15. Investigating the Size and Economic Value of National Parks in Guizhou, China

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EXTENDED ABSTRACT

Tourism plays a crucial role in facilitating regional economic development. National parks are vital tourism attractions in China and worldwide. Undoubtedly, national parks are significant for regional action on value-added, employment, and tax revenue.

Guizhou, located in western China, is one of the poorest provinces in China and boasts 18 national parks (Guizhou statistic, 2020) as the main tourist attraction. Tourism is Guizhou province's pillar industry, and it needs to rely on tourism to eliminate poverty (Zhou, 2020). Now China has entered to 14th five-year development plan. It is urgent to address the problems of examining industrialization and properly allocating the investment to national parks.

Meanwhile, in 2021, the central government released the first batch of the new national park, implying the new national park system is established under which the government should degrade or upgrade the old national parks. How to rank the old national parks in Guizhou is a problem. This study aims to evaluate the economic value and investigate the experience of tourists visiting the national parks in Guizhou, China.

This research applied the systematic literature review method to find an appropriate model to assess the economic value, using the tourism economy, economic impact, effect evaluation, or assessment as search words and found 183 articles from 1988 to 2021. Articles were downloaded for a complete reading if the abstracts were deemed relevant. Finally, 66 articles met the requirements and were used. For the literature review, there are three main findings:

(1) The tourism economic impact development can be defined in three phases:
   i.   The introduction period (1988-1995): there were limited statistics on tourism data, and assessments of the general impact were conducted, mainly using the economic discipline I-O Model.
   ii.   The development period (1998-2010): new methodologies were proposed and focused on the contribution of the different tourism markets. The new methods comprise Ricardo–Viner–Jones (RVJ) (Nowak et al., 2005), Heckscher–Ohlin (H–O)models (Nowak et al., 2005), IMPLAN (Yu & Turco, 2000), TSA (Dwyer et al., 2016). Various tourism markets include events (Huang et al., 2014), festivals, VFR (visiting friends and relatives) (Asiedu, 2008), and agritourism (Rainey, 2010).
   iii.   The flourishing period (2010 to 2021): the advent of different methodologies from static to dynamic and more precise international data were collected. Such as the causal chain model (Young et al., 2010), a three-bottom-line method (Fairley et al., 2011), CGE (Becken & Lennox, 2012), and GMM (Generalized Methods of Moments) (Seetanah, 2011) method are

dynamic methods for assessing the tourism economic impact. An international geo-database was presented to collect tourists for a more precise economic assessment impact.

Table 1: National Parks of Guizhou Province in 2019

Serial Number	Parks	A-level Standard
1	Hongfeng Lake National Park	4A
2	Huangguoshu Waterfalls National Park	5A
3	The Dragon Palace National Park	5A
4	Zhijin Cave National Park	4A
5	Jiudongtian National Park	4A
6	Malinghe Canyon-Wanfeng Lake National Park	4A
7	Wuyang River national park	4A
8	Liping Dong-Village National Park	4A
9	Libo Zhangjiang National Park	5A
10	Duyun Doupeng mountain—Jianjiang National Park	4A
11	Chishui National Park	4A
12	Jiulong Cave National Park	4A
13	Ziyun Getu River National Park	4A
14	Pingtang National Park	4A
15	Wengan Jiangjie River National Park	4A
16	Rongjiang Mountain and Water landscapes with Miao and Dong Cultures National Park	4A
17	Shiqian Hot Well Flock National Park	4A
18	Yanhe Wujiang River Sanxia National Park	4A

Source: Guizhou statistical yearbook, 2020.

(2) Scholars developed the research either from the supply-side or the demand perspective (Baggio 2018, cited as Cooper and Hall 2008). The supply side includes tourism resources, facilities, and services. People (tourists), money (expenditure, receipts), time (stays and travels duration), and space (distances, lengths of trips) can be taken into account when measuring tourism impact from the demand side(Song et al., 2010).

(3) The MGM model is tailored for national park economic impact assessment(Fish, 2009). The primary assessment models are Input-Output, CGE, IMPLAN, REMI, REMII, and MGM, mainly applied in national or provisional regions. Meanwhile, Input-Output Model, IMPLAN, REMII, and MGM models are static models (Kumar & Hussain, 2014; Dan S.Rickman, 1990; D. Stynes, 1999); CGE and REMI are dynamic models(Hussain et al., 2017b; D. Stynes, 1999).

Table 2: Tourism Revenue, GDP, and Proportion of Added Value of Tourism in GDP in Guizhou from 2013 to 2020

Year	Gross Tourism Revenue (100 million yuan)	GDP of Guizhou (100 million yuan)	Proportion of added value of tourism in GDP Guizhou
2013	2370.65	8006.79	7.9% (Zhang, 2014)
2014	2895.98	9251.01	8.7% (Li, 2021)
2015	3512.82	10502.56	
2016	5027.54	11734.43	
2017	7116.81	13540.83	11% (Jiang, 2018)
2018	9471.03	14806.45	11.3% (Li, 2019)
2019	12318.81	16769.34	11.6% (Cao, 2021)
2020	5785.09	17826.56	12% (Zhou, 2020)

Source: Guizhou statistical yearbook, 2020.

This study adopts the MGM model tailored to national park economic value calculation regarding value-added, employment, and tax revenue to target the research aim. A survey questionnaire method is applied to collect the data on tourists' expenditures which support the economic value assessment. This study indicates the development path of the old national park in Guizhou based on tourists' expenditure and experience, satisfaction, revisit intention, and economic value of national parks, including present and future, from the perspective of investment, planning, and industrialization. It is significant to the government decision-maker.

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