



# Exploration on the Establishment of Endogenous Development Framework in Rural China

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**Abstract.** China has gradually achieved a smooth transition from concentrating resources on poverty eradication to comprehensively promoting rural revitalization, representing a historic shift in the focus of the “*San Nong*” work (agriculture, rural areas and peasants). The recent policy documents show that rural revitalization needs to adhere to the farmers as the main body and activate the endogenous power of rural revitalization. Therefore, the endogenous development model is of great practical significance for rural areas to achieve revitalization and consolidate the results of poverty eradication. This paper will develop a normative model for the characteristics and success of the endogenous development strategy by comprehensively analyzing recent government documents on rural revitalization, theoretical constructs of endogenous development, and case studies. First, this paper will review the current status and development of research on rural endogenous development models at home and abroad, and summarize and analyze the existing research findings and shortcomings. Second, the paper will elaborate on the characteristics that rural endogenous development entails and include them as judgment criteria in the model. Then, the paper will establish the success criteria of the endogenous development model and elaborate the economic and social implications behind them. Finally, the paper describes the dynamic nature of the model and its limitations.

**Keywords:** Endogenous development · Rural revitalization · China · Rural development

## 1 Introduction

Since the 18th National People’s Congress of the Party, China has gradually achieved a smooth transition from concentrating resources on poverty eradication to comprehensively promoting rural revitalization and promoting a historic shift in the focus of the

“*San Nong*” (agriculture, rural areas and peasants). Throughout the process, endogenous development is consistently an important approach to rural development and an effective way to achieve sustainable rural development. Enhancing the endogenous development capacity of farmers for rural revitalization and promoting the modernization of agriculture and rural areas has become an important strategy for the progress of the “*San Nong*” endeavor.

In 2016, the No. 1 Document of the Central Government proposed to “enhance the endogenous power and unleash new momentum for rural development” [7]. The requirement to integrate internal and external resources for rural areas and retain rural identity, thus “activating the endogenous development momentum of agriculture and rural areas” was also mentioned in the No. 1 document in 2017 [8]. *The Strategic Plan for Rural Revitalization (2018–2022)* proposes to implement an endogenous development strategy to promote rural revitalization [19]. In the recent past, the No. 1 document of the Central Government in 2023 again emphasized on enhancing the endogenous development momentum of the areas and people who have escaped from poverty [10]. The relevant policy documents show that rural revitalization needs to adhere to the farmers as the main body and activate the endogenous power of rural revitalization. Therefore, the endogenous development model is of great practical significance for rural areas to achieve revitalization and consolidate the results of poverty eradication. This paper will develop a model to determine whether the region of interest has adopted an endogenous development strategy and its success by comprehensively analyzing recent government documents on rural revitalization, theoretical constructs of endogenous development, and case studies. First, this paper will review the current status and development of research on rural endogenous development models at home and abroad, and summarize and analyze the existing research findings and shortcomings. Second, the paper will elaborate on the characteristics that rural endogenous development entails and include them as judgment criteria in the model. Then, the paper will establish the success criteria of the endogenous development model and elaborate the economic and social implications behind them. Finally, the paper describes the dynamic nature of the model and its limitations.

## 2 Literature Review

The endogenous development model can be traced back to the early 1970s, when the United Nations Social and Economic Council proposed five criteria for the implementation of projects in underdeveloped areas, namely, that the general public should enjoy the fruits of social development on an equal footing, that residents should be involved in the development process, that specific administrative measures for development must be strengthened, that urban and rural infrastructure should be integrated, and that environmental protection should be thorough [27]. In 1975, the Dag Hammar skjêld consortium formally introduced the concept of endogenous development. It consists of the following five points: development can only be driven from within society, elimination of absolute poverty, self-reliance, ecological protection, and structural changes in the economy [27]. In the 1980s, European scholars enriched the theory of endogenous development, emphasizing the full use of intra-rural resources and local mobilization.

Regarding the characteristics of the endogenous development model, Ploeg and Long identified the degree of local social mobilization as a characteristic of endogenous development [2]. Garofoli argues that the ability to innovate at the local level is extremely important for endogenous development, and that the capacity of socio-economic systems, the ability to respond to external challenges, and the promotion of social learning are essential attributes [3]. According to Kenichi Miyamoto, endogenous development needs to include four elements: localized development, environmental protection, cross-industry development, and the establishment of a resident participation system [17].

Regarding the application of the endogenous development model, domestic and foreign scholars have come to study it with different purposes. Western scholars believe that developing the rural area is not only about economic development, but also about achieving an integrated improvement of the rural environment, welfare, education and culture as well as the maximum flexible application of resources and technology, and that the endogenous development model can better achieve rural development and enhance the capacity of the rural area to innovate within the local level [3], so that the benefits of development are retained locally [2].

This distinguishes it from other theories that incorporate an endogenous dimension, such as endogenous growth theory, which is often mentioned alongside endogenous development. As shown in Li's study, the three major elements of development identified by endogenous growth theory are capital, human and technology, with technology being the source of the economy's capacity to grow self-sustainably without relying on external forces [13]. The difference between this theory and the endogenous development model, as can be seen, is that it limits the concept of development to the framework of economic rationalism, whereas endogenous development focuses not only on concrete, calculable aspects of development, but also takes into account subjective, intangible needs. In addition, endogenous growth theory indicates the priority of "technology" over other drivers of development, demonstrating its position as a theory of growth strategy. This contrasts with the endogenous development model, which not only treats the drivers of development as equal, but also provides guidance for judging the social costs of development and the distribution of development outcomes.

Chinese scholars have focused more on the application of the endogenous development model to rural areas from the perspective of the problems of practical development in rural China. In the process of urbanization, the issues of relative decline in the status of rural areas, excessive loss of rural resources, and underdevelopment of modernized rural resources have become increasingly prominent, and thus taking the path of endogenous development is an important way to truly achieve rural revitalization as well as autonomy [22].

At present, China has overall entered the stage of developing agriculture through industry and leading rural areas through urban areas. However, the long-pursued exogenous development relying on development assistance from the government and foreign enterprises has failed to effectively solve the problem of sustainable and stable rural development; in this context, the endogenous development is turning more and more

obvious, and endogenous development is worth exploring [6]. In this context, endogenous development presents the most value for discussion as a theoretically viable alternative. Wang also argues that due to the path dependence of intervention and the lack of development experience, the concept of exogenous precision administration is applied to the practice of rural common prosperity of farmers, and as a result, the situation of “internal” immobility is encountered despite the internal and external coordination [23]. Endogenous development, as a model that limits the scope of coordination and activation to the “internal”, has the potential to reverse this situation.

It is clear from the above literature that studies on the endogenous development model are more macroscopic. In addition, the characteristics of the regions that are adopting the endogenous development strategies and the criteria for assessing their development outcomes are not detailed enough and are difficult to measure in terms of operability. More importantly, the above studies cannot match the current situation of China’s rural development. This paper sets up a more detailed and multi-dimensional model of the characteristics and criteria of successful endogenous development in accordance with the situation of China’s rural development at the phase of shifting from poverty eradication to rural revitalization, so as to provide a reference for the practice of endogenous development and consolidation of rural revitalization in China.

### 3 Methodology

The methodological framework used in this paper is a desktop research approach. For the collection of materials, we used the method of source triangulation. Specifically, the paper analyzes the following three authoritative releases whose research specifications complement each other: 1) official releases by the Chinese government and international organizations, 2) theoretical research papers, and 3) empirical research papers, including case studies and review studies. This is intended to ground the model developed in this paper in its comprehensive orientation, and also to add weight to the research task of making the model fit the characteristics of rural development in China.

In addition to this, we employ semi-literal replication in establishing criteria for measuring the characteristics of endogenous development. Continuing with the three objects of analysis mentioned, we believe that by capturing the similarities or differences between the characteristics of the areas of interest in the case studies of endogenous development and the general characteristics of rural China, the position of the paper will be formulated in interaction with both theoretical studies and the analysis of official documents. The paper does not fully reproduce the research methodology of the relevant case studies but only looks at the areas of interest in the study. This is because the paper is devoted to the establishment of endogenous developmental characteristics and results of ideal-typical, while the methodology of the case study is centered on the facts within the region of interest, thus making the basic positions of the two research methods somewhat mutually exclusive.

## 4 Characteristics to Be Satisfied by Endogenous Development

### 4.1 The Full Presence of Residents and Measurement

The measurement of “full presence of residents” in this criteria comprises two aspects: on the one hand, the participation of residents in the decision-making process of rural development, the participation of residents in the management and production of local industries on the other. The report of the 20th CPC National Congress identifies the development of the “full process of people’s democracy” as an important element of the essential requirements of Chinese-style modernization. The “full process of people’s democracy” is a form of democracy in which all people can participate, with consultative democracy and democratic decision-making as its crucial links. General Secretary Xi Jinping stressed that “complete institutional procedures and participation practices should be formed to ensure that people have the right to extensive and continuous in-depth participation in their daily political life” [14]. In terms of the analysis of the subject dimension, endogenous development theory recognizes the primary position of farmers in rural development, encourages them to take part in the decision-making process of rural development and express their reasonable opinions in the whole process of development, so as to strengthen the will of self-change and self-development, and eventually enable each participant to achieve the organic unity of development [23]. This view is consistent with the descriptions of the characteristics of endogenous development by numerous scholars and transnational development organizations [12, 27].

For the measurement of residents’ participation in rural development decision-making, the villagers’ committee’s democratic decision-making on relevant issues through the villagers’ assembly or the villagers’ representative assembly in accordance with laws, regulations and legal procedures has been the main benchmark. It reflects the characteristics of institutionality, organizability and popularity, and has incomparable advantages. First of all, there are comprehensive legal and institutional safeguards for the democratic decision-making of villagers, and the composition of the meeting, the election of villagers’ representatives, consultation and discussion, voting methods, implementation and oversight are all subject to the supervision and constraints of the respective legal systems. Secondly, villagers’ committees, as organizations with mature development, comprehensive functions and complete coverage in the village area, are the central parts of performing various functions. Finally, villagers’ committees, as grass-roots mass self-governance organizations, have a broad basis of masses, which makes the participation of all villagers in rural development consultation and decision-making operable.

As mentioned above, rural residents are the main participants in rural revitalization, and only their participation and leadership in rural revitalization is legitimate and justifiable. Therefore, in our model, the percentage of the number of local villagers participating in rural development projects is a valid measure of villagers’ participation in management and labor. Gong and Chen et al. conducted a thematic survey and in-depth interviews with 1023 farmers in 71 villages in Hubei Province from June to September 2018 under the theme of “farmers’ participation in rural revitalization” in 2019. Based on their findings, it is clear that farmers’ participation is positively related to the probability

of successful rural revitalization. The data of the 49 successful samples of rural revitalization studied in Hubei Province showed that 83.68% of the villagers were very active and relatively active in participation [9]. Therefore, the number of farmers involved in rural development projects needs to be in the majority. Specifically, an absolute majority of those involved in labor and a relative majority of those involved in management are necessary features of the endogenous development model.

The specific measurements are as follows. All development-oriented projects (i.e., encouraged by the state) in the region within the measurement time period need to have all of the following characteristics: First, the project or company is established through a vote of the villagers' committee or village representative assembly. Then it is a measurement of the percentage from the decision-making level to the general employees whose *Hukou* is local. The bottom tier employees need to be greater than 90%, as the work is labor-based, which can directly enhance the value of the previous work as purely agricultural labor, while the remaining 10% leaves room for mobile employees. The decision making level then needs to be greater than 50%. This is mainly a consideration of organizational economics. Currently a person or entity that owns more than 50% of the equity in a joint stock industry is a majority shareholder and has the ultimate decision-making power. Another consideration is that managerial work requires characteristics of high coordination and experience that generally need to be complemented by an urban population (specific percentage criteria vary from place to place and require further research by scholars). If the above requirements are met, then the development model in the interested region is considered to have "the full presence of residents".

## 4.2 Activation and Coordination of Endogenous Resources

In the context of rural revitalization development, the dual structure of urban and rural areas is gradually broken down, and the two-way flow of resources between urban and rural areas is becoming increasingly common. Many new businesses have emerged in rural areas, generating a strong demand for rural land, especially land for construction. This has challenged the way of resource allocation formed in the urban-rural dualistic system in the past. The inefficient use of land, people and capital is the main cause of the low level of utilization of rural resources. To achieve endogenous development in rural areas, the activation of endogenous resources is a priority. Endogenous resources can be understood as resources that already exist in the area and belong to local residents but are not activated because they are considered unproductive. The activation of these resources is a characteristic and prerequisite for endogenous development [12].

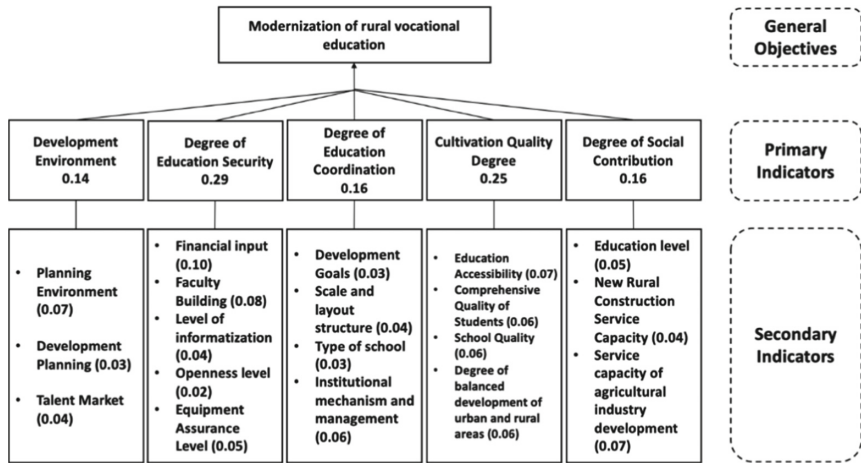
At present, rural revitalization investment projects are generally based on the study of land and the application value of land. As far as rural collective land is concerned, the current national policies and regulations, as well as the ways and means of application are a novelty. Clarifying the property of land is the basis and prerequisite for reducing idle land and planning and operating land. Rural land is divided into two categories: collective construction land and industrial land. At present, the utilization of industrial land is the new trend of rural revitalization, and wasteland is an important source of industrial land. Therefore, the significant reduction of idle land is a reflection of the

high utilization rate of rural land resources, which can be one of the criteria to infer the activation and coordination of endogenous resources.

The core of rural revitalization is in industry, and the development of industry needs financial support. At present, the sources of funds are mainly divided into two categories, namely, national special subsidy funds and enterprise investment, among which the participation of enterprises is guided and supported by policies. According to relevant documents issued by the State Council, public support and public services, etc. are the responsibility of the government, while commercial investment projects are the responsibility of enterprises [18]. Reliance on government responsibilities and policies to make full use of state and enterprise funds is the main approach to achieve industrial development in rural areas. Therefore, the efficient use of funds is a prerequisite for industrial development and the manifestation of resource utilization. Farmers' issues are the root of agricultural and rural issues, and rural revitalization should adhere to the concept of people as the core, which requires giving full play to the role of farmers. On the one hand, industries can only be developed when they belong to farmers, so that villagers can devote themselves to the development of industries, concentrate on the increase of income, thus accelerating the revitalization of villages. On the other hand, familiarity and convenience are important factors that give villagers the advantage of participating in the industry of their village, while employment is fully realized. Thus, a significant increase in the labor participation rate of villagers in the region is able to reflect the activation of endogenous human resources, i.e., the proportion of the people in the region who are engaged in labor or seeking labor opportunities as a percentage of the total population. In summary, if the region of interest shows the following characteristics during the measured time period: a significant reduction in idle land; efficient use of capital; a significant increase in the labor participation rate of villagers in the region. Then we can determine that the endogenous resources of this region are activated and coordinated.

### **4.3 Continuing Development of Rural Vocational Education Toward Modernization**

Vocational education enables the mobilization of people's initiative and the development of rural areas in accordance with local conditions. The improvement of the level of vocational education in villages can attract corresponding enterprises to settle in, providing conditions for the integration of industry and education and industrial clusters. The increase in the number and quality of enterprises provides a large demand for jobs, which is conducive to the attraction and return of talents and curbs the talent outflow. Retaining rural human resources by providing quality education lays the foundation for the consumer demand needed for industrial development and boosts the economic status of the rural areas. At the same time, the improvement of vocational education level will provide a new development direction for rural youth, relieve the pressure of academic students, increase technical talents, improve the talent structure, and drive innovation and entrepreneurship. In addition, vocational education provides farmers with opportunities to improve their comprehensive quality, which facilitates their work efficiency and income level, eases social conflicts, improves the quality of their participation in political activities, and increases the efficiency of self-determination.



**Fig. 1.** Indicators and weight distribution of rural vocational education modernization index system at all levels [21]

It is thus clear that vocational education, to which the state attaches considerable importance, provides the source of power for endogenous rural development, and its continuous development in terms of quality should be a characteristic of endogenous development.

The construction of the modernization index system of rural vocational education is a basic measure of whether rural vocational education is modernized or not [21]. As shown in Fig. 1, Qi and Wang used hierarchical analysis and Delphi method to derive the indicators and weight distribution of rural vocational education modernization index system at all levels in a more scientific way. The modernization of rural vocational education is a multi-level system project, and it is difficult to work alone, so all relevant elements need to work together to support the modernization of rural vocational education [21].

Since the modernization indicators of rural vocational education involve a variety of related elements, the evaluation process is somewhat complex and needs to be evaluated annually in the context of the actual local situation. Specifically, if the secondary indicators show an increase in performance compared with the previous year and none of the indicators decline, it is considered that rural vocational education is continuously developing towards modernization. This assessment method incorporates the dimension of coordinated development of each element.

#### 4.4 Environmental Protection

Rural revitalization is not just a whim. It should also be sustainable. Gro Harlem Brundtland defines sustainable development as “development that meets the needs of the present without jeopardizing the ability of future generations to meet their needs” [1]. It proposes strategies and models for long-term human development from the perspective of environment and resources, especially emphasizing the importance and necessity of environmental carrying capacity and sustainable use of resources for the development



process [5]. This fits with the characteristics of the endogenous development model described in the Dag Hammarskjöld Foundation's *"Future of the World"* UN report [27]. In rural revitalization, we have to deal with the relationship between economic development and environmental protection. This is because the environment affects all elements of rural development and determines whether it can be developed in a long and sustainable manner. If waste is not properly disposed of, it not only affects the living and sanitary environment of the local population and the appearance of the local village, but also limits the development of local tourism resources as the current major rural-centered income generating project [5]. Wild species other than crops not only constitute the biological resources on which humans depend in various ways [20], but also indirectly influence the development of rural tourism as mentioned above. Distinctive species, whether as ornamental or cash crops, are necessary to contribute to the success of the rural "Featured Town" that are so prevalent today.

More importantly, rural areas are an important source of greenhouse gas emissions in China, and an important field for China to promote carbon emission reduction actions to achieve carbon peaking and carbon neutral goals. In the process of comprehensively promoting rural revitalization, the issue of rural carbon emissions must be taken into account, and whether this issue can be properly resolved directly determines whether rural areas can develop sustainably and with high quality [29]. Therefore, the dimension of environmental protection will be measured by the following criteria: development plans carried out in the area within the time scale of interest generally have explicit waste disposal plans; no species in the area is extinct or significantly reduced; and no significant increase in carbon emission levels. If all of the above criteria are met, then the region can be deemed to have met the characteristics of environmental protection in the endogenous development model.

## 5 Criteria for Determining Successful Endogenous Development

### 5.1 Localized Distribution and Equal Access of Benefits to the Public

According to the analysis of the institutional advantages of the endogenous development theory over the external administrative model made by Wang, the localization of the distribution of outcomes is one of the five elements included in the endogenous development of rural areas [23]. In his paper, Wang states that this element "emphasizes the principle of distribution of endogenous development and responds to the question of the effectiveness of endogenous development" [23]. The model developed in this paper therefore uses this as one of the criteria for judging the effectiveness of endogenous development designs. However, as Huhe and Chen's research on rural grassroots governance suggests the micro interest circles created by "specific trust" among individuals, can be detrimental to the localization of development outcome [11]. Therefore, in this paper, the additional criterion of "equal access to the benefits of development for all" will be added to the dimension of distribution of results. This echoes the consensus that should be reached for project development in underdeveloped areas, as advocated in the 1971 report of the United Nations Social and Economic Council [27].

After the criteria itself is clarified, the biggest challenge is to establish a mechanism to quantify the criteria. According to General Secretary Xi Jinping in his article *"Solidly*

*promoting common prosperity*”, the common prosperity of all people should achieve “substantial progress” within a measurable scale [24]. With this as an orientation to establish a quantitative mechanism, the model set up in the paper will directly seek to analyze the substantive aspects of development. In the paradigm of macroeconomics, GDP is a commonly used index that directly measures the degree of development of a region and indirectly infers the standard of living of the population by measuring the output contributed by a region over a given time scale. As such, it has the potential to serve as a proxy for overall regional economic trends. However, GDP has also been criticized by many scholars as an indicator that is too general, weak in explanatory power, and derailed from the actual living standards of the population. Especially for endogenous rural development, scholars have pointed out that the increase in GDP should not be seen as a development outcome, but as an addition to the outcome of the improvement in the integrated standard of living [27]. Therefore, the model in this paper will follow the same logic of comparing the trends in the contribution of regional output with the trends in per capita disposable income, i.e., the changes in regional economic development with the changes in the living standards of the population. If the two curves are found to have a similar shape in the observed time scale, i.e., if they show an equiproportional upward or downward trend, it can be inferred that the benefits of endogenous development are localized in a specific proportion.

In contrast, the quantification mechanism of “equal access of the general public to the fruits of development” will adopt the less controversial and internationally used indicator, the Gini index, which is commonly used to measure the income disparity of the population in a region. This index has two advantages when applied in the model. First, it has an intuitive mathematical meaning and requires the direct input of disposable wealth per capita. This allows the trend of the coefficient to be directly related to the economic trends of the region. Second, as Zhu mentioned in his research in 2016, China’s rapid economic development has come at the cost of a serious wealth gap in rural areas caused by the unclear distribution of land benefits [28]. Endogenous development in China, as a model used mainly to develop rural areas, should take this gap into account. Therefore, it can be inferred that the benefits of endogenous development are “equally accessible to the masses” if the Gini index remains the same or decreases at the end compared to the beginning of the selected time scale.

## **5.2 Protection of Landscape and Traditional Production Activities**

In the last two decades, a large number of case studies of endogenous development in Southern and Eastern Europe have clearly indicated that the preservation of traditional culture and landscape should be considered as an important dimension of development effectiveness. For example, in a case study conducted by León and González et al. in 2012 on the development model of the Gran Canaria region located on the Spanish island of Canary, “restoration of traditional activities of rural societies” and “preservation of the land landscape and ecosystems” as endogenous development objectives to facilitate the arrival of urban populations for vacations and consumption are extensively elaborated in the text (this idea is in line with many studies such as Becerra, Bravo et al., 2010 [4]). Their study argues that the one-way flow of factors of production from rural to urban

areas due to the siphoning effect of cities, and the aesthetic shift of urban people towards the landscape and terroir of rural areas are two trends that need to be reconciled [12].

China's rural development endeavors are facing the same, if not more serious, situation. Li and Lee's survey of a sample of 13 villages in eastern China revealed that traditional rural production patterns have been replaced or severely weakened in highly industrialized as well as poorly industrialized villages as a result of China's development strategy pursued in the middle and late 20th century based on the principles of rapid industrialization and collectivization of agricultural production [15]. In addition to production methods, China is likewise facing challenges in the conservation of rural land landscapes. As Zhu points out, rural non-agricultural development, while improving the quality of village life, has also led to the fragmentation of industrial landscapes and farmlands [28]. Therefore, in our model, the protection of the landscape and the preservation of traditional production activities will be the second criterion to determine the effectiveness of the endogenous development design.

The quantitative mechanism established for it has less mathematical significance than the distribution of results. This is because "tradition and landscape" itself, as a culturally rooted concept, is difficult to find universally accepted indicators. Regarding the "conservation of landscape", this paper decides to continue Professor Zhu's logic by identifying the amelioration of the phenomenon of "fragmentation of industrial landscape and farmland" as the fulfillment of this criterion. Specifically, the joint family production responsibility system introduced since 1983 has stimulated farmers to increase agricultural productivity, but it has also led to a widespread phenomenon of "piece-meal farming", in which limited farmland is further divided and allocated to villagers' families. This has hindered the installation of agricultural infrastructure, thus hindered economic development. At the same time, the displacement of collective manufacturing by private external investment in commune-dominated industrial zones has also resulted in a fragmented and dysfunctional industrial landscape. This has hindered the development of tourism services, a business that requires the integration of land resources, as mentioned above [28]. Therefore, the alleviation of the "fragmentation of industrial landscapes and farmlands" is a characteristic that will be observed when endogenous resources are activated and a prerequisite for maximizing economic efficiency, as will be mentioned later.

The conservation of traditional production activities, on the one hand, is strongly correlated with the amelioration of farmland and industrial fragmentation. As Li and Lee 2021 point out, "semi-industrial" villages, have also modernized [15]. These villages have been able to preserve their traditional rural production patterns in the face of the less fragmented character of the industrial landscape brought about by the more moderate industrialization drive. On the other hand, there is the dimension of culture. According to Xinhua News Agency reporter Yu Wenjing's interpretation of the *National Rural Industry Development Plan (2020–2025)* released by the Ministry of Agriculture and Rural Affairs, the idyllic landscape and farming culture are important resources for promoting layout optimization and differential development [25]. It is not only an additional result of the integrated development of the area, but also a common characteristic of rural areas with a well-developed rural leisure tourism industry, echoing the profile of the scholars mentioned above. Taking these considerations into account, the

model developed in this paper considers that the criterion of “protection of traditional production activities” is met if there is no significant reduction or disappearance of any of the existing primary industries in the observed time scale.

### 5.3 Maximization of Economic Efficiency

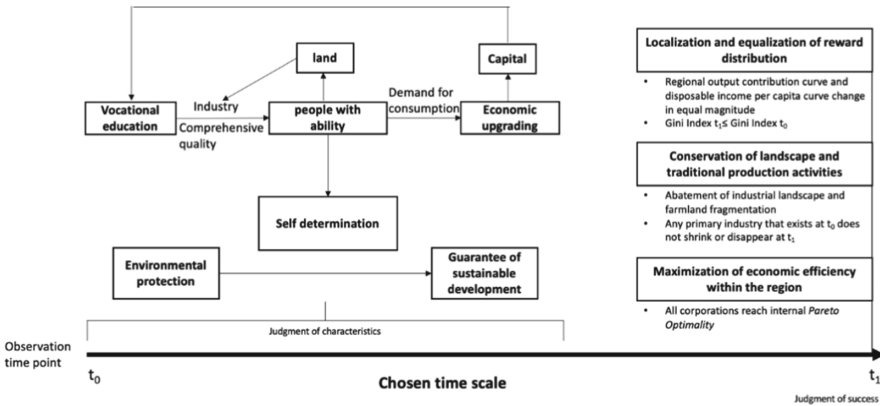
If the first criterion measures the distribution of results, and the second the pathway to the results, then this criterion is the dimension of the results itself. According to the definition, endogenous development is directed toward “maximizing the economic benefits of the region” [27]. This distinguishes economic efficiency in the sense of the endogenous model from other macro theories or external development models, i.e., the endogenous model is able to accomplish economic efficiency maximization because its scope of concern is limited to a smaller area. Therefore, in our model, the maximization of economic efficiency within the region of interest will be used as the third criterion.

For the quantification mechanism of economic efficiency, scholars have argued for the most appropriate methods at different levels. The model set up in this paper will determine whether a region has achieved economic efficiency maximization by determining whether a development venture or enterprise has achieved *Pareto optimality* or not. Specifically, the Pareto optimality refers to an ideal state of resource allocation in production. In this state, there is no alternative allocation pattern that can use fewer resources than in that state to reach greater economic utility than in that state. The organization-level economy is selected for assessment because the scale up of the rural economy usually involves the coordination and cooperation of economic organizations such as enterprises, farmers, bases, and cooperatives [16], and therefore, the organization-level quantification mechanism can capture most of the economic and production factors.

In this model, if all development-oriented projects (i.e., encouraged by the state) in the region of interest during the measurement period achieve the internal production optimum, i.e., maximizing the output of available production resources, and the internal distributional optimum, i.e., maximizing the sum of the individual surpluses returned by the human costs of all organizational members, at a certain point in time, then the region can be considered to have met the criterion of “economic efficiency maximization” (Fig. 2).

## 6 Conclusion

The endogenous development of rural areas pursues the sustainable value creation of the internal resources of the countryside in an environmentally friendly and efficient manner by the internal population driven by the stimulus of certain dynamics [26]. For the criteria mentioned above, they actually reinforce each other. The development of investment vocational education can continuously cultivate capable elites for rural revitalization and improve people’s self-determination; the formation of industrial clusters can build regional brands and population scale; the activation of coordinated endogenous resources with human as the main body can further revitalize land elements, reduce wasteland, and build industries suitable for the countryside that meet people’s needs. All these can improve the regional economy, and industrial development can in turn drive



**Fig. 2.** Normative model for the characteristics and success of the endogenous development strategy

the upgrading of vocational education. In these processes, a virtuous circle can be further formed by paying attention to environmental carrying capacity and sustainable use of resources. This paper provides basic ideas for determining whether or not a rural area is oriented toward “endogenous development” and for measuring the extent of its development. Nevertheless, some of the measures in the paper are not specified to the extent of a specific numerical threshold and need therefore to be standardized by more quantitative studies. In addition, the model needs a large number of sample cases to further verify its accuracy and validity. Future researchers should further improve the measurement indicators developed in this paper and the interactions among indicators from a multidisciplinary perspective. Discussion and demonstration of the conduction logic between them are also deemed necessary, so as to provide sustainable and scientific programs for the design of rural revitalization.

**References**

1. Brundtland, G. (1987). (rep.). *Our Common Future*. Tokyo, Japan: WCED.
2. Barke, M., & Newton, M. (1997). The EU leader initiative and endogenous rural development: The application of the programme in two rural areas of Andalusia, southern Spain. *Journal of Rural Studies*, 13(3), 319–341.
3. Boisier, S. (2005). Is there room for local development in a globalized world? *CEPAL Re-view*, 2005(86), 45–60.
4. Becerra, A. T., Bravo, X. L., & Gomez, E. G. (2010). Planning and neo-endogenous model for sustainable development in Spanish Rural Areas. *International Journal of Sustainable Society*, 2(2), 156.
5. Du, S. (2018). Study on Sustainable Development of Rural Environment -- A case study of rural household waste treatment in Heishui County. *The Farmers Consultant*, 21, 36–65.
6. Guo, Y., Liu, Y., & Li, Y. (2012). Mechanisms and Empirical Analysis of Rural Endogenous Development: The Case of Beilangzhong Village in Shunyi District, Beijing. *Economic Geography*, 32(09), 114–119.

7. General Office, Opinions on Implementing the New Concept of Development, Accelerating Agricultural Modernization and Realizing the Goal of Well-off Society in an all-round Way (2016). Beijing, China.
8. General Office, Several Opinions of the CPC Central Committee and The State Council on Deepening the supply-side Structural Reform of Agriculture and Accelerating the Cultivation of new growth drivers for agricultural and Rural Development (2017). Beijing, China.
9. Gong, L., Chen, Y., & Li, J. I. (2019). (rep.). Rural Revitalization: Urgent Need to Stimulate Farmers' Participation - A Survey Based on 1023 Farming Households in 71 Villages in Hubei Province. Wuhan, China: Institute of China Rural Studies.
10. General Office, Opinions of the CPC Central Committee and The State Council on Completing the Key work of Comprehensively Promoting Rural Revitalization in 2023 (2023). Beijing, China.
11. Huhe, N., Chen, J., & Tang, M. (2015). Social Trust and grassroots governance in rural China. *Social Science Research*, 53, 351–363.
12. León, C. J., González, M., Araña, J. E., & de León, J. (2012). An evaluation of endogenous sustainable development planning for the rural–urban environment in Gran Canaria. *European Planning Studies*, 22(2), 229–245.
13. Li, D. (2016). Research on the endogenous growth theory and Chinese economic growth. *Proceedings of the 2016 4th International Conference on Management Science, Education Technology, Arts, Social Science and Economics (Msetasse-16)*, 85.
14. Li, J. (2021). Xi Jinping delivered an important speech at the Central People's Congress Work Conference . Beijing, China; NPC Press.
15. Li, X., & Lee, C.-Y. (2021). Uneven but not combined development: Rural industrialisation on the East Coast of China. *Third World Quarterly*, 42(7), 1601–1624.
16. Liao, M. (2023). Rural revitalization: Project Planning and Design. Lecture.
17. Miyamoto, K. (2004). *Environmental Economics* . Sanlian Bookstore.
18. National Development and Reform Commission (NDRC), The Guiding Opinions of The State Council on promoting enterprises' participation in the supply of public services (2015). Beijing, China.
19. National Development and Reform Commission (NDRC), The Strategic Plan for Rural Revitalization (2018–2022) (2018). Beijing, China.
20. Qian, K., Liu, C., & Li, J. (2012). Biodiversity conservation and sustainable agricultural development. *Jiangsu Agricultural Sciences*, 40(12), 419–422.
21. Qi, Z., & Wang, Y. (2020). The index system and action logic of rural vocational education modernization under the background of rural revitalization strategy. *Journal of Southwest University (Social Science Edition)*, 46(04), 67–77.
22. Run, C. (2019). Strategies and paths of rural revitalization in the context of post-rural society: An analytical perspective based on endogenous development. *Lanzhou Academic Journal*, (04), 173–183.
23. Wang, J. (2023). Towards Endogenous Development: Promoting logic and path choice of common prosperity of farmers and rural areas in the new stage. *Journal of Yunnan Minzu University ( Philosophy and Social Sciences Edition)*, 40(1), 93–103.
24. Xi, J. (2021). Make solid progress in promoting common prosperity. *Seek Truth From Facts (Qiushi)*, (20).
25. Yu, W. (2020). Promoting All-round Rural Revitalization through Industrial Development — The responsible person of the Ministry of Agriculture and Rural Affairs interprets the national rural industrial development plan. *Xinhua News*.
26. Yang, G., Zhuang, H., Tian, G., & Miu, G. (2023). The Realization Logic of endogenous Sustainable Development of rural Economy -- Based on the experience of Z Town in Jiang-su Province. *Issues in Agricultural Economy*.

27. Zhang, H., Huang, C., & Zhou, Y. (2007). A review of endogenous development models. *Journal of Zhejiang University*, 37(2), 61–68.
28. Zhu, J. (2016). Making Urbanisation Compact and equal: Integrating rural villages into ur-ban communities in Kunshan, China. *Urban Studies*, 54(10), 2268–2284.
29. Zhang, G. (2022). Carbon peaking and carbon neutral enabling rural revitalization: Internal mechanism and realization path. *Guizhou Social Sciences*, 06, 145–151.

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