farmers to consolidate and support objects (refer to If there is no consolidation and assistance measures, farmers with an average annual income of less than 4,600 yuan will easily be included in the new round of low-income farmers. Jiangsu Province divides rural low-income population groups according to the per capita disposable income in rural areas (the low-income standard of 6,000 yuan has been determined).

According to domestic and foreign research and practical experience, the standard for delimiting the low-income population is mainly based on the median or a certain percentage

of the mean value of income or expenditure, or taking the living standard of the inspected object as the inspection standard, or a certain proportion of the low-income population is identified as the low-income population. The identification standards of China's rural low-income population can be based on these standards, which are more in line with the actual situation of China's rural development from the following perspectives:

The first is based on the disposable income of rural residents. Generally, this method divides low-income groups by a certain percentage of the average or median rural per capita disposable income in one year, and the commonly used ratios are 40%, 50% and 60%. In 2020, China's rural population will be about 510 million. According to the trend of rural population changes in the past ten years, the annual rural population will decrease by about 3%. It is estimated that the rural population in 2021 will be about 490 million. In 2020, the median per capita disposable income of rural residents was 15,204 yuan, an increase of 815 yuan from last year. If 40% of the median disposable income of rural residents in 2020 is used as the standard, in 2021 the rural low income line will be 6,082 yuan; taking the median per capita disposable income of rural residents as the dividing standard, the coverage is more extensive than the average.

The second is to determine the rural low-income population with the minimum living guarantee households as a reference. By the end of 2020, the average standard of minimum living security for urban and rural residents is 678 yuan and 497 yuan per person per month respectively. It can be seen that, There are still some differences in the average standard of subsistence allowances between urban residents and rural residents. At the same time, there are also large differences in the average standard of subsistence allowances between urban and rural areas between provinces and cities, which are generally based on local economic development conditions. Under this method, we can refer to the “two-in-one” identification method of the identification standard line for low-income farmers and the identification standard line for marginal households with minimum living allowances in Zhejiang Province.

The third method can be based on the comprehensive identification method of “1+3+N” multi-dimensional indicators proposed by scholars Cheng Guoqiang and Wu Xiaohong. This method comprehensively considers the per capita disposable income of rural residents, living standards, health education level and other indicators , and set corresponding thresholds to determine rural low-income households^[5].

On the above basis, the identification of rural low-income population is an important guarantee for the implementation of the assistance mechanism. According to the relevant characteristics of rural low-income population, stratified and classified assistance is the need for our further development. This paper defines the rural low-income population as the rural subsistence allowance objects, the rural extremely poor people, the rural people who are easy to return to poverty, and the people who have serious difficulties in basic life due to large rigid expenditures such as disasters, accidents or the sharp reduction of income. Rural residents' incomes within the sample range are ranked in ascending order and evenly divided into five parts. The income group in the lowest 20% is defined as the rural low-income group.

2. Analysis of the characteristics of rural low-income population

2.1. Environmental and Demographic Characteristics

The success of China's poverty alleviation campaign has improved the living environment of rural low-income people. The improvement of the living environment of the population will gradually reduce the number of low-income population in rural areas, which will lead to the concentration of the remaining low-income households in mountainous areas with relatively poor natural conditions. The survey found that the low-income population is mostly concentrated in mountainous areas, hills and other places. In terms of living environment, the infrastructure of the villages where the rural low-income groups are located has also been greatly improved and improved under the leadership of the government, including the level of transportation, communication, and water use.

There are two main situations in the family structure of the rural low-income population: one is in a family with a large population, and the other is living alone without family members. Moreover, rural low-income people live in families with a large number of low-collar and elderly people, which makes the labor burden in the family serious and leads to the lower education level of family members. Compared with other rural families in rural areas, the family demographic characteristics of the low-income population mainly include large family size, low quality, weak labor force and poor health^[6].

2.2. Income characteristics

Since the 18th National Congress of the Communist Party of China, China has significantly improved the living conditions of the poor through stratified and classified assistance measures, and the income situation of the people across the country has also shown new characteristics. According to the "Statistical Communiqué of the People's Republic of China on the 2020 National Economic and Social Development", the per capita disposable income of residents nationwide increased by 4.7% over the previous year. After deducting price factors, the actual increase was 2.1%, which was faster than the growth rate of per capita GDP. The income of rural residents was higher than that of the previous year. However, under the general trend of development, if we look at the per capita disposable income in rural and urban areas and within rural areas, we can still find some drawbacks.

As shown in Table 1, from 2013 to 2024, the per capita disposable income of urban residents and rural residents in China both showed an upward trend, and the relative gap showed a downward trend, which decreased from 2.81 times in 2013 to 2.34 times by 2024, but the absolute gap increased from 17,037 yuan in 2013 to 31,069 yuan in 2024, which is opposite to that of the relative gap. It can be seen from this situation that the absolute gap between the per capita disposable income of urban residents and rural residents is expanding in the short term, which also shows that the current income level of the rural population is not optimistic.

Table 1. Statistical data on disposable income of urban and rural residents in China from 2013 to 2024 (unit: yuan)

<div>Year</div> <div>Project</div>	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Citizens	26467	28844	31195	33616	36396	39251	42359	43834	47412	49283	51821	54188
village People	9430	10489	11422	12363	13432	14617	16021	17131	18931	20133	21691	23119
absolute gap	17037	18355	19773	21253	22964	24634	26338	26703	28481	29150	30130	31069
Relative gap (times)	2.81	2.75	2.73	2.72	2.71	2.69	2.64	2.56	2.50	2.45	2.39	2.34

Note: The relative income gap between urban and rural residents is obtained by dividing the disposable income of urban residents by the disposable income of rural residents; the absolute income gap between urban and rural residents is obtained by subtracting the disposable income of urban residents from the disposable income of rural residents.

Data source: National Bureau of Statistics of China.

According to the Nationwide Households by Income Quintile^[7], the per capita disposable income of the rural low-income population in China in 2023 will be 5264 yuan. According to this method, from the internal comparison of rural areas, it can be observed that the absolute gap between the low-income group and the high-income group has gradually increased, and the relative gap has also shown a fluctuating upward trend. It can be speculated that the rural low-income population in China The income gap with the rest of the rural population continues to widen.

Table 2. Statistical data on disposable income of rural residents in China from 2013 to 2024 (unit: yuan)

<div>Year</div> <div>Groups</div>	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
low income group	2878	2768	3086	3007	3302	3666	4263	4681	4856	5025	5264	5410
Lower middle income group	5966	6604	7221	7878	8349	8509	9754	10392	11586	11965	12864	13298
Medium income group	8438	6504	10311	11159	11978	12530	13984	14712	16546	17451	18479	19337
upper middle income group	11816	13449	14537	15727	16944	18052	19732	20884	23167	24646	25981	27060

[7] The Nationwide Households by Income Quintile refers to arranging all surveyed households in descending order of per capita income level, and dividing them into five equal parts on average. Lower middle income group, middle income group, upper middle income group, high income group.

high income group	21324	23947	26014	28448	31299	34043	36049	38520	43082	46075	50136	53805
absolute gap	18446	21179	22928	25441	27997	30377	31786	33839	38226	41050	44872	48395
relative gap (times)	7.41	8.65	8.43	9.46	9.48	9.29	8.46	8.23	8.87	9.17	9.52	9.95

Note: The absolute income gap of rural residents is obtained by subtracting the per capita disposable income of the high-income group from the per capita disposable income of the low-income group; the relative income gap of rural residents is obtained by dividing the per capita disposable income of the high-income group by the per capita disposable income of the low-income group.

Data source: "China Statistical Abstracts" over the years.

In addition, the income structure of China's rural low-income population is relatively single, and most of them come from the primary industry. The development of modern agriculture has also increased the requirements for farmers, and the restrictions have gradually increased. In addition, people with a certain ability to work will choose to go out. Doing odd jobs will lead to unstable sources of income and a higher risk of unemployment; the proportion of policy income in the income of rural low-income population is gradually increasing, and the subsistence allowances, ecological compensation, etc. are all covered.

2.3. consumption characteristics

"The consumption of rural residents and low-income groups should become a more important demand factor driving the economy, and it should also be the top priority of the 'Dual Circulation'." Cai Fang, vice president of the Chinese Academy of Social Sciences, said. With the implementation of support policies, the lives of most groups in absolute poverty or relative poverty have been improved, people's consumption expenditure has gradually increased, and the proportion of service consumption has gradually increased. For the rural low-income population, their living consumption is mainly based on food, clothing and housing, and the consumption expenditure on culture or other living services accounts for a small proportion. Even some people whose income is not as good as consumption expenditure can only rely on assistance to maintain their basic living.

3. The advantages of e-commerce in boosting the development of rural low-income population

Industrial assistance is a measure with the widest coverage among policy assistance. It not only ensures the further improvement and development of rural industries, but also the income of the rural low-income population. However, its current trend is serious, lack of competitiveness, which makes resource utilization is not high. In the era of digital economic development, e-commerce has entered thousands of households, bringing a new economic model to rural development.

E-commerce refers to online business activities with information network technology as the fundamental means and commodity exchange as the core^[8]. Traditional commodity transactions are generally completed offline, which has great limitations for both individuals

and business entities. "Internet +" refers to the integration of Internet technology to create new business forms and models. The intrinsic mechanism of the "Internet +" e-commerce poverty alleviation operation features "e-commerce + farmers" as the main body, with the government playing a guiding, assisting and overall supporting role. Poor households can access an unlimited market space and market information at a relatively low transaction cost through e-commerce platforms and e-commerce operation entities, sell characteristic agricultural products, increase monetary income, save consumption expenditure, achieve the effect of poverty alleviation, and enhance the sense of gain from industrial value. With the further development of commerce, rural e-commerce also has great development potential. It is foreseeable that e-commerce will be an important way to consolidate the achievements of the poverty alleviation battle and the effective connection stage of rural revitalization.

3.1. E-commerce promotes employment and entrepreneurship of rural low-income population

Information asymmetry has always been a major factor limiting rural development, and the development of e-commerce has alleviated this situation and provided a novel and convenient way to sell agricultural products. The scale of rural e-commerce is also increasing. With the help of government policies, more and more farmers have joined the e-commerce market. The expansion of rural e-commerce has further promoted the employment and entrepreneurship of the rural population, especially for the rural low-income population, the threshold required for rural e-commerce employment is relatively low. The improvement of the rural characteristic industrial chain driven by rural e-commerce is based on the local area from the production end to the consumption end. Therefore, low-income people can participate in the development of the entire rural e-commerce, so that the rural manpower can be fully utilized^[9]. At the same time, the development of rural e-commerce is inseparable from skills training, so it will bring opportunities for rural low-income people to learn knowledge. This also lays the foundation for further higher level employment.

3.2. E-commerce improves rural infrastructure construction

Areas with a large number of low-income rural populations generally have poor geographical conditions, and some are located in mountainous areas, so the local infrastructure construction is relatively backward, restricting the local economic development and the development of rural population, and rural e-commerce. On the basis of promoting the further reform and optimization of the industry, the development of the industry has also increased the requirements for infrastructure construction. The storage and transportation of local special products need the support of the platform or the park. Therefore, when developing the local development of rural e-commerce projects, it will further strengthen financial investment to improve the local basic infrastructure, and the development of rural e-commerce will help improve the local logistics system, payment system, network system and power grid.

3.3. E-commerce helps to increase the income of the rural low-income population

With the further improvement of rural e-commerce development, the market participation of rural low-income population has been gradually strengthened, and the gap between urban and rural areas has also been gradually narrowed, which has played a positive role in increasing the income of rural low-income population. At the same time, the process of rural e-commerce development is the process of exchanging information between rural low-income population and the outside world. New concepts and new ways of thinking continue to drive rural low-income population to improve their way of life. In the direction of diversification, the operating income has increased, and the income level of its own living standard has been improved.

4. E-commerce has helped to promote the effectiveness of the normalization of the support mechanism for rural low-income populations

In 2020, the online retail sales of 2,083 counties across the country reached 3,530.33 billion, of which the online retail sales of county-level agricultural products were 350.76 billion, an increase of 29% year-on-year. During the COVID-19 outbreak in 2020, rural e-commerce has highlighted its advantages such as online, non-contact, rapid matching of supply and demand, and efficient connection between production and marketing, and new formats and new models such as live streaming with goods and community group buying have continued to emerge, and cross-border e-commerce has opened the door for rural integration into the international market. In 2020, the Ministry of Finance, together with the Ministry of Commerce and the Poverty Alleviation Office of the State Council, issued the "Notice on Doing a Good Job in the Comprehensive Demonstration of E-commerce into Rural Areas in 2020", which also pointed out that it is necessary to carry out rural construction and develop rural e-commerce, and the central government will also give funds to support the development of e-commerce in rural areas. In recent years, agricultural products out of the village into the city, e-commerce into the rural comprehensive demonstration, e-commerce poverty alleviation, digital rural construction and other work has also been continuously deepened, providing a new way for rural low-income areas, creating an information network of rural agricultural products, driving the rapid development of rural economy.

4.1. It is conducive to promoting the prosperity of rural industries and driving the development of rural economy.

E-commerce is to connect small products with the big market, to achieve the government, experts, platforms, enterprises, cooperatives and farmers six forces to create this model, around the farmers, agriculture, rural areas to create three rural e-commerce, farmers into netizens, agricultural products into online goods, with the help of online stores to sell agricultural products into the city, industrial products online purchase into the village, the urban and rural areas to connect, the resources to share the network marketing system. As an

emerging business format, it can not only sell agricultural and sideline products, help the masses get rid of poverty and get rich, but also promote rural revitalization, which is promising. The development of e-commerce, so that agricultural products through the network to sell to a broader market, with market demand to force the adjustment of the agricultural industry structure, led to the development of e-commerce related storage, logistics and service industries.

On the one hand, e-commerce promotes the rural agricultural industry to increase business opportunities and expand the market, and e-commerce, as a typical form of Internet economy, expands the transaction space and enables farmers to face consumers directly across the country. Firstly, e-commerce provides a platform and channel for obtaining information, with the help of which it can realize the communication of agricultural information and the sharing of knowledge, complete the collection and exchange of market information, and at the same time with its superior data integration and processing capabilities, analyze the market changes in the demand for agricultural products through the data model, so that farmers can grasp the market information in a timely manner, and avoid the agricultural production risks and benefits uncertainty brought about by the uncertainty of demand. Provide accurate and efficient services for the production and marketing of online and offline agricultural products, and promote the improvement of the rural market. Secondly, e-commerce provides rural merchants with a larger platform for the whole country, attracting more customers, enabling them to expand market share and product sales, smoothly realize the sale of products to farther places, and also scale and organize the geographical dispersion, small amounts, and separate agricultural product transactions. The third is interactive sales methods, so that rural merchants through the e-commerce platform in a timely manner to obtain the sales price of agricultural products and opinions from market consumers, is conducive to improving their own services, providing personalized services, establishing a stable customer base, and opening up market visibility.

On the other hand, the promotion of e-commerce platforms has reduced the cost of rural agricultural production as well as the cost of sales. Firstly, the means of production such as pesticides, feeds and disease prevention vaccines in rural agricultural production and aquaculture are crucial to the quality of agricultural products, and for rural aquaculture cooperatives, the cost of large-scale means of production accounts for a high proportion of the total cost. Under the e-commerce platform, help farmers to buy on a large scale, grasp the active bargaining power, enjoy quantitative discounts, and reduce the production costs of farmers' agriculture. Secondly, e-commerce can make full use of the e-commerce optimization of the supply chain to save sales costs and through low-cost docking between farmers and the large market, which solves the problem of difficult sales of agricultural products and farmers' income increase that China's modern agricultural development has been facing. E-commerce can improve marketing efficiency and reduce promotion costs through network marketing, and the direct docking of rural merchants and market demand can reduce the various losses caused by inaccurate information in intermediate links and achieve "zero" Inventory management. E-commerce has rapidly realized the connection between farmers, consumers and the market, improved the transaction efficiency of products, changed the traditional production and sales mode of rural agricultural products, expanded the scope of publicity of regional characteristic agricultural products, expanded sales channels, reduced

the sales cost and circulation cost of rural agricultural products, increased the income of rural farmers, and improved the overall development level of rural low-income areas. In addition, e-commerce can also force the upgrading of rural industrial infrastructure, promote the integration and development of local industries, under the impetus of e-commerce, the development space of rural industries has been further expanded, which is conducive to the prosperity of rural industries, industrial prosperity is the basis for realizing rural revitalization, promoting the rapid development of rural economy, promoting the comprehensive development of rural economy, and realizing rural revitalization^[10].

4.2. It is conducive to solving the problem of rural employment and increasing the income of the rural population.

F-commerce is one of the most direct and effective ways for poor people to get rid of poverty and increase income. The development of rural e-commerce is not only to increase farmers' income through the industrialization of agricultural products, but also to promote the adjustment and upgrading of rural industrial structure and promote the development of new formats, which has produced new changes in the employment choices of rural labor. The boom in e-commerce has created more high-income jobs and more opportunities for low-cost local entrepreneurship for rural labor, as well as accelerated the odds of non-farm payrolls, increasing farmers' incomes and reducing the number of low-income rural populations. Firstly, the "live streaming of goods" in rural e-commerce has created opportunities for rural low-income people to start businesses on the spot. The development of rural e-commerce has realized the local collection of agricultural products, especially the on-site display of fresh agricultural products to improve its market competitiveness, greatly stimulate online sales, help rural low-income farmers online marketing, and actively mobilize the endogenous power of the development of rural low-income populations. Secondly, in recent years, there is a problem in rural areas that is difficult to achieve the supply of labor scale, rural e-commerce through the aggregation of resource elements, promote the optimization of the supply chain, to achieve a more convenient and effective transmission of information, is conducive to the timely reflection of rural labor supply and demand information, and then create conditions for the orderly flow of rural labor, so that villagers can improve the ability to obtain information resources faster, broaden farmers' non-agricultural employment options, thereby increasing the employment opportunities of rural labor. Achieve efficient employment. The last one, rural e-commerce has broken down industry barriers in the region and promoted the further development of the logistics industry. Taking fresh products as an example, due to the short shelf life and difficult quality, the development of cold chain logistics has been triggered, which has greatly increased the demand for rural labor and provided employment opportunities for rural low-income people; and open up the upstream and downstream of the industrial chain, driving the development of agricultural product processing, warehousing, packaging and rural logistics and other industries, providing more rural labor jobs. According to data from the Ministry of Commerce, e-commerce poverty alleviation has driven 7.71 million farmers to start businesses and employment on the spot, driven 6.188 million poor people to increase their income, stimulated the endogenous motivation of low-income people in rural areas to get rid of relative poverty, further promoted economic growth, and achieved

a virtuous circle.

4.3. It is conducive to optimizing the rural industrial structure and promoting the sustainable development of the rural economy.

G-Because agricultural products are often asymmetrical in production and marketing information, rural areas cannot grasp the correct market information in a timely manner and cannot make correct judgments, resulting in poor supply and demand of agricultural products, and the situation of "reducing grain and hurting farmers" occurs. Firstly, interactive transactions make sales orders force the allocation of industrial resources to be readjusted, and guide and optimize the structure of the agricultural industry. Farmers can obtain the sales prices and agricultural policies of various agricultural products in the market through e-commerce to adjust the planting plans and sales plans of farmers, make full use of the advantages of e-commerce in rapidly disseminating information and reducing information asymmetry, make the allocation of resources more reasonable, actively adjust agricultural production methods according to the actual needs of the market, and avoid the problem of short supply or oversupply. Secondly, rural low-income population areas organize targeted, standardized and intensive production according to their own environmental characteristics and characteristic products, with the planting base and production base of the cooperative method as the link, stimulate the expansion of regional agricultural product brands, with the help of e-commerce platforms, relying on the rapid dissemination of the Internet, broaden the communication channels between consumer groups and rural farmers, open market awareness, form characteristic agricultural industrialization, create regional brands, and improve market competitiveness. Thirdly, the application of e-commerce in agriculture has accelerated the process of agricultural industry informatization, which can reduce the cost of logistics and industry exchanges to a certain extent, so that the agricultural structure can be optimized. Fourthly, rural e-commerce has also promoted the development and innovation of traditional industries through the embedding of commercialized industries, enhanced the income of the rural population, and formed the imitation and diffusion of rural internal industries and the siphon of resources outside the village, strengthening the industrial cluster effect of the countryside. The agglomeration of rural industrial clusters based on e-commerce platforms can also promote the transformation of traditional agriculture, promote urban and rural construction, and promote the sustainable development of rural economy.

4.4. It is conducive to improving rural infrastructure and promoting the comprehensive revitalization of rural areas.

H-Firstly, the basic conditions in rural areas are insufficient, the supporting facilities of highways are not perfect, the power grid and communication facilities are weak, the information technology is lagging behind, and the market system of the logistics supply chain has not yet been formed, resulting in the economic development of some rural areas stagnating, there are low-security marginal households and poverty alleviation households at risk of returning to poverty, and the development of rural e-commerce promotes the improvement of rural infrastructure construction and taps the development potential for rural

revitalization. The vigorous development of e-commerce platforms in rural areas has reduced the intermediate links of product circulation in the traditional transaction mode, driven the accelerated development of the rural logistics industry, and reduced the cost of circulation. The second is to promote the informatization of rural public services and improve the management capabilities of rural organizations. China's rural public resources are generally insufficient, rural grassroots management capacity is often low, and the process of introducing e-commerce in rural areas makes public service resources tilt to rural areas, promotes grass-roots managers to change the concept of public service, innovates services and management, is conducive to the improvement of rural organization management capabilities and public service levels, and improves the organizational management foundation for rural revitalization. Thirdly, rural e-commerce is a fundamental breakthrough in traditional poverty alleviation methods, which can greatly improve the participation of the poor and the ability to resist future risks. E-commerce is through the government, experts, platforms, enterprises, cooperatives and farmers six forces to create a new model, through human capital, physical capital and social capital investment in three aspects of investment to achieve rural revitalization.

5. E-commerce promotes the development of the normalization of the support mechanism for rural low-income populations

This paper constructs the development idea of e-commerce to promote the normalization of the rural low-income population from four aspects, the first aspect is to start from the endogenous power of the low-income population and self-help; the second aspect is to actively lead from party building and lead the help; the third aspect is to start from the needs of low-income people and provide precise assistance; the fourth aspect is to start from the characteristic agricultural products and help the industry. These four aspects are relatively independent in actual development, complement each other, promote each other, rely on e-commerce platforms, and jointly help rural low-income people and push forward all-round rural vitalization.

5.1. Establish the awareness of e-commerce assistance for rural low-income populations, and stimulate the endogenous motivation to get rid of relative poverty.

Firstly, the traditional backwardness of rural low-income people has caused the misconception of distrust and insecurity of rural e-commerce, and it is impossible to recognize the benefits and advantages of rural e-commerce to help low-income people, and then it is impossible to improve the enthusiasm of low-income people to participate in e-commerce assistance. From government department staff to grass-roots management personnel in rural areas, especially cadres and first secretaries stationed in villages, it is even more necessary to improve the awareness and responsibility of e-commerce to help low-income people, strive to learn new e-commerce business, improve the popularization of detailed and comprehensive information and materials on rural e-commerce for farmers, help cultivate Internet awareness, reverse the misconception of e-commerce among rural

populations, make e-commerce poverty alleviation enter the rural field of vision with a more reliable and safer image, and enable rural personnel to establish a good awareness of e-commerce assistance, improve the network environment, to create a good e-commerce ecology. Give full play to the positive role of e-commerce in sales, provide strong talent support and attract capital investment, and then drive the industrialization of local characteristic products. The second is to stimulate the endogenous motivation of low-income people to get rid of relative poverty and self-development, enhance their willingness to self-development, and the combination of "Increase confidence + Improve education + Poverty alleviation" can fundamentally help rural low-income people embark on the road of common prosperity^[11]. Actively guide the rural low-income population who need help such as poor households caused by illness, marginal households with low insurance, and poverty alleviation households with the risk of returning to poverty, on the one hand, convey the state's attention, efforts and current results in helping rural low-income populations. The government's policy support, providing rural low-income families with tangible resources such as economic materials, public resources are constantly tilted towards rural low-income people, and social organizations provide professional and non-profit services for rural low-income people, which provide psychological comfort for rural low-income populations, thereby stimulating self-development awareness. On the other hand, cultivate their Internet awareness, improve their awareness of network thinking, and enhance their possibility and enthusiasm for employment and entrepreneurship on e-commerce platforms.

5.2. Implement the "Party building + E-commerce + Assistance" model to help precise help.

Through the implementation of the model of "Party building + E-commerce + Assistance", the development of rural e-commerce to promote the implementation of the rural low-income population support mechanism, the establishment of rural e-commerce party branches, the formation of "branch leadership, party members leading, e-commerce boosting, cohesion to help" low-income population assistance and development path. The first is to give prominence to the leadership of party building and strengthen grass-roots organizations. Through the demonstration of the party member industry and the public commitment of party members, encourage and guide party members to clarify their identity, start their own businesses in the field of e-commerce services, actively support low-income people to join various professional cooperatives, rely on rural e-commerce platforms, boost the network marketing of regional characteristic agricultural products, increase the income of low-income people, promote the development of rural low-income population, and drive the rural economy. The second is to strengthen e-commerce support. With the help of the advantages of stable sales of e-commerce platforms, make full use of the advantages of regional characteristic agricultural products, promote the optimization, transformation and upgrading of agricultural industrial structure, and stimulate the vitality of rural economy. On the one hand, we should strengthen the construction of communication network infrastructure and better realize the integration of agriculture, farmers and modern information technology. Improve the level of informatization of agricultural production in China's rural low-income areas, so that the network can benefit thousands of households. This can expand the horizons

of farmers in rural low-income areas, let farmers sense the changes in market demand in time, and better develop modern agriculture that meets market demand, such as organic agricultural products and sightseeing agriculture. In order to obtain higher economic income, this requires an efficient information transmission network. On the other hand, we will build a logistics distribution system, improve rural e-commerce service outlets, set up village-level logistics start-up stations, increase the allocation of service personnel and service tools, realize e-commerce village communication as soon as possible, and stimulate the going out of local agricultural products and industrial products. Due to the relatively backward transportation conditions in low-income areas in rural China, logistics development is limited. The backward logistics conditions have led to the fact that agricultural products are no longer competitive when they reach the market, resulting in the inability to improve the income level of farmers. The government has improved distribution efficiency, reduced logistics costs, formed a modern logistics distribution center, optimized distribution links, and encouraged enterprises to set up express delivery agencies in rural low-income areas to effectively solve the problem of slow sales of agricultural products^[12]. Rural e-commerce talents are also crucial. Carry out e-commerce skills training, encourage and guide young and middle-aged laborers with low-income populations to return to their hometowns to start businesses, and continuously improve the comprehensive quality of rural e-commerce service personnel. The third is to consolidate the foundation for increasing income and let the low-income population "remove from the poverty list". Pay attention to the guiding role of party organizations and the radiation role of rural e-commerce, and strive to achieve 80% of rural low-income people to increase their income through participation in e-commerce. First of all, demonstration leads to increase income. Each party member contacts at least two low-income households, actively guides and leads low-income households to develop the e-commerce industry, and helps realize the online sales of their agricultural products and increase their income. The second is to give play to the leading role of e-commerce radiation and promote the increase of income of low-income people in rural areas. Through targeted subsidies and other policies, it is promised that e-commerce will give priority to the acquisition of support products, give priority to absorbing low-income population to work, actively organize and support low-income people to adjust the industrial structure, help the income population to integrate into all aspects of e-commerce development, and achieve efficiency and income. Finally, make full use of local agricultural products and create planting demonstration bases to promote income growth. According to the nature of the industry, regional characteristics and the establishment of party groups, demonstration bases and demonstration planting cooperatives will be created to enrich e-commerce products and promote farmers' income.

5.3. E-commerce boosts on-demand assistance and accurate classification and assistance mechanisms.

Firstly, the e-commerce platform sets up a special channel for it to carry out help marketing, donate help, sales support, and further develop to industrial support, employment assistance and entrepreneurial support. First of all, establish a corresponding support group of village cadres to visit and investigate the needs of low-income people in rural areas. Due to the different factors that cause poverty in rural low-income populations, and the support

needs of rural low-income populations are also different, it is necessary to pay special attention to the needs of people who have returned to poverty due to illness, disability and disasters, and focus on low-income households, difficult laborers who cannot be employed, and breeding households with difficult products caused by major risks such as the new crown pneumonia epidemic, and effectively carry out targeted assistance for rural low-income people to help according to their needs and accurately classified assistance, so as to promote income growth. Secondly, according to the strength of the rural low-income population labor force determines their different types of support needs, according to whether the rural low-income population has a labor force, it is divided into strong labor, weak labor force, no labor force, so as to facilitate the use of e-commerce platforms to provide targeted and differentiated assistance measures. For the low-income group of strong labor force, e-commerce is used as a driving force to stimulate the improvement of human capital of low-income people of strong laborers. With the help of e-commerce platform implementation assistance, from free training, information services, all-round and multi-angle to help low-income people from e-commerce work, give priority to the placement of capable low-income population to the e-commerce business incubation base, through e-commerce job introduction, vocational skills training, entrepreneurship training, actively guide into the e-commerce industry services, employment and entrepreneurship support. For the weak labor force and low-income population, with e-commerce as the network, vigorously promote the development of e-commerce service industry, support the low-income people of weak laborers to provide rural e-commerce with labor services such as packaging, warehousing, logistics, as well as demonstration planting bases and planting cooperatives to provide services, so that the low-income people of the weak labor force can find suitable employment, entrepreneurship direction and position, promote the low-income masses of the weak labor force to solve the employment nearby, on the spot, and solve the problem of sustainable livelihood of the low-income population. Relying on the rural e-commerce platform, create its own e-commerce production mode to benefit the people's livelihood and bring development momentum to the realization of rural revitalization. For the elderly, children, the disabled without labor, and low-income people who are in difficulty due to the causes of illness, it is necessary to further implement comprehensive social security measures such as minimum guarantee, medical care, old-age care, and assistance and support for the extremely poor people, and strengthen the level of security^[13].

5.4. Brand building to upgrade the value chain and give full play to the effectiveness of e-commerce assistance.

E-commerce to help rural low-income population support is a sustainable development route, "Agriculture + E-commerce" large-scale development involves government assistance, enterprises, farmers production, e-commerce platform, express delivery and transportation led by a variety of aspects to help coordinated development. Relying on the policy support of government assistance, with the support of agricultural products with rural economic development characteristics, and with the help of the advantages of regional farmers' planting and breeding resources, the vigorous development of rural e-commerce will be realized, the employment of low-income people in rural areas will be driven, the income will be increased,

the rural economic development will be promoted, and the overall revitalization of rural areas will be helped. There are many kinds of characteristic agricultural products in various regions of China, some of which have opened up their popularity in the domestic and foreign markets, but for most rural areas, due to the impact of various factors such as insufficient production scale, uneven product quality and inaccurate positioning, the products provided by the e-commerce platform are not differentiated from the products provided in other regions, and the advantages of the rural e-commerce platform cannot be maximized^[14]. Therefore, the planting of agricultural products is the foundation, quality is the guarantee, and the promotion of the brand is the key, so the relationship between the three is very close and the linkage development should be realized.

The first is to tap the advantages of their own products in rural low-income areas, shape geographical landmark products from the quality, and provide an essential foundation for the development of e-commerce^[15]. Take this as a breakthrough point to increase publicity, take quality, efficiency and market competitiveness as key tasks to grasp, improve the e-commerce operation system, enhance the characteristics of the existing e-commerce industry, further based on local resource conditions, rationally layout characteristic industries, and accelerate the optimization and upgrading of rural industries.

Secondly, because green, healthy and pollution-free agricultural products have been greatly favored in the market, it can be used as the beginning of the development of characteristic agricultural products, further create the characteristics of agricultural products, accurately locate agricultural products, comprehensively do a good job in publicity and promotion, give full play to the advantages of e-commerce, expand sales, and establish an online and offline sales system of "the same model, the same price, the same quality, and the same service" to show the brand culture for customers, enhance the consumer experience, and strengthen the brand trust^[16]. In addition, we will enhance the development of the value chain of the e-commerce industry in low-income areas, use the help of e-commerce cultural performance activities, strengthen the influence of celebrities and Internet celebrities to live broadcast goods, expand the overall scale of the rural e-commerce industry, and at the same time allocate the benefits between farmers, enterprises and anchors with goods, and promote the sustainable development of e-commerce centered on characteristic agricultural products. After the brand value of "Agriculture + E-commerce" has been recognized, it has taken the development model of cross-border e-commerce. Use the principle of industrial income increase to promote the "going out" of regional characteristic agricultural products and e-commerce, and ultimately achieve incremental development.

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