

Research on the Promotion of the Development of Regional Tourism Economy by the Silk Road Economic Belt Based on Remote Sensing Prediction Model

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Abstract: The article constructs a spatial Durbin model to explore the economic growth mechanism of inbound tourism. Three remote sensing prediction models of Li content were established respectively, namely the PCA regression model, the BP neural network model and the RF model to study the role of the Silk Road Economic Belt on regional economic development. The scale of foreign trade, economic activity, transportation accessibility, and the local positive effects of tourist facilities are obvious; the local negative effects of major emergencies are obvious; the scale of foreign trade has a significant positive spillover effect; the degree of economic activity, tourist facilities, and major emergencies the negative spillover effect of the incident is obvious.

Keywords: Regional Tourism Economy, Silk Road, Economic Belt, Remote Sensing Prediction

1. INTRODUCTION

In 2015, China's tourism theme was identified as "Beautiful China-Silk Road Tourism Year", which is the strategic concept of implementing the "Silk Road Economic Belt" and "21st Century Maritime Silk Road" (abbreviated as "One Belt One Road") , An important measure to promote regional cooperation between China and Central Asia and South Asia. On September 7, 2013, in a speech delivered by President Xi Jinping at Nazarbayev University in Kazakhstan, for the first time, he proposed to strengthen policy communication, road connectivity, unimpeded trade, currency circulation, and people-to-people connections, and jointly build the Silk Road Economic Belt. Strategic initiative . The "Silk Road Economic Belt" is an economic cooperation area formed between China, Central Asia, West Asia, and European countries on the basis of the ancient Silk Road. As the most important commercial artery in the world in history, there are rich world heritages along the ancient Silk Road [2-9].

According to Klimt, the basis of comparative advantage in tourism service trade is natural tourism resources. Shaanxi is located in the hinterland of China, in the middle of the Yellow River and Yangtze River basins. It is one of the important birthplaces of Chinese civilization and one of the provinces with the richest tourism resources in China. It is known as the "natural history museum". Shaanxi ranks first in the country in terms of density, number, and level of cultural relics. Its tourism resources are unmatched by several important domestic provinces along the New Silk Road Economic Belt, such as Xinjiang, Qinghai, and Gansu. As a province with rich natural resources and unique history and culture, Shaanxi's tourism service trade occupies an important position in the national tourism service trade. The "Ancient Silk Road" roughly began in the Qin and Han dynasties of China. It was an important channel for trade activities and cultural exchanges between the East and the West in ancient times. Trade exchanges along the way have been active for more than two thousand years [10-16].

The Third Plenary Session of the Eighteenth Central Committee has even elevated the decision to build the "Silk Road Economic Belt" to the level of China's national strategy. As part of the vision of "Beautiful China Dream", the construction of the Silk Road Economic Belt can bring China's relations with Central Asian countries closer, while creating a stable political and economic development environment for China's western border provinces. The Silk Road Economic Belt in the new era runs through the Eurasian continent, starting from China's Shaanxi Province in the east, passing through the five energy-rich Central Asian countries, the Middle East and North Africa, and west to the Port of Rotterdam in the Netherlands. It stretches for more than 7,000 kilometers and has a total population of nearly 3 billion. Huge development potential and extensive development basis. The Silk Road Economic Belt passes through vast inland areas in China. The provinces along the route include the five northwestern provinces and the four southwestern provinces, accounting for about 45% of China's land area. In addition, Yao Peisheng, the former Chinese ambassador to Kazakhstan, stated that "it will be difficult to build this economic belt without making political and cultural efforts." Undoubtedly, the tourism industry is the soft power of building the Silk Road Economic Belt, and it is also the hard foundation for the construction of the "Belt and Road" initiative and the construction of the Asian Economic Infrastructure Investment Bank and other major countries' strategies [17-21].

With the general rise of foreign tourism, related research in the 1960s continued to deepen and involved the economic effects of tourism, tourism management, resource development, leisure tourism, regional differences and spatial correlation. Smith S. L. J (1996)'s tourism analysis manual updated the definition of tourism organization and industry concepts; Brieden Hann and Wickens (2004) affirmed that tourism drives the economic growth of underdeveloped regions; Kimed (2005), Chi-Okoh (2005), etc. Scholars use quantitative methods to conduct empirical research on the relationship between the tourism economy of a specific country or region and the overall economy. With the gradual

improvement of the strategic position of building the "Silk Road Economic Belt", academic research on the "Silk Road Economic Belt" by different scholars has gradually increased. At this stage, domestic and foreign scholars' research on the Silk Road Economic Belt mainly focuses on policy, transportation, energy, environment, cooperation, etc., and has achieved certain research results [22-24].

2. THE PROPOSED METHODOLOGY

2.1 The Remote Sensing Prediction Model

Principal component analysis (PCA), also known as principal component transformation, is a method based on mathematical statistical analysis that transforms multiple variables with high correlation into less comprehensive variables with low correlation. In actual research, there are many independent variables used to build regression models, and the correlation between the independent variables is high, and the data redundancy is large, that is, the data information contained between the variables and the variables overlap. Therefore, before building a predictive model, it is necessary to perform corresponding mathematical transformations on the original independent variable data, reselect independent variables, eliminate overlapping information between independent variables and reduce the number of independent variables, and use fewer independent variables to express the most content information to improve the computational efficiency and accuracy of the prediction model.

Using the above linear transformation to convert the original p independent variables into new independent variables, using different linear transformation methods to obtain the new independent variable characteristics are different. In order to improve the calculation efficiency and accuracy of the model, keep the z in the above formula independent of each other, and make the variance of the linear combination as large as possible, so the constructed model needs to meet the following conditions. The difference in brightness value of PC1 image is hierarchical. The main reason is the difference in brightness value caused by the different content of mineral components in the salt lake. The texture of PC1 image is clearly visible, the noise is the smallest, and it contains the most information about the content of mineral components. It can separate the Li content information in the image, so the PC1 component image can be used to establish a remote sensing prediction model.

2.2 The Silk Road Economic Belt

The Silk Road, more than two thousand years ago, has promoted the trade, cultural prosperity, and religious spread between the East and the West in human history, greatly promoted the development and progress of social civilization, and set a model for modern international economic and cultural exchanges and cooperation. Based on the basic data of the number of outbound tourists of Chinese residents in 2013, the market share of each tourist destination in China's outbound tourism market and its development status are studied.

Therefore, Shaanxi's tourism service trade has obvious comparative advantages in tourism resources in the New Silk Road Economic Belt. The results show that the Moran's I index from 2001 to 2012 is positive and has passed the significance test. The inbound tourism economy of the "Silk Road Economic Belt" has significant spatial correlation. The economically backward provinces tend to be adjacent. From 2001 to 2012, the changes in Moran's I index can be divided into three stages, with 2003 and 2008 as the turning point

respectively, mainly due to the influence of "SARS" and "Wenchuan Earthquake", and the spatial correlation of inbound tourism economy. The weakening of gender and regional cooperation, but the overall development trend, especially under the "Silk Road Economic Belt" and "Opening to the West" strategy, regional integration and cross-regional markets for the tourism industry are taking shape.

The economic growth of inbound tourism is not only affected by the economic, social and tourism resource conditions of the province, but also by factors related to inbound tourism in neighboring provinces.

2.3 The Silk Road Economic Belt's Promotion of Regional Tourism Economy

The well-developed railway hub and highway network, as well as the convenient international airport, have brought tremendous development to Shaanxi's tourism service trade. With the successful holding of the Xi'an Expo in Shaanxi in 2011, its tourism external influence has continued to increase, and its tourism, catering and accommodation industries have shown a trend of rapid growth. Shaanxi's increasingly improved infrastructure and services have provided a solid foundation for the development of tourism service trade in the context of the New Silk Road Economic Belt. In the practice of international regional tourism cooperation, the tourism cooperation model among EU countries is the most influential.

Zou Tonglan pointed out in his research that the tourism cooperation of EU countries is reflected in two aspects: First, the strong promotion of cooperative organizations. The European Tourism Commission is a non-profit regional tourism management agency. With the strong support of 33 member states, it can uniformly formulate regional tourism. Policy, conduct overall tourism promotion to the outside world, and cooperate with the European Union and the European Parliament to formulate the benefit distribution mechanism of each member state, plan the protection of cultural heritage in a unified way, and promote the sustainable development of regional tourism; the second is a convenient visa policy for tourists from member states. Entry provides freedom 19-21. Another region worth learning from is Southeast Asia. Zhang Guangrui analyzed that ASEAN, as an intergovernmental organization responsible for regional tourism affair.

3. CONCLUSIONS

The spatial distribution of tourism activities between China and countries in the Silk Road Economic Belt region is uneven, showing a "gourd-shaped" layout with high on both sides and low on the middle. Asian countries belong to the lower protrusion of the gourd, European countries belong to the upper protrusion of the gourd, and the vast Central and West Asian countries in the middle of the Silk Road Economic Belt belong to the concave part of the middle of the gourd. In view of the fact that there are many bilateral man-made inefficiencies, in order to fully tap the potential of trade, it is recommended to actively promote the construction.

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