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An empirical study on the dual TALC model

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Abstract: *The evolution of tourism destinations is a critical issue in tourism studies. Butler's Tourist Area Life Cycle (TALC) theory is the most influential framework for researching the evolution of tourism destinations. Although numerous researchers have substantiated or modified the TALC theory, its applicability and predictability remain debated. To further advance existing knowledge about the evolution of tourism areas, a more systematic and theoretical analysis is needed. This study re-evaluates the y-axis in the TALC model through a case study of Grand Canyon National Park in the United States. The findings suggest that the long-term TALC is more suitable when using the cumulative number of visitors as a metric, while the short-term TALC is more appropriate when using the annual number of visitors as a metric. As tourism development rises and falls, the destination's evolution unfolds in a series of waves, with several short-term cycles collectively forming a long-term cycle. Moreover, from a short-term perspective, this study also explores the macro-environmental factors contributing to the five recession periods and two stagnation periods experienced by Grand Canyon National Park. The primary contribution of this study is the introduction of a novel dual TALC framework and the demonstration of its effectiveness using data from the Grand Canyon National Park. Finally, the potential managerial implications for tourist destination development are discussed.*

Keywords: *Tourist area life cycle, Evolution of destination, National Park, Tourism destination*

1. Introduction

The evolution of tourism destinations is one of the most crucial issues in tourism studies[1-2]. The Tourist Area Life Cycle (TALC) theory, proposed by Butler[3-5], has been the most influential theory in the study of tourism destination evolution. Although numerous researchers have substantiated or modified the TALC theory, its applicability and predictability remain debated[6-8]. Despite the fact that scholars from around the world have conducted extensive case studies on the TALC theory for over four decades[9-13], there is still a lack of research focusing on the expansion and further development of this theory.The most notable visualization of Butler's TALC framework is a model consisting of six stages: exploration, involvement, development, consolidation, stagnation, and decline or rejuvenation. Since 1980, numerous case studies have applied the TALC theory to a range of tourist areas, identifying their six stages and revealing their evolutionary characteristics over time. Although widely recognized as a useful tool for describing the evolutionary trajectory of tourism areas, the TALC theory fails to accurately specify the delineations of the six stages. To further develop our existing knowledge about the evolution of tourism areas, a more systematic and theoretical analysis is required[14].

The objective of this study is to explore a novel approach for identifying the stages of tourist areas, which is crucial for destination planning and development. This study makes a significant contribution by proposing an innovative dual TALC model and demonstrating its utility using a data set from Grand Canyon National Park in the United States. The remaining sections of the paper are structured as follows: The second section reviews the literature on the TALC model; the third section describes the methodology and provides an overview of national parks in the United States; the fourth section presents the empirical results and discussion; and finally, the fifth section concludes the paper with key findings and implications.

2. Literature review

2.1 TALC theory

The term "evolution" was initially utilized in the biological sciences to delineate the phenomenon of

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heritable variations between generations of organisms. The concept of evolution has been applied to a number of different fields within the discipline of social development research. A number of theories have been put forth in an effort to elucidate the disparate levels of evolution that have been observed in a given destination. Such models include those of a locational nature, as well as the TALC model. The evolution of destinations research encompasses a broad range of topics, including, but not limited to, tourism destination networks, tourism spatial structures, and the tourism industry. This study is primarily concerned with the description of the evolution of tourism destinations, with a particular emphasis on the TALC theory.

The three-stage paradigm of the evolution of tourism destinations was first proposed by Christaller[15], after which Stansfield introduced the concept of the resort cycle[16]. However, it was not until the proposal of the TALC conceptual framework (see Figure 1) by Butler that the study of the life cycle of destinations notably increased, and then underwent further modification and improvement by Butler[4-5]. The TALC pattern, which considers distinct tourist areas as products, was originally based on the product life cycle (PLC) concept. The PLC, a concept with significant influence across a range of disciplines (including economics and marketing), has been the subject of investigation since the 1960s. It has gained acceptance as an effective framework for application to marketing strategy and planning. The predominant PLC pattern depicts the characteristics of the market diffusion of products or services over time as an S-shaped curve comprising four stages: introduction, growth, maturity, and decline. The PLC concept has its roots in the life cycle concept in biology, which is defined as the maturation and generational processes driven by the reproductive mechanism in natural populations. When the life cycle concept is employed as a metaphor for the description and explanation of complex economic phenomena, it serves to elucidate the entirety of the market diffusion process of products or services. There are notable similarities between the TALC and PLC theories, including the use of comparable S-curves and the division of stages into discrete phases. A significant distinction between the two models is that the PLC theory posits that the majority of products will ultimately decline, while new products may emerge as replacements. In contrast, the TALC model allows for a range of potential scenarios regarding the future evolution of destinations, including decline, rejuvenation, and other possibilities.

McKercher advanced a controversial argument that a destination should be conceptualized as a geographically clustered amalgam of tourism experiences, rather than as a single product[17]. While Butler defended the premise of the TALC, namely that destinations can be considered as products[4], Ma and Hassink challenged that it is problematic to apply the TALC without specifying "tourism areas" and "tourism products."[14] One criticism of the TALC model is that it treats destinations as homogeneous entities[18]. Consequently, it is regarded as an ideal model of evolution by some researchers. Despite the ongoing debate in the existing literature regarding the classification of tourist areas and the characteristics of tourist products, the evolution of tourist areas can be understood as a market diffusion process, whereby areas are continuously visited by tourists who incur travel costs or expenses.

While the TALC framework is not universally applicable, some researchers have endeavoured to adapt the six-stage model to align more closely with the distinctive stage patterns observed in various tourist areas. For example, Hovinen proposed that the consolidation and stagnation phases could be combined into a single "maturity" phase[19]. Baum observed that the phase following the decline in tourism could be regarded as the "exit" phase[20]. Priestley and Mundet proposed the "post-stagnation" concept, which encapsulates the long-term stable state of destinations when maximum tourism growth is achieved[21]. Agarwal proposed the addition of a "re-orientation" phase following the stagnation phase to represent the dynamic process of destination restructuring[22]. Since 1980, numerous case studies conducted via both qualitative and quantitative approaches have applied the TALC theory to a range of tourist areas, identified their six stages, and revealed their evolutionary characteristics over time. The majority of the results indicate that the TALC model is consistent with the historical data of destinations[18, 23]. However, other studies have indicated that the life cycle of the analysed destination does not always align with the six stages of the TALC theory[24]. The aforementioned studies have indicated that the life cycle of the analysed destination does not always align with the six stages of the TALC theory.

In order to gain insight into the evolution of tourist areas, Cohen put forth an interpretative framework that classifies tourists into two categories: non-institutionalized or institutionalized. Moreover, he identified four distinct categories of tourists: drifters, explorers, individual mass tourists, and organized mass tourists[25-26]. Moreover, Plog put forth the notion that a destination has the capacity to resonate with a specific psychographic cohort of travellers at each stage of its TALC[27-28]. He put

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forth a proposal to identify five distinct categories of tourists, based on the aforementioned psychocentric personality types. The aforementioned psychocentric personality types can be further classified into the following categories: dependable psychocentric, near-dependable (near psychocentric), mid-centric, near-venturer (near-allocentric), and venturer (near-allocentric). This was done in order to elucidate the reasons behind the fluctuations in popularity of tourist destinations.

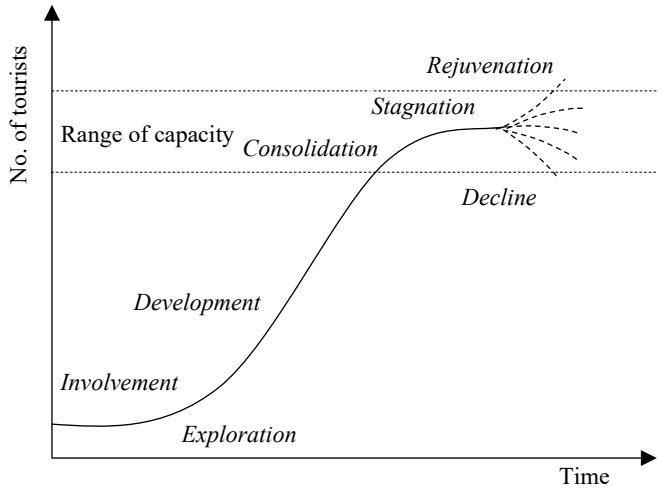

Figure 1: Hypothetical evolution of a tourist area life cycle[3]

2.2 Empirical research of TALC

Several studies have examined the applicability of the TALC model in various destinations and regions worldwide[29-31]. Researchers have used mathematical modelling to explore the evolutionary process of destinations through the TALC model. Empirical evidence suggests that the S-shaped curve of the TALC can be closely represented by a logistic function expressed as $N(t) = K/(1+e^{a-rt})$[32-33], which effectively captures the primary five stages of the TALC. Additionally, the multi-logistic model has demonstrated superior fitness[34-35]. The logistic growth model assumes a fixed market ceiling K, which is measured by the carrying capacity in the context of tourism. However, it fails to explain the post-stagnation stages[35]. The carrying capacity, defined in terms of limits of economic, social, environmental, and physical conditions, is a topic of controversial debate[36]. Critics argue that the decline stage for large geographical areas does not inevitably emerge unless there is a tremendous and everlasting catastrophe[37]. Furthermore, some researchers suggest that the decline in tourism arrivals is not attributed to exceeding the carrying capacity of a tourist area but rather results from the exhaustion of the potential market[36]. Another point of contention is that the carrying capacity of a tourist area is not constant but dynamic[35].

Fundamentally, both single and multi-logistic functions lack the breadth of perspective required for the future tourism development of destinations, as they merely emphasize the fitting of past data. The mathematical formulation of the TALC curve remains an urgent issue that demands further detailed analysis. Moreover, alternative formulations of the TALC pattern, such as overlapping or segmented functions, represent the evolutionary path of destinations through a series of differentiated models based on specific growth trends over time. However, these formulations still rely on the previous assumption of a fixed market ceiling (K), thus highlighting the inefficiencies in the existing TALC theory.

3. Method and data

Case study methodology has been widely applied in the field of tourism[38-39]. Adopting a longitudinal research paradigm, this study aims to investigate the evolution of national parks. While numerous studies have focused on tourist behaviours or tourism development within the context of national parks, few have explored the applicability of the life cycle concept to these protected areas.

National parks are a typical tourist destination type that has attracted wide attention[40-41]. In particular, several national parks have continuously collected visitor data for over 100 years, which is

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essential for exploring the evolution of tourism destinations. Therefore, this study focuses on the measurements of the y-axis in the TALC model via a case study of national parks. The Grand Canyon National Park was selected as the case study for the following reason: it has collected nearly 120 consecutive years of tourism statistics (1904-2021), which provides an opportunity to examine the long-term pattern of tourist areas. As indicated by Singh, tourist areas evolve differently and may take at least a hundred years to understand[42]. All the secondary data on the evolution of tourism in Grand Canyon National Park (1919-2021), Yellowstone National Park (1904-2021), and Acadia National Park (1919-2021) were downloaded from the U.S. National Park Service website.

4. Findings

4.1 Long-periodic TALC

It is well known that the evolutionary trajectory of tourist areas, as described by Butler with an S-shaped curve, is differentiated into six stages: exploration, involvement, development, consolidation, stagnation, and finally, either decline or rejuvenation. The evolution of tourism in Grand Canyon National Park (1919-2021) has gone through a complete six-stage life cycle, including the exploration, involvement, development, consolidation, stagnation, and decline stages. However, the above stage divisions based on the conventional TALC framework may fall into the trap of "tourism myopia." Butler emphasized that the life span of a destination might be a century or more[4]. Therefore, while the tourism growth of Grand Canyon National Park has been truncated by the current COVID-19 crisis, it may be far from its peak in the life cycle. It is important to note that many destinations do not go through all stages completely, and all the identification methods may be somewhat subjective. From a long-term perspective, this research suggests that the evolution of tourism in Grand Canyon National Park (1919-2021) has mainly experienced the following three stages:

1) The exploration stage (1540-1919): Several explorers first arrived at the Grand Canyon in 1540, attracting many additional explorers, including John Wesley Powell, who led an expeditionary team to explore the Colorado River and Canyon by boat in 1869, and John Hance, who organized the first touring group to visit the Grand Canyon for sightseeing in the 1880s. The most crucial milestone was the establishment of Grand Canyon National Park in 1919.

2) The involvement stage (1919-1945): Since its establishment in 1919, Grand Canyon National Park has been protected, and visitor statistics have been collected continuously. The Grand Canyon has become one of the most popular tourist destinations worldwide. However, World War II had a disastrous impact on global social and economic development, including tourism in Grand Canyon National Park.

3) The development stage (1945 to date): After World War II, tourism in Grand Canyon National Park recovered rapidly and increased unprecedentedly. In 1979, the Grand Canyon was listed as a UNESCO World Heritage site. As Butler (2009) emphasized, the life span of a destination might be a century or more. Therefore, while the tourism growth of Grand Canyon National Park has been truncated by the current COVID-19 crisis, it is far from reaching its long-term peak in the TALC model, which is expected to occur in the future.

4.2 Short-periodic TALC

Table 1: Five Stages of Decline in Grand Canyon National Park (1919-2021)

Stage	Maximum year	Minimum year	Max-Min	Exogenous factors
Decline I	1929 (184093)	1933 (105475)	78618 (0.427)	World War I
Decline II	1941 (436566)	1944 (64568)	371998 (0.852)	World War II
Decline III	1972 (2698300)	1974 (1888600)	809700 (0.300)	The 1st oil crisis (1973)
Decline IV	1997 (4791668)	2002 (4001974)	789694 (0.165)	9-11 attacks (2001); SARS (2002)
Decline V	2018 (6380495)	2020 (2897098)	3483397 (0.546)	COVID-19

Note: The numbers in parentheses in the second and third columns represent the annual number of tourists. The percentages in parentheses in the fourth column indicate the proportion of tourists in each category.

The single life cycle concept limits the description of the detailed characteristics of the distinct short-term evolution of a park destination. According to Singh, the evolution of resorts is a long-term

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continuous process involving multiple life cycles, some of which may end while others continue, or during which new branches may emerge[42]. Garay and Canoves indicated that many major destinations have a much longer history and appear to have undergone different consecutive life cycles related to various stages[24]. Furthermore, Albaladejo and Martínez-García proposed that a new cycle could arise as a result of an investment or innovation[35]. Moreover, McKercher and Wong emphasized that destinations commonly experience multiple smaller life cycles with continuous growth[7].

It was found that the evolution of tourism in Grand Canyon National Park (1919-2021) might have experienced five complete sub-cycles of the TALC framework from a short-term perspective. Specifically, five decline phases and two distinct stagnation phases are apparent, as shown in Tables 1 and 2. Based on Butler's TALC framework, a decline stage usually occurs after the stagnation stage. However, this study reveals that the two stagnation phases actually occurred after Decline III and Decline IV. This finding demonstrates that a tourist area sometimes does not immediately recover after a decline but may experience a long stagnation stage. Moreover, the stagnation and decline in the evolution of tourism in Grand Canyon National Park are mainly influenced by exogenous factors.

Table 2: Two stagnation stages of Grand Canyon National Park (1919-2021)

Stage	Maximum year	Exceeding the maximum year	Negative tourism growth years	Exogenous factors
Stagnation I	1972 (2,698,300)	1985 (2,711,529)	1973-1974; 1977; 1979; 1982-1984	First oil crisis (1973); second oil crisis (1978); financial crisis (1979); etc.
Stagnation II	1997 (4,791,668)	2015 (5,520,736)	1998; 2000-2002; 2006; 2009; 2011	Financial crisis (1997); Internet bubble (2000); 9/11 attacks (2001); SARS (2002); subprime mortgage crisis (2007-2009); etc.

Note: The numbers in parentheses in the second and third columns are the annual numbers of tourists.

Moreover, as tourism development fluctuates, the destination's evolution presents a series of consecutive waves, each representing a short-term cycle. These short-term cycles collectively form a long-term cycle. The model's fitness, when presented with the cumulative number of visitors, was better than when presented with the annual number of visitors, as used in the conventional TALC model (see Table 3).

Table 3: Sub-cycles of Grand Canyon National Park (1919-2021)

Sub-cycle	Period covered	Fitting function	Dependent variable					
			Annual no. of visitors			Cumulative no. of visitors		
			R^2	F	Sig.	R^2	F	Sig.
Sub-cycle I	1919-1933	Quadratic function	0.878	43.350	.000			
		Cubic function				0.999	4615.824	.000
Sub-cycle II	1933-1944	Quadratic function	0.763	14.492	.002			
		Cubic function				0.998	1360.772	.000
Sub-cycle III	1944-1984	Quadratic function	0.913	199.561	.000			
		Cubic function				0.999	18406.775	.000
Sub-cycle IV	1984-2002	Quadratic function	0.937	118.135	.000			
		Cubic function				1	126046.216	.000
Sub-cycle V	2002-2021	Quadratic function	0.193	4.318	.052			
		Cubic function				0.996	4825.860	.000

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5. Conclusion and implications

5.1 Conclusion

Compared with previous studies, this study selects a national park as a typical case and finally offers a novel methodology to specify the stages of tourism development in a destination.

First, this study compares the respective advantages of using the annual number of visitors and the cumulative number of visitors as measurements of the TALC. Second, the single life cycle concept limits the description of the detailed characteristics of the distinct short-term evolution of a park destination. This study suggests adopting both long-periodic and short-periodic TALC views. Based on the case of Grand Canyon National Park, this study identifies three specific stages of TALC from the long-term perspective and five sub-cycles from the short-term perspective. In short, the long-periodic TALC is more appropriate when using the cumulative number of visitors as a measurement, while the short-periodic TALC is more appropriate when using the annual number of visitors as a measurement. The main theoretical contribution of this research is the reconstruction of the interpretive framework for the evolution of destinations, thereby providing a new perspective for tourism destination studies.

5.2 Implications

Tourism destination managers should identify the specific stages in the long-periodic TALC through the cumulative number of visitors as a measurement of the y-axis in the TALC model. They should also identify the specific stages in the short-periodic TALC through the annual number of visitors as a measurement of the y-axis in the TALC model. Based on this analysis, managers can formulate appropriate marketing strategies and planning for each specific stage. Suggestions for marketing strategies and planning are as follows:

1) Exploration Stage: If a location is assessed as having considerable tourism resources or a significant potential tourism market, tourism investment and intervention could be carried out. However, if the location lacks such potential, it is suggested not to take any measures related to tourism investment, as this may be the optimal marketing strategy and planning option. It is important to recognize that not every location is suitable for the development of a tourism industry, and a small number of explorers visiting a location in the exploration stage may not be a good market investment signal.

2) Involvement Stage: This stage is considered the best for tourism investment and marketing. If a place is evaluated as having substantial tourism resources or a considerable potential tourism market, market resources and power should be centralized to bridge the gap between early tourists and majority tourists. This is a critical point in the market diffusion of the tourist area.

3) Development and Consolidation Stage: At this stage, investment does not need to be scaled to attract a large number of visitors. The most important measure to be taken during this period is to improve the quality of tourism services to extend this stage as long as possible.

4) Stagnation, Decline, or Rejuvenation Stage: If there is no destructive external disturbance and the annual number of tourists still begins to decline, it is often a sign of the end of a short-term market cycle. In this case, it is suggested that tourism projects should be properly updated to rejuvenate the destination. It is particularly important to take action during the stagnation period to prevent further decline.

By implementing these strategies and considering the specific stages of the TALC model, tourism destination managers can optimize their marketing efforts and ensure the long-term success of their destinations.

5.3 Limitations and future research directions

Despite the contributions made in this paper, there remain several limitations that warrant further exploration in future research endeavors.

First, just as Chapman and Light criticized the TALC model for inappropriately treating destinations as homogeneous entities[18], the authors of the present study acknowledge that this is also a shortcoming of the dual TALC model. Thus, determining whether the dual TALC model is applicable to various destinations requires further empirical research in the future. Moreover, the heterogeneity of

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tourists or visitors is another important issue that should be considered in future studies.

Second, previous research has noted that the return rate may influence the TALC[43-46]. Unfortunately, the proposed dual TALC model neglects the revisitation rate. One of the implicit assumptions of the dual TALC model is that there are no repeat adopters of a tourist area, which is a condition that does not exist in practice. The dual TALC model may be much more efficient, which requires further exploration and experimentation in future research.

Finally, the present study also ignored the market competition between neighboring tourist areas. Generally, there is a substitution effect among competitive homogeneous destinations. Therefore, more complicated multiple diffusion models could be much more effective, which also requires further detailed analysis.

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References

[1] Lu L, Zhang Q Y, Huang J F, et al. A theoretical research and prospect of tourism destination evolution based on a glocalization perspective[J]. Acta Geographica Sinica, 2021, 76(06): 1504-1520.
[2] Lu L, Chu X L. Research progress and enlightenment on tourism destination evolution[J]. Journal of Anhui Normal University (Natural Science). 2018, 41 (01): 77-84.
[3] Butler R W. The concept of a tourist area cycle of evolution: Implications for management of resources [J]. Canadian Geographer, 1980, 24(01): 5-12.
[4] Butler R. W. Tourism in the future cycles: Waves or wheels? [J]. Futures, 2009, 41: 346-352.
[5] Butler R W. Tourism destination development: the tourism area life cycle model[J]. Tourism Geographies, 2024: 1-9.
[6] Albaladejo I P, González-Martínez M I, Martínez-García M P. A double life cycle in tourism arrivals to Spain: Unit root tests with gradual change analysis[J]. Journal of Destination Marketing & Management, 2020, 18: 100497.
[7] McKercher B, Wong I A. Do destinations have multiple lifecycles? [J]. Tourism Management, 2021, 83: 104232.
[8] Koens K, Smit B, Melissen F. Designing destinations for good: Using design road mapping to support pro-active destination development[J]. Annals of Tourism Research, 2021, 89: 103233.
[9] Huang Z F, Yu Z Y, Huang Z L, et al. Evolutionary stages and dynamic mechanisms of thematic cultural tourist areas: A Case Study of Lingshan Scenic Area in Wuxi[J]. Acta Geographica Sinica, 2011, 66(06): 831-841.
[10] Qi H L, Liu J S, Mei L. Progress of tourism area life cycle theory[J]. Scientia Geographica Sinica, 2018, 38(02):264-271.
[11] Xu Y, Lu L. Tourism destination evolution: A systematic literature review[J]. Human Geography, 2023, 38(03): 11-20.
[12] Zhang J Z, Sun G N. Life cycle and upgrade of Shangxi's mansion as a tourist destination: Taking Qiao's grand compound as an example[J]. Geographical Research. 2012, 31(011): 2104-2114.
[13] Ma X L, Li W W, Chen L J. Life cycle characteristics and formation mechanisms of the urban tourism complex: A case study of Qujiang, Xi'an city[J]. Geography and Geo-Information Science, 2020, 36(04): 102-109.
[14] Ma M, Hassink R. An evolutionary perspective on tourism area development[J]. Annals of Tourism Research, 2013, 41: 89-109.
[15] Christaller W. Some consideration of tourism location in Europe: The peripheral regions underdeveloped countries recreation areas[J]. Papers in Regional Science, 1963, 12(01), 95-105.
[16] Stansfield C. Atlantic City and the resort cycle background to the legalization of gambling[J]. Annals of Tourism Research, 1978, 5(02), 238-251.
[17] McKercher B. Destinations as products? A reflection on Butler's life cycle[J]. Tourism Recreation Research, 2005, 30(03): 97-102.
[18] Chapman A, Light D. Exploring the tourist destination as a mosaic: The alternative lifecycles of the seaside amusement arcade sector in Britain[J]. Tourism Management, 2016, 52: 254-263.
[19] Hovinen G R. Visitor cycles: Outlook for tourism in Lancaster County[J]. Annals of Tourism Research, 1982, 9(04): 565-583.

ISSN 2616-5902 Vol. 6, Issue 9: 1-8, DOI: 10.25236/AJBM.2024.060901

[20] Baum T. Taking the exit route extending the tourism area life cycle model[J]. Current Issues in Tourism, 1998, 1(02): 167-175.
[21] Priestley G, Mundet I. The post-stagnation phase of the resort cycle[J]. Annals of Tourism Research, 1998, 25(01): 85-111.
[22] Agarwal S. Restructuring seaside tourism: The resort life cycle[J]. Annals of Tourism Research, 2002, 29(01): 25-55.
[23] Zhong L S, Deng J, Xiang B. Tourism development and the tourism area life-cycle model: A case study of Zhangjiajie National Forest Park, China[J]. Tourism Management, 2008, 29(05): 841-856.
[24] Garay L, Canoves G. Life cycles, stages and tourism history: The Catalonia (Spain) experience[J]. Annals of Tourism Research, 2011, 38(02), 651-671.
[25] Cohen E. Toward a sociology of international tourism[J]. Social Research, 1972, 39(01): 164-182.
[26] Cohen E. Rethinking the sociology of tourism[J]. Annals of Tourism Research, 1979, 6(01): 18-35.
[27] Plog S C. Why destination areas rise and fall in popularity[J]. Cornell Hotel & Restaurant Administration Quarterly, 1974, 14(04): 55-58.
[28] Plog S C. Why destination areas rise and fall in popularity: An update of a Cornell Quarterly classic[J]. Cornell Hotel & Restaurant Administration Quarterly, 2001, 42(03): 13-24.
[29] Garcia-Ayllon S. Geographic information system (GIS) analysis of impacts in the tourism area life cycle (TALC) of a Mediterranean resort[J]. International Journal of Tourism Research, 2016, 18(02): 186-196.
[30] Almeida A, Garrod B. A CATREG model of destination choice for a mature Island destination[J]. Journal of Destination Marketing & Management, 2018, 8: 32-40.
[31] Kebete Y, Wondirad A. Visitor management and sustainable destination management nexus in Zegie Peninsula, Northern Ethiopia[J]. Journal of Destination Marketing & Management, 2019, 13: 83-98.
[32] Cole S. A logistic tourism model: Resort cycles, globalization, and chaos[J]. Annals of Tourism Research, 2009, 36(04): 689-714.
[33] Zhang C M, Zhang H. A quantitative division for each stage of the TALC model based on the logistic model: Discussion on the tourism life cycle types of the ten national parks in the United States [J]. Tourism Tribune, 2017, 32(06): 86-95.
[34] Petrevska B, Collins-Kreiner N. A double life cycle: Determining tourism development in Macedonia [J]. Journal of Tourism and Cultural Change, 2017, 15(04): 319-338.
[35] Albaladejo I P, Martínez-García M P. The post stagnation stage for mature tourism areas: A mathematical modeling process [J]. Tourism Economics, 2017, 23(02): 387–402.
[36] Lundtorp S, Wanhill S. The resort lifecycle theory: Generating processes and estimation[J]. Annals of Tourism Research, 2001, 28(04): 947-964.
[37] Toh R S, Khan H, Koh A J. A travel balance approach for examining tourism area life cycles: The case of Singapore [J]. Journal of Travel Research, 2001, 39(04): 426-432.
[38] Shaker M, Hermans E. Identification of key measures to promote and enhance cycling for visiting National Parks: A case study of Peak District National Park, England[J]. Journal of Outdoor Recreation and Tourism, 2021, 35, 100406.
[39] Fan X, Lu J, Qiu M, Xiao X. Changes in travel behaviours and intentions during the COVID-19 pandemic and recovery period: A case study of China[J]. Journal of Outdoor Recreation and Tourism, 2022, 41: 100522.
[40] Elmeligi S, Nevin O T, Taylor J, Convery I. Visitor attitudes and expectations of grizzly bear management in the Canadian Rocky Mountain National Parks[J]. Journal of Outdoor Recreation and Tourism, 2021, 36: 100444.
[41] Bhatt P, Pickering C. M. Destination image of Chitwan National Park, Nepal: Insights from a content analysis of online photographs[J]. Journal of Outdoor Recreation and Tourism, 2022, 37: 100488.
[42] Singh S. The tourism area "life cycle": A clarification[J]. Annals of Tourism Research, 2011, 38(03): 1185-1187.
[43] Liao P, Xie L S. The paradox of tourists' novelty-seeking and revisiting: Theoretical and empirical analyses[J]. Tourism Tribune, 2022, 37(01): 56-67.
[44] Xu H G. Study on the Potential Tourists and Life cycle of Tourism Product: A system dynamics approach [J]. Systems Engineering, 2001, (03): 69-75.
[45] Xu H G, Zheng H Y, Bao J G. The system dynamic model for urban tourist destination cycle of evolution [J]. Human Geography, 2005, (05): 72-75+25.
[46] Wu J, Huang Z F. Study on the application of logistic curve simulating tourism destination lifecycle [J]. Geography and Geo-Information Science, 2004, (05): 91-94