The Efficiency of Tourism Impact on People's Livelihood: 
A Theoretical Framework

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\textbf{Abstract}: The impact of tourism on people's livelihood has always been a concern of the government and academia. The effects of tourism on people's livelihood include: employment absorption, stimulating consumption, boosting the government, improving infrastructure and living quality of citizens. The paper believes that, looking at the tourism impact on people's livelihood and efficiency from the input-output perspective, the data envelopment analysis (DEA) network model can be adopted to carry out research on two evaluation framework with two intermediate variables. The theoretical framework proposed in this paper will be a quantitative analysis about the impact of tourism on people's livelihood.

1. Introduction

People's livelihood is always the focus of attention of the government. For tourist destinations with relatively abundant tourism resources, the government will accelerate the development of tourism products and attract tourists' consumption as an important means to improve people's livelihood. The tourism industry is showing a strong comprehensive influence in stimulating local economic growth, promoting employment and stimulating consumption. However, the livelihood of the people has a wide range of issues, which is closely related to the realities of employment, income, housing, medical care and education. However, the study found that the side effect of local tourism industry is sometimes hard to avoid. For example, the rapid rise of local price caused by the rapid development of the tourism industry. Development of some regional tourism results in unequal distribution benefits. It is worthwhile to discuss whether there is positive efficiency difference in developing people's livelihood caused by tourism industry.

In the English literature, most of the scholars who study people's livelihood are represented by the word \textit{welfare}. Countries evaluate the welfare status of a country or region residents generally by the objective and subjective aspects, including the number of individuals to occupy resources, but also covers personal feelings of society, such as satisfaction, happiness and so on. The study of the relationship between tourism and people's livelihood has a long history in some European countries. In early 1899, an Italy scholar started to research on the consuming status & spatial distribution of Italy inbound foreign tourists. Since then, the economic effects of tourism development have attracted much attention. An earlier scholar who studied the social and cultural impact of tourism was T. Nunez in 1963. He conducted a case study of a mountain village in Mexico where tourism was developing. Since then, the academic circles began to pay more attention to the livelihood effect of tourism development, and mainly from the following three aspects: (1) Positive effects of tourism on the improvement of people's livelihood. In terms of income, the tourism industry's improvement of the local residents' economic condition is obvious. In particular, incorporating qualitative research methods into the study of the impact of tourism on local people's livelihood can be more systematic. The operation of the tourism industry can greatly enhance the social and economic status of the local residents, so family-style tourism operators worth promoting. In terms of employment, women are especially concerned by researchers. Especially for some housewives, the development of the tourism industry has improved their employment opportunities and employability. In some natural resource oriented tourist destinations, local women who work in
hotels or high-end tourist sites will have better financial conditions for their families. In terms of perception, the study of tourism's well-being of people's lives reveals that factors such as age, financial status and visitor responsibility cannot be ignored. (2) Negative impacts of tourism on people's livelihood. Even though there are relatively few studies, pessimistic attitude scholars also use scientific methods to point out sharply that the rapid development of the tourism actually weakened the various welfare of local residents from tourism. Furthermore, the development of tourism may cause traffic congestion. Some scholars point out that tourism should be taxed and used to subsidize local low-income people, otherwise it will lower the welfare of local residents and eventually lead to polarization between the rich and the poor. (3) The development of tourism and the evaluation of people's livelihood. Scholars in the field gave different research findings. Scholar Landford design a relevant index system, and reveals some factors have effects on the people's livelihood, including demographic factors, residents' attitudes towards tourism, interests, development scale, community participation, and so on. A. Urtasun selected 12 incomplete indicators and 1 complete indicators, including destination, economy, society, culture and environment, to evaluate the local welfare situation. The study pointed out that the direct impact on the level of local welfare is the scale of local tourism development, the uneven distribution of tourism income, and the overall economic development level. Generally speaking, the research of people's livelihood effect of tourism focuses on the investigation and analysis of microscopic level. In the past two years, more quantitative research has begun to be done in the study of tourism and people's livelihood, but the efficiency analysis based on input-output has not become a specific field of research.

2. The input-output method of tourism towards the impact of people's livelihood.

2.1 Tourism has higher employment absorptive capacity

Employment is called the foundation of people's livelihood, and is the stabilizer of society. With the transformation and upgrading of the social economic structure, the ability of traditional industries to absorb employment gradually decreased, and the employment absorptive capacity of the service sector will be significantly improved. According to Chinese Tourism Statistical Bulletin issued by the National Tourism Administration in 2015, the direct employment in tourism industry reached 27.98 million people. The direct and indirect employment in tourism industry reached 79.11 million people, accounting for 10.2% of total employment of China. The tourism industry plays an obvious role in promoting the employment of some important social groups, especially young people, women, rural labor force and people of minority groups in remote areas.

2.2 Tourism is an important engine to stimulate consumption and increase income

Tourism can promote the participation of local residents in tourism business operation, optimize the structure of livelihood through the development of tourism economy, and increase income. The income increasing effect of tourism is especially reflected in the economically backward areas with potential for rural tourism development. Nowadays, in the macro trend of the Chinese government's efforts to improve poverty alleviation, tourism has become an optional mode. The development of tourism businesses including rural tourism areas, farm resort, hotels and leisure agricultural parks, country manors, provides many opportunities for local residents to increase income. Local governments could push more people to engage in tourism and improve their living, based on the advantage of the long tourism industry chain and its wide range, as well as the multiplier effect of tourism in stimulating consumption.

2.3 Tourism is a key driver for the government to improve its infrastructure

In order to speed up the development of local tourism economy, the government is committed to planning and improving local infrastructure, so that airports, railways, highways, ports, communication facilities could be developed. The continuous improvement of infrastructure not
only serves the tourism economy, but also provides convenience for the local people's work and life. The building of the city leisure space brings a number of public squares, cultural streets, leisure parks, footpaths along rivers and other facilities. This is not only the needs for an outstanding tourist city, but also a place for recreation and entertainment. On November 19, 2016, the China National Tourism Administration hosted the World Toilet Day and the Chinese Toilet Revolution Propaganda Day. Driven by the development of tourism, the toilet revolution in cities and rural areas has not only improved the level of civilization in tourism services, but also provided people with a more clean and tidy daily public service facilities.

2.4 Tourism is an important guarantee to improve the quality of life

The American scholar Clayton Alderfer proposed survival - relations - growth theory. He believes that human needs are based on the three tier Pyramid structure, from the most basic survival needs, to the middle level of the relationship & harmony needs, until the growth needs of the highest level. And from the perspective of people's livelihood, the three layers need correspond to the basic survival needs of people's livelihood, to the middle of the social integration needs, until the top quality of life needs. From the demand point of view, tourism is not the livelihood industry to protect the basic survival of consumers. Tourism consumption is not the first choice in the case that the income fails to meet the basic living conditions. But from the supply point of view, tourism is a means of livelihood for the local people in tourist destination to improve their income and living standards. With the continuous improvement of living standards, people's high level of needs, including the pursuit of a sense of well-being and survival of dignity is increasing. Tourism consumption behavior plays an important role in improving people's quality of life and happiness. In this sense, the tourism industry has a livelihood effect at different levels of demand.

3. Efficiency evaluation of tourism impacts on people's Livelihood: a conceptual framework

3.1 Evaluation of people's livelihood efficiency

A concept that is closely related to the impact of tourism on people's livelihood is the efficiency of people's livelihood investment. The resources investment for improving people's livelihood is limited. In order to improve people's livelihood, it is necessary to evaluate the efficiency. At present, the definition of the efficiency of people's livelihood is mainly defined from an economic perspective, that is, the perspective of input and output. In this context, people's livelihood efficiency is the ratio of people's livelihood cost and people's livelihood benefit. The cost of people's livelihood refers to various inputs in order to improve people's livelihood. This kind of cost can be either long-term or short-term, either direct or indirect. The income of people's livelihood is the improvement of people's livelihood after being invested. This kind of income also has the characteristics of long-term or short-term, directness or indirectness correspondingly. Since many aspects of people's livelihood income are difficult to measure quantitatively, it will be difficult to study the efficiency of people's livelihood only from the perspective of economics. The evaluation of people's livelihood efficiency should also consider the indirect benefits of people's livelihood. Therefore, the evaluation of people's livelihood efficiency usually includes the economic efficiency, the political efficiency, the cultural efficiency and the social efficiency of people's livelihood, and so on.

3.2 Hypothesis of the efficiency evaluation of tourism to people's livelihood

After years of development, the tourism industry has attracted widespread attention in improving employment, increasing income and improving people's quality of life. However, the evaluation of the impact size remains a difficult point of study. From a systematic point of view, tourism and people's livelihood are two overlapping but relatively independent subsystems. There are many elements of people's livelihood, including income, employment, medical care, housing, education and environment, and so on. The tourism industry is supported by related industries, including food,
accommodation, travel, shopping and entertainment and so on. Tourism stimulates consumption and promotes the development of related industries. It also produces a series of direct or indirect effects on people's livelihood. These effects have improved the income, employment, environment and local infrastructure of the local residents. Thus, the development of tourism is a useful tool for improving or improving people's livelihood. However, the development of tourist industry is not evenly distributed, and the improvement of people's livelihood is also subject to varying degrees. In areas where tourism is not a pillar industry, the government's involvement in people's livelihood and other factors may play a greater role. In this case the development of tourism is not a necessary condition for the improvement of people's livelihood.

3.3 Framework for evaluating the impact of tourism on people's livelihood

The research is based on the premise that tourism is a pillar industry. Specifically, taking tourism flow as input and people's livelihood effect as output, this paper follows the idea of data envelopment analysis (DEA) for efficiency evaluation. Data envelopment analysis (DEA) is a method for evaluating the efficiency of multi input and output. The method was first created by A. Charnes in 1978, and the efficiency of the evaluated decision unit (DMU) was analyzed based on the sample data. DEA's commonly used radial models include two models, CCR and BCC, which are based on different assumptions about constant returns to scale and variable returns to scale.

The impact of tourism on people's livelihood is more complex. When introducing data envelopment analysis (DEA) method, we can take into account the phased role of tourism, and adopt different intermediate output variable strategies. Specifically, the tourism flow is taken as the initial input variable or as an intermediate variable to calculate the efficiency contribution of tourism to the local people's livelihood in different situations. The first way is to take tourism flow as the initial input variable, tourism revenue as the intermediate output variable, people's livelihood financial investment as the intermediate input variable, and the improvement degree of people's livelihood as the final output variable. This kind of analysis and evaluation framework is based on the development of tourism, and promotes the income of tourist destination. At the same time, the government began to increase investment in the local people's livelihood, and eventually produced a tourism livelihood benefits. The premise of the network model analysis framework is that the government's investment in people's livelihood is lagging behind the development of tourism. The second way is to take the financial input of people's livelihood and the investment of tourism assets as the intermediate input variables, take the tourist flow as the intermediate variable, and take the people's livelihood improvement and tourism income as the output variables. The above research is based on the premise that tourism industry is a pillar industry. The improvement of people's livelihood and tourism receipts is inseparable from the investment of people's livelihood, financial investment and the development of tourism, assets and personnel. The process is similar to the black box, and it is difficult to split.

4. Discussion

In the less developed areas, tourism is a mode of implementing precise poverty alleviation. It is an option for people in the rural areas to get rich, and it becomes a kind of basic livelihood industries. In the relatively developed areas, tourism is a means of stimulating consumption and employment, reflecting quality of life, as well as the higher level of people's livelihood industries. The efficiency of the impact of tourism on the people's livelihood is a proposition worthy of further study. The theoretical framework of the efficiency evaluation of tourism impacts on people's livelihood is a reference for further quantitative analysis and comparison. It is also expected to further study the impact of tourism on the people's livelihood.
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Reference


