

The ticket price regulations of state-owned scenic spots from the perspective of quasi-public goods

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Abstract: *Based on the basic theories of welfare economics and industrial economics, this paper analyzes the economic principles followed by the pricing of state-owned public resource scenic spots, and gives policy suggestions on the pricing of state-owned scenic spots. The conclusion shows that the state-owned public resource scenic spots should implement hierarchical pricing, and the government should guide the scenic spots to take functional finance as the goal and follow the policy-oriented ticket price scheme with marginal cost pricing or free opening. The government should improve the incentive and supervision mechanism so that state-owned scenic spots can serve regional economic growth and national well-being.*

Keywords: *Tourist attractions; Welfare economics; Price regulation*

1. Introduction

In recent years, as China's economic growth and national income levels have risen, the tourism industry has entered a phase of high-quality development. In the eyes of many practitioners, the essence of the tourism industry is the ticket economy, and as long as ticket prices are raised, scenic area incomes will naturally rise. For a time, "the most crowded attractions and the most overpriced tickets" became the "special color" of China's scenic spots.

In response, the government has issued a number of policies and regulations in an attempt to curb the rise in scenic area ticket prices. China's first Tourism Law has been in force since October 1st, 2013, which stipulates the principles for charging admission fees and the basis for pricing at scenic spots that are public resources, providing a legal basis for the regulation of admission fees at scenic spots that are public resources.

It is not difficult to see that low-cost or free access to public resource scenic spots is the general direction of the future business model development of scenic spots, and it is also the inevitable result of the economic structure of scenic spots from the simple and extensive "ticket economy" to the scientific and reasonable "tourism economy" in the future. Under normal circumstances, the ticket price of private market-oriented scenic spots is directly reported to the local price bureau for examination and filing by the operator according to the actual revenue situation and the market adjustment price. Thus, how should the ticket price of state-owned scenic spots, especially public resource scenic spots, be formulated? This is the topic discussed in this paper.

2. Literature Review

A large number of studies have been conducted by academics on the countermeasures for the management of domestic tourist attraction tickets, mainly including general scenic area ticket prices, public resource scenic area tickets, and price management of local tourist attractions.

For example, Li Ning discusses the solution to the rationalization of ticket pricing for tourist attractions from three perspectives: introducing a quasi-market competition mechanism and improving the price hearing mechanism.^[1] Tang Xiaoyun believes that "benefiting the public" and "fairness" are the starting point and destination of the current management of scenic spot ticket prices, and puts forward some specific countermeasures.^[2] Yuan Kunkun proposed five major strategies for rationalizing ticket pricing from the legal, regulatory, technical, economic and educational perspectives, and emphasized that the role of the state and local governments is the most critical.^[3] Kang Jun pointed out that to improve the ticket pricing system for tourist attractions, the price elasticity of demand for the

attractions, the social and economic effects, and the characteristics of groups of tourists should be taken into account.^[4] Song Rui and Sun Panpan believe that there are three pairs of relationships that need to be rationalized in order to solve the problem of scenic spot ticket prices: between the government and the market; between the central government and the local government; and between different government departments.^[5] Based on the theory of price elasticity of demand, scholars such as Zhou Weiwei and other scholars have developed reasonable ticket pricing norms, increased the number of tickets, and increased the number of tourists.

Many countermeasures have been put forward in terms of strengthening the service training of tourist attractions.^[6] Geng Songtao researched on the countermeasures for the transformation of the ticket economy of tourist attractions and proposed countermeasures including enriching the tourism product system and extending the value chain of the tourist attraction industry.^[7] Yu Jie proposed that social benefits, price hearings, regulation and legislation should be considered to improve the management of entrance fees for tourist attractions in China.^[8] Hu Liduo and other scholars proposed five ways to improve relevant laws and regulations to strengthen the management of domestic tourist attraction ticket prices.^[9] He Jia discussed the effective countermeasures to reduce the ticket prices of scenic spots in four aspects, including the establishment of a quality-price-compatible ticket price formation mechanism.^[10] It can be seen that academics mostly emphasize the improvement of the corresponding system and other aspects in pricing tickets for tourist attractions, and there are both universal studies on the pricing method for all tourist attractions and specific case studies, and a consensus is basically reached on the improvement of the price hearing system and the extension of the industrial chain of tourist attractions.

3. Perspectives of economics on scenic pricing

According to the categorization of public economics, a tourist attraction can be considered as a social good in the form of a product that has elements of natural creation, as well as elements of modernization and industrialization of mankind. According to their ownership, social goods can be categorized into private and public goods. Private goods are, as the name suggests, products acquired or appropriated by people and supported by them; public goods are collective consumer goods that are enjoyed collectively by all members of society, and which can be enjoyed by all members of society at the same time; each person's consumption of this product does not reduce the consumption of other members of society.

Based on the above definition, we can analyze the two main characteristics of public goods: non-exclusivity and non-competitiveness. Non-exclusivity means that they are available to all members of society and it is not possible to exclude those who do not pay for them; non-competitiveness means that once a public good has been created, an increase in consumption by one person does not reduce the benefits to others, and does not increase the cost, i.e. the marginal cost is zero.

Public goods can be categorized into two types, pure public goods and quasi- public goods, based on their attributes of "non-exclusivity" and "non- competitiveness". Pure public goods are neither exclusive nor competitive, and neither of their characteristics matches the nature of tourist attractions, which can therefore be categorized as quasi-public goods.^[11]

3.1. Marginal cost pricing

According to economics, the intersection of a firm's marginal cost and demand curves determines the level of production in order to determine cost and price, known as the marginal cost pricing principle.

In a non-perfectly competitive market, since the marginal revenue curve is at the lower end of the demand curve, firms cannot maximize profits by pricing on the basis of the marginal cost principle, and will therefore set their price level at the point where marginal cost intersects with marginal revenue in order to maximize profits. However, the firm that maximizes profit does not always break even and there are three possible scenarios depending on the relationship between marginal cost and average cost. The three specific situations are:

In the first case the marginal cost is equal to the average cost and the company will break even; in the second case the marginal cost is greater than the average cost and the company will make an excess profit; and in the third case the marginal cost is smaller than the average cost and the company will lose money. In the first two cases the firm will not lose money if it follows the marginal cost principle and

will maximize social welfare; in the latter case the firm will lose money if it follows the marginal cost principle, although it will maximize social welfare.

3.2. Market failures and price regulation

The theory of regulation first emerged when it was recognized that market mechanisms were imperfect and that market failures caused losses in economic efficiency and social welfare. This led to an in-depth theoretical study of monopoly markets, producer welfare, consumer welfare and so on, which laid the foundations for the economic theory of regulation.

Traditional economics considers perfect competition to be the ideal state of a market economy, where the market mechanism is able to achieve Pareto optimality. However, in reality, the economy is not sufficiently perfectly competitive, and market failures can occur due to natural monopolies, externalities, information asymmetries, etc. From the perspective of welfare economics, market failure leads to a reduction in social welfare, while government regulation has the potential to increase social welfare, and therefore government intervention is needed. The aim is to maximize social welfare by restricting and limiting the conduct of market players in order to achieve an equilibrium between market efficiency and social equity.

3.3. Economic spillover effects

There is a clear industrial spillover effect from tourist attractions. Taking the West Lake in Hangzhou as an example, since the implementation of the ticket-free policy, the West Lake, as a national 5A-level tourist attraction and a World Heritage Site, has attracted a large number of tourists. Although the admission fee for the scenic spot has been foregone, the arrival of tourists has greatly boosted the development of Hangzhou's hotel, catering, retail, and arts and cultural industries, and has created tens of thousands of additional jobs in Hangzhou, with the additional economic benefits far greater than the lost admission fee.

According to the World Tourism Council statistics, the contribution of total tourism receipts to GDP growth has a multiplier of 2.5, i.e. \$1 invested in tourism generates an additional \$2.5 in value added. According to a study by the Canadian scholar Smith, an increase of \$30,000 in tourism sector revenue increases direct and indirect employment by one and three jobs respectively; this ratio is two direct and five indirect jobs in tourism-rich developing countries.^[1]

4. Policy recommendations

Based on the above economic theory, the following analysis is carried out from the aspects of price regulation, differential pricing, transformation to industrial economic objectives, incentive and supervision mechanism under different classification modes, and corresponding policy recommendations are put forward.

4.1. Categorized pricing

The functional attributes of tourist attractions have a significant impact on price setting and regulation policies. The clarification of the attributes and functions of tourist attractions and the implementation of hierarchical pricing of tourist attractions is the norm for the current development of state-owned tourist attractions.

Tourist attractions can be divided into sightseeing, leisure vacation and special scenic spots according to their functions and roles. The traditional natural landscape and cultural attractions can meet the purpose of tourists' enjoyment and increase their knowledge and experience. This type of scenic spot has a monopoly due to its scarcity, and the ticket price is generally determined by the quality level of the scenic spot. Leisure resort scenic spots can play a role in relaxing and recuperating, tickets are only part of tourism consumption, and supporting service income accounts for a large proportion, the ticket price often includes the use price of facilities and the service price. Specialized tourist attractions, such as religious tourist attractions, play a unique role for specific groups. The target tourists of this type of scenic spots are usually not sensitive to prices, and the ticket price is generally determined by the quality level of the scenic spot.

China's tourist attractions can be categorized by their attributes as fully public goods attractions,

quasi-public goods attractions, operational attractions and private attractions. Operational scenic spots and private scenic spots are invested and constructed by enterprises and private individuals, and ticket prices are determined by market supply and demand. Most state-owned scenic spots in China are public goods and quasi-public goods. Because of the non-competitive and non-exclusive characteristics of public goods scenic spots, ticket prices should be fully subsidized by the government; because of the non-competitive and insufficiently non-exclusive characteristics of quasi-public goods scenic spots, ticket prices should pay attention to both social welfare and the carrying capacity of the scenic spots, and government-guided prices can be used (see Table 1).^[12]

Table 1: Price regulation under different classification pricing modes.

Classification perspective	Classification object	Classification basis	Form of price regulation
Stakeholder	Government	Social welfare maximization	Free admission
	Tourist	Satisfaction degree maximization	Fair rate of return regulation
	Scenic spot administration	Economic benefit maximization	Price cap regulation
Development stage	Developing	High ticket revenue ratio	Average cost pricing
	Developed	Low ticket revenue ratio	Marginal cost pricing
Function and role	Sightseeing	Traditional type	Fair rate of return regulation
	Leisure vacation	Ascending type	Marginal cost pricing
	Others	Specialized type	Price cap regulation
Economic attribute	Public goods	Non-competitive & non-exclusive	Free admission
	Quasi-public goods	Competitive & non-exclusive	Marginal cost pricing

4.2. Differential pricing

Price discrimination in the admission fees of state-owned public resource scenic spots based on the price elasticity of consumption of different consumer groups is important for regulating the order of the tourism market, improving efficiency and enhancing fairness.

At the operational level, tourism consumers can be divided into the following categories: price-sensitive and price-insensitive; low-season and peak-season travelers; and local and foreign tourists. In the process of realizing price discrimination, the above criteria will be considered in the process of price discrimination.

Identifying the three types of consumers and ensuring information asymmetry among them are important prerequisites. Unlike off-peak seasons, which are differentiated by time of day, and local and foreign tourists, which are differentiated by geography, it is important to consider price sensitivity and how to prevent communication, and to determine the economic origin of tourists based on their personal statistics, in order to set up children's tickets and adult tickets.

For more general purposes, the "fence model" of price discrimination is more commonly used. The "fence model" refers to the fact that when a firm induces more resilient consumers to identify themselves, the firm will set up a "fence" (criteria) and discount customers who meet such criteria, making it easy for price-sensitive customers to "jump the fence" and cross the "fence". so that price-sensitive customers can easily "fall for it" and cross the "fence". Therefore, state-owned scenic spots can refer to the "fence model" when distinguishing between price-sensitive and non-price-sensitive customers, for example, by organizing promotional activities on specific holidays, offering different types of ticket packages, and releasing a certain amount of information about discounts in publicity. In the end, price-sensitive and non-price-sensitive customers will be effectively differentiated and pricing will be differentiated to achieve Pareto optimization.^[11]

4.3. From ticket economy to industrial economy

Tourism is a highly interconnected industry. From the beginning to the end of the tourism process, tourists need a wide range of industries to provide products and services to satisfy their needs. The chain involves the following activities: travel, food, accommodation, tourism, shopping, and entertainment, all of which are mutually beneficial and competitive, forming a complete industry chain that includes tourism service centers such as travel agencies, transportation departments, restaurants, hotels, scenic spots, tourist stores, tourist buses and boats, and recreational facilities.

Therefore, the managers and operators of scenic spots should make files on the tourism industry chain. Instead of focusing all their eyes on the small piece of cake of admission fees, it would be better to pool their wisdom, reform and innovate, transform the economic structure, optimize the industrial model, realize the transformation from single sightseeing tours to tourism products such as services, vacations, and experiences, and then promote the development of tourism-related industries, so as to jointly make a bigger piece of cake of the tourism industry market, and to expand their own income under the premise of expanding the total economy. In order to expand the total economy, we will expand our own income and transform the deformed "ticket economy" of the scenic spots into an industrial economy for sustainable development.

The West Lake Scenic Area in Hangzhou was the first tourist attraction in China where free admission was performed.^[13] The implementation of the ticket-free policy in the West Lake Scenic Area has realized the transformation from "ticket economy" to "industrial economy," which has led to the expansion of the total demand for tourism products in Hangzhou, and has a great driving effect on the development of the tertiary industry such as catering, transportation, hotels and retail in the West Lake Scenic Area. With the development of urban economy, the fiscal revenue of Hangzhou has increased. In turn, the government will give more financial allocation and policy support to the West Lake scenic spot. The two promote each other and develop each other to form a benign development model of the scenic spot.^[14]

However, for areas where the development of the tourism industry chain is not mature enough, the demand elasticity of tourists for other supporting services other than scenic spots is small, and it is not appropriate to implement the policy of free tickets, and the average cost pricing should be adopted.

4.4. Incentives and monitoring mechanisms

In terms of regulating ticket prices for tourist attractions, establishing appropriate incentives and monitoring mechanisms to minimize the welfare loss of multiple principal-agent relationships is an important policy direction in the current social context.

From the perspective of quasi-public goods, tourist attractions have the attributes of quasi-public goods, and therefore the ownership of tourist attractions should be vested in all citizens. However, given the large number of people in China, it is impossible for every person to exercise power. Therefore, all citizens entrust the management of scenic spots to the state, and the state exercises its power on their behalf. In order to increase efficiency, the state executed a top-down delegation of the management rights of the scenic spots. From the initial management by the state to the final management by specific enterprises, the management right is executed by the enterprises, thus separating the ownership of the scenic spots from the management right. This separation of ownership and management has led to the creation of agency costs in the process of entrusting the management of tourist attractions, and has led to an increase in the price of tourist attraction tickets.

Therefore, in order to address the current situation of multiple layers of delegation, appropriate incentives and monitoring mechanisms should be established to reverse the situation whereby tourist attractions seek to maximize their own profits, so that they can move towards the goal of achieving social welfare and the goal of creating an environment that is conducive to the development of the tourist industry.

5. Conclusions

From the perspective of quasi-public goods, state-owned scenic spots have the attributes of quasi-public goods, therefore, the ownership of scenic spots should be owned by all nationals, and the ultimate goal of state-owned scenic spot operation is to enhance the welfare of all citizens.

Due to the wide distribution of public resource tourism scenic spots in China, the large span of types, and the large disparity in endowments, tiered and graded pricing should be implemented. From the perspective of building the industry chain, the government should not pursue a fiscal policy that balances the budgets of scenic spots, but should instead guide scenic spots to formulate ticket pricing plans for the purpose of functional finances; in the context of epidemics, scenic spots can be flexibly priced in order to expand market demand, reduce social costs, and at the same time give more play to their public service functions. In terms of the long-term development of scenic spots, in order to implement the construction of a national unified mass market, the government should improve incentive and supervision mechanisms, reduce the welfare loss under multiple sub-delegated agency relationships, so that state-owned scenic spots can truly serve the overall socio-economic situation, promote regional economic growth and enhance national welfare.

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