



The Development Model of Forestry Tourism from the View of Ecological Civilization

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Abstract. With the continuous development and improvement of China's economic level, people's consumption power has also been greatly improved, and tourism has gradually become the most popular leisure and entertainment activities. In order to promote the practice of circular economy system, change the current disadvantages into advantages, and realize the goal of leapfrog development and ecological development of energy conservation and emission reduction, it is necessary to further discuss and deepen the research on the development model of forestry tourism circular economy from various perspectives. In view of the consumption prospect of the current tourism industry, we can turn the development of tourism to develop the forestry tourism industry model, and make it a very popular tourism project. The combination of forestry and tourism is also a new way to realize the integration of the primary industry and the tertiary industry, which can effectively improve China's tourism consumption capacity and provide a new growth point for the economic development of forestry. This article mainly tells the story of ecological civilization perspective of research of the forestry tourism circular economy development model, this paper based on the current situation relating to the problems put forward their own views of the present, the purpose is to accelerate the process of research of the forestry tourism circular economy development model, thereby further speed up the development of tourism industry, protect the ecological civilization.

Keywords: data · tourism · ecology · analytics

1 Introduction

At present, the overall development situation of forestry tourism has realized the effective promotion of forestry development throughout the country, and to a certain extent, it has realized the indirect promotion of tourism promotion and ecological agriculture to natural villages. Most of the locations of forestry tourism are parks, rural wetlands, village forests and other areas far away from cities, which can provide a relaxing environment for urban residents and improve their happiness. But at the same time, due to the increase of human activities, the forest ecological environment has been irreparably damaged to a certain extent, and the surge in the number of tourists has spawned a serious waste of resources, affecting the development of China's ecological civilization [1].

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2 Evaluation of Forestry Ecological Efficiency

DEA evaluation model of the current mainstream mainly have two types of BCC model and CCR model, BCC model to measure its sectional curve form exists in the present stage DEA evaluation study, convex polyhedron shape instead of the early form of convex cone may set the CCR model, made it possible to multistage measure efficiency, get rid of the CCR model constraints of the single set of single point measurement [3]. In the double stage, or even three phase curve slope compared to determine the increase or decrease of the scale of production yield, more accurate judge out the improvement direction of the input and output, data envelopment analysis is a kind of typical nonparametric analysis, referred to as "DEA analysis, put forward by the famous American operational research such as home Charnes, by evaluating each decision-making unit inside the input-output ratio of relative efficiency, To study the optimization of resource allocation in the production process (Fig. 1).

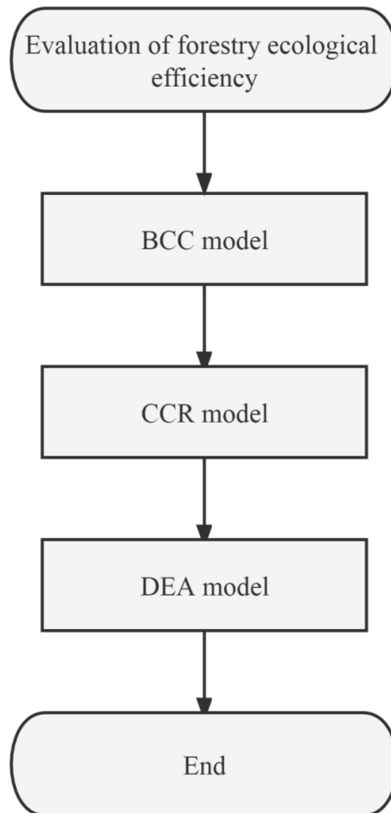


Fig. 1. Evaluation of forestry ecological efficiency

In the production process, the ratio between the input amount of resource consumption and the output amount of products determines the production efficiency value in the decision-making unit. The weighted treatment of input value and output value can be used to analyze the multi-input and multi-output problem. To apply to the research of green environmental protection problem, in the process of construction of DEA model, pollution factor index, ecological environment of negative index can be due to the expected output, such as DEA model will be based on various types of output “asymmetric” type curve measurement, accurate estimate the ecological value, economic efficiency through the projection analysis, to ensure adequate and appropriate input output at the same time, Undesired output will also be strictly controlled. The estimation of expected output and unexpected output in the production process is realized by the radial measure value of curve and the reciprocal of curve measure. DEA method is widely used in production efficiency research in various fields because it adopts objective automatic weighting and excludes interference from subjective factors, and its measurement method is curve radial measure without function expression and hypothesis testing (Table 1).

The DEA-BCC model is constructed, assuming that there are U decision units in this model, and there are N inputs X , M expected outputs Y and L non-expected outputs Z in each decision unit. Accordingly, the DEA evaluation model from the input perspective is established:

Table 1. Evaluation of forestry ecological efficiency

Evaluation of forestry ecological efficiency		
BCC model	CCR model	DEA model
BCC model to measure its sectional curve form exists in the present stage DEA evaluation study, convex polyhedron shape instead of the early form of convex cone may set the CCR model, made it possible to multistage measure efficiency, get rid of the CCR model constraints of the single set of single point measurement	DEA method is widely used in production efficiency research in various fields because it adopts objective automatic weighting and excludes interference from subjective factors, and its measurement method is curve radial measure without function expression and hypothesis testing.	DEA model will be based on various types of output “asymmetric” type curve measurement, accurate estimate the ecological value, economic efficiency through the projection analysis, to ensure adequate and appropriate input output at the same time.
In the production process, the ratio between the input amount of resource consumption and the output amount of products determines the production efficiency value in the decision-making unit.	In the double stage, or even three phase curve slope compared to determine the increase or decrease of the scale of production yield, more accurate judge out the improvement direction of the input and output.	When $0 = 1$, it means that the ecological forestry production efficiency in China is effective. When 1, it means that China’s ecological forestry production efficiency is invalid.

Min0;
 S1. The $\sum w_x \leq 1$ or less, $n = 1, 2, 3 \dots, N$;
 $u=1$
 $\sum w_y \leq 1$ or less y , $m = 1, 2, 3 \dots, M$; $\sum w_z \leq 1$ or less z , $l = 1, \dots, L$;
 $U, \sum w = 1$; W , acuity 0; 0 1 or less.
 $u=$

The model represents the ecological forestry efficiency value in China, and $0 \leq \theta \leq 1$. When $\theta = 1$, it means that the ecological forestry production efficiency in China is effective. When $\theta < 1$, it means that China’s ecological forestry production efficiency is invalid. In the model, X, Y and Z, respectively represent the input value, expected output value and unexpected output value of ecological forestry production in each decision unit. W represents U-1, 2, 3... When w is equal to 1 or non-negative, this model is the DEA model of variable scale returns (VRS).

3 Research on the Development Model of Forestry Tourism Circular Economy from the Perspective of Ecological Civilization

First of all, it is necessary to select the weights of model indicators. In view of the current ecological civilization, it is necessary to establish a new concept of development and a new concept of modernization as the new goal of forestry tourism development, so as to form a better and more modern development path and mode. Therefore, in the process of model construction, it is necessary to establish the forewarning of forestry tourism circular economy threat, so as to effectively improve the ability of forestry tourism emergency treatment. In the orderly development of the circular economy of forestry tourism, it is necessary to follow the principles of real-time, integrity and regularity in the early warning money, and then choose the weight of the model index, so as to effectively avoid risks according to the early warning of the index system (Table 2).

In this model index, it can be divided into three levels, namely target level, state index level and evaluation factor level. The development of circular economy of forestry tourism is regarded as a parallel model. It is necessary to put forward the weight index from different angles and directions around the cyclic development of forestry, and discuss the problems, and finally solve them. In the ratio scale method, 25 indexes of the forestry tourism circular economy development model in the same period are sequentially connected to form the overall value. According to the obtained value, the weight of each indicator in the model is reasonably allocated. According to the degree of influence of each indicator on the development of forestry tourism circular economy in the model, the scale of each indicator is from 1 to 9, and the corresponding reciprocal, so as to quantify the original complex and disorderly qualitative problems and facilitate the operation of the subsequent model. Index weight distribution is expressed by the following formula:

$$C_i = \frac{C - \min C}{\max C - \min C} \tag{1}$$

The second is the collection and processing of original data. In the model of forestry tourism circular economy development, the input data are usually original data, and

Table 2. Research on the development model of forestry tourism circular economy from the perspective of ecological civilization

Research on the development model of forestry tourism circular economy from the perspective of ecological civilization		
Weight selection of model indicators	Acquisition and processing of raw data	Determine the vigilance degree of forestry tourism circular economy development
In view of the current ecological civilization, it is necessary to establish a new concept of development and a new concept of modernization as the new goal of forestry tourism development, so as to form a better and more modern development path and mode. Therefore, in the process of model construction, it is necessary to establish the forewarning of forestry tourism circular economy threat, so as to effectively improve the ability of forestry tourism emergency treatment.	In the model of forestry tourism circular economy development, the input data are usually original data, and the collection of these data generally adopts different and differentiated standardized processing methods. The statistical data of specific cities are generally obtained by calculating the average growth rate, but there are still some errors compared with the values required in the actual model, so the data cannot be used as reference values.	In order to realize the sustainable development of forestry tourism circular economy, the model proposed in this paper will be used to effectively warn the possible dangers in the development of forestry tourism.

the collection of these data generally adopts different and differentiated standardized processing methods. The statistical data of specific cities are generally obtained by calculating the average growth rate, but there are still some errors compared with the values required in the actual model, so the data cannot be used as reference values. This part of the data needs to be standardized processing, through the establishment of SAP HANA data platform, a large number of data information integration, integration and query of massive data in a short period of time, the obtained data will be imported into the file platform, standardized data. In SAP HANA data platform, the default data processing method is to standardize the data. Therefore, the collected original data can be directly imported to the relevant platform to obtain the results of standard data.

Finally, determine the vigilance degree of forestry tourism circular economy development. In order to realize the sustainable development of forestry tourism circular economy, the model proposed in this paper will be used to effectively warn the possible dangers in the development of forestry tourism. In order to effectively solve the ecological civilization problems in the process of tourism development, corresponding preventive measures can be put forward when the problems such as the possible impact on the ecological environment of forestry, the waste of environmental resources and the

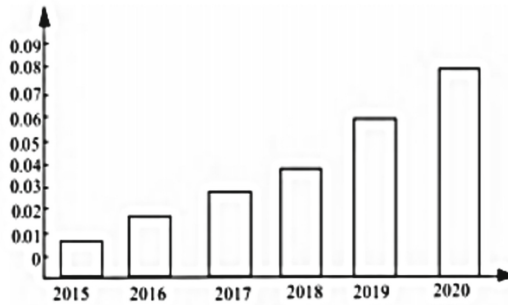


Fig. 2. Output schematic diagram of forestry tourism circular economy development model

reduction of circular economy of forestry tourism occur. Using the membership function of fuzzy mathematics, the alarm degree of development of forestry tourism circular economy is determined (Fig. 2).

4 Conclusion

In the process of forestry economic development, the corresponding ecological and natural system can be protected at the same time, even the development of forestry resources cannot be ignored. From the perspective of forestry resource development, as the most effective mode to protect the ecological environment and develop the economy, strong measures should be taken to avoid this problem in the utilization of forestry resources. The protection of forestry resources is to further examine and utilize the resources in the process of economic development. Believe in the near future, forestry ecological environment will be better and better.

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