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Empirically Mapping the Evolutionary Phases of Tourism Area Life Cycle (TALC): The Case of Goa, India

Abstract

This paper aims to simulate the stages of the Tourism Area Life Cycle (TALC) in Goa, India, based on the number of tourist arrivals and tests whether the stages correspond with the stages of TALC as predicted in the theory. The graphs are plotted for total, foreign, and domestic tourists from 1962-2018. A compliance assessment of the indicators with the TALC stages is also done to ascertain the extent of development. The leading indicators of the exploration, stagnation, and decline stages are identified. The lagging indicator shows sluggish tourism planning initiatives. It is observed that the TALC differs for domestic and foreign tourists' arrivals. The study provides an important historical perspective on the pattern of growth of tourism in Goa. The pattern can further be employed as a basis to guide the process of strategy formulation.

Keywords: tourism area life cycle, stages of TALC, tourist arrivals, pattern analysis, Goa

1. Introduction

The tourism area life cycle (TALC) maps the extent of development of a tourism destination as a function of time and explorer categories (George et al., 2013). The linkages between marketing and planning in tourism (Ketter et al., 2016) are articulated in no better terms than in the TALC model. The model gives insights into the stages of growth, investments, facilities, changes, and challenges encountered during its transition as a tourist destination. Butler (1980) proposed the concept of TALC, depicting the evolution cycle of a tourism area having an S-shaped curve and six developmental phases, namely exploration, involvement, development, consolidation, stagnation, and decline or rejuvenation.

The exploration stage marks the start of tourism at the destination. The tourists are attracted to the virgin natural and cultural beauty of the place. At this stage, tourism does not affect the destination environment. At the involvement stage, the tourist inflow stabilizes. The locals are involved in providing basic catering and lodging facilities. Better transportation facilities are made available, and the lifestyle of the locals engaged in tourism changes. The Local Government is also involved in the development process. The development stage signifies the growth of tourism at the destination. A distinct tourist market area indulging in heavy advertising to attract tourists is formed within the destination. The National Government, along with Local Government, takes control of planning, development of natural, cultural, and manmade attractions. This stage is very important to the destination as rapid development can alter the quality of the destination. At the consolidation stage, tourism is a full-fledged industry. The tourist arrival growth rate drops compared to

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the development stage. Local, national, and international organizations provide tourism services. Older tourist facilities do not get any attention and become outdated. The stagnation stage is differentiated for having psycho-centric tourists, repeat visitors, and peripheral development of tourism. The destination reaches the carrying capacity, many ecological, environmental, social problems surface. Tourism organizations face low occupancy, less advertising, and so the destination slowly loses its appeal. The decline stage is characterized by a decrease in the number of tourist arrivals, occupancy, average stay, and growth rate. The destination may get day-trippers and weekend tourists. The market declines, and so does advertising. Tourism infrastructure degrades, hotels get converted into retirement homes, and many second homes emerge in the area. It is difficult to manage traffic and environmental problems. The social and cultural fabric of the place gets destroyed.

The TALC model is one of the well-researched concepts in tourism literature. Mapping the growth pattern of the destination helps tourism planners study the past happenings (Bagri et al., 2009). Based on past experiences, new plans can be developed, which will help the destination to grow further. Careful strategy interventions can also help in managing a particular stage of the life cycle. Butler (1980) also proposed specific indicators for each stage of the life cycle. The indicators tell us about the impact of tourism on the destination.

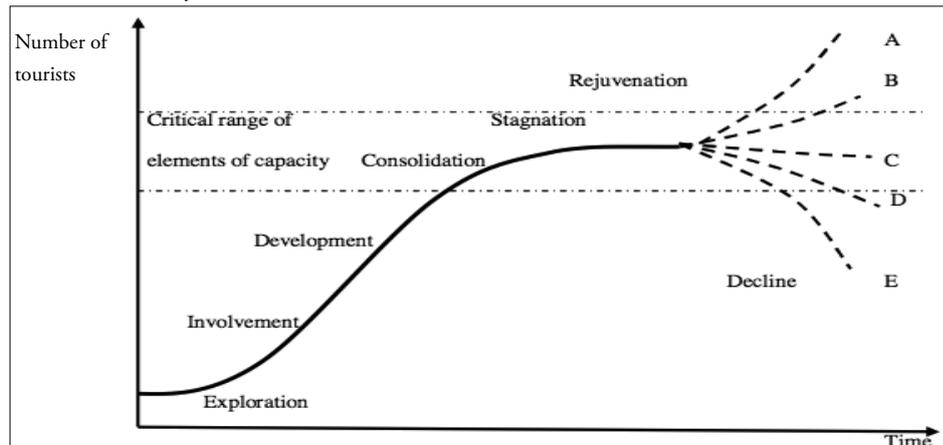
The objective of the paper is to plot the TALC graph and interpret the stages of TALC based on the number of tourist arrivals, with Goa, India, as a case for examination. Goa is the smallest state in India, with an area of 3,702 km², a coastline extending to 110 km, and a population of about 1.6 million people. Situated on the western coast of India, Goa is surrounded by the states of Maharashtra and Karnataka, and the Arabian Sea on the west. It is a well know tourist destination among both domestic and foreign tourists. A compliance assessment of the indicators with the TALC stages is done to trace the TALC evolution in Goa and to ascertain the extent of development. This interpretation will then help in understanding if the TALC in Goa complies with the TALC model. The paper is structured as follows. First, the literature review on TALC is presented. The objectives, propositions, and methodology are discussed, followed by an introduction to the state of Goa as a tourism destination. In the analysis section, the TALC graphs and corresponding stages are discussed, and compliance assessment of indicators is done.

2. Literature review

The TALC model is based on Keynes's economic development cycle model (1937), Rostow's theory of economic growth model (1960), and Vernon's (1966) product life cycle model. Polli and Cook (1969) validated the product life cycle theory by developing an operational model and identifying the appropriate stages. Butler conceptualized the TALC model in 1980. He hypothesized that the destination passes from one stage to the other through time and ultimately declines or rejuvenates. Butler (2009) stressed that the purpose of TALC was to propose the importance of planning for the management of the destination. The number of tourists' arrivals determines the extent of the evolution of the area in quantitative terms. The qualitative analysis is proposed through indicators corresponding to each stage. The stages of the cycle have implications for the number of tourist arrivals and types, interactions between hosts and guests, degree of change in the destination, and who is in control of the local tourism industry.

Haywood (1986) correlated the justification of the product life cycle theory to TALC for construing the different life cycle stages. He explained how the change in the number of tourists every year can be used to identify the destination's position in the life cycle. Few authors have suggested that the destination may not experience all the stages of the TALC curve (Butler, 1980; Cooper, 1994; Haywood, 1986). Figure 1 represents the 'S' shaped curve of the TALC and the stages.

Figure 1
Tourism area life cycle



Source: Butler (1980).

Several other authors have also used tourists arrivals to plot the TALC (e.g. Albaladejo & Martinez Garcia, 2017; Bao & Zhang, 2006; Boyd, 2006; Kruczek et al., 2018; Lee & Weaver, 2014; Petrevska & Collins-Kreiner 2017; Tang et al., 2017; Tischer et al., 2018; Zhong et al., 2008). Change in accommodation pattern (Foster & Murphy, 1991; Kermath & Thomas, 1992; Oglethorpe, 1984; Prideaux, 2000; Pulina et al., 2006; Weaver, 1990; Zmyslony, 2011) and government's expenditure on tourism (Debbage, 1990; Getz, 1992; Haywood, 1986; Knowles & Curtis, 1999; Richardson, 1986; Toh et al., 2001; Weaver, 2006) are the other most widely used data sets for mapping TALC.

Butler (1980) proposed specific indicators for each stage of the TALC. These indicators are used to interpret the extent of development at the destination. Many researchers have analyzed the TALC by evaluating the indicators (Agarwal, 1997; Berry, 2000; Getz, 1992; Haywood, 2005; Kruczek, 2015; Lee & Weaver, 2014; Zmyslony, 2011). Some had problems with associating indicators to a particular stage (Haywood, 2005; Zmyslony, 2011). Berry (2000) evaluated the indicators and classified them as leading or lagging. Leading factors are defined as those factors that occur prematurely in a different stage than suggested by Butler (1980), and lagging factors are described as factors that are delayed (Wilson, 1969). Cooper (1990) suggested that the leading indicators of the region could be possible threats for the future survival of the region.

Haywood (1986) stressed that for plotting TALC, the unit of analysis, i.e., the tourism area, should be identified. Some authors have raised their doubts on a tourism destination being analyzed as a single product (Chapman & Light, 2016; Cole, 2009; Ma & Hassink, 2013). Strapp (1988) stated that the TALC concept involves the cumulative of all tourism products in the tourism-based economies. Agarwal (1997) probed the geographical scale determining the tourist area. Berry (2000), however, stressed that the unit of analysis does not need to be the same in terms of geographical boundaries. The unit of analysis would depend on the region and should be consistent with the location of tourism activity. Butler (2009) reinforced that destination/tourism area/resort can be used interchangeably and can be analyzed as a single unit. Researchers in the area of marketing and strategic management have pointed out the similarity of tourism regions to a business organization (Kotler et al., 1993).

The TALC model has been widely researched in a different part of the world, and authors have different opinions on its utility and stages (Dodds & McElroy, 2008; Giannoni et al., 2017; Pathak, 2014). The difference of opinion on the TALC gives scope for researchers to study the TALC at a different geographical area. There are very few case studies that involve analysis of the TALC evolution concept in India. As and Mathews (2017) analyzed TALC for Kuruva Island in Kerala. In a study based in Goa, Kamat (2010) analyzed the TALC and

assessed local populations' perception of tourism development. The author concluded that tourism in Goa was at the consolidation stage and suggested the promotion of village tourism.

3. Research propositions and objectives

The dearth of TALC research in Goa/ India gives scope to research TALC and map the pattern of development of tourism in Goa. As a developing country, the analysis of TALC indicators for tourism in Goa, India, may present a different picture. The authors did not find evidence of the analysis of the compliance of indicators for tourism in Goa while doing a literature review. Researchers have pointed out that leading indicators could be a threat to the destination. The identification of leading and lagging factors has also not found in the literature for tourism in Goa. The application of the TALC model to public tourism planning is also not discussed much (Bao & Zhang, 2006). The research on the TALC would highlight important tourism planning issues and give scope to the destination managers to develop better plans for the future. The research would also advance the theory on TALC and give a perspective on how the cycle of tourism is different for a developing country.

Proposition One: The pattern of TALC for Goa follows the sequence of stages suggested by Butler.

Proposition Two. The compliance assessment of indicators shows a considerable difference between the TALC indicators and tourism indicators in Goa.

Proposition 2.1 The leading indicators impact the destination negatively.

Proposition 2.2 The lagging indicators delay the growth of tourism at the destination.

Objectives

1. To map the pattern of tourism development in the state of Goa (1961-2018) for domestic and foreign tourists.
2. To do a compliance assessment of the TALC indicators and identify the leading and lagging indicators for tourism in Goa.

4. Methodology

The TALC is plotted from 1962-2018 as the year 1962 marks the beginning of tourism in Goa. The research was undertaken in the year 2018. For plotting the TALC, researchers have used different data sets at different destinations. Butler (1980) plotted the TALC based on the number of tourist arrivals. Berry (2000) postulated that the unit of measurement depends on the number of factors that will be different for each region and will depend on an informed decision. Initially, three data sets, namely, tourists' arrivals, the number of hotels and hotel beds, and government expenditure on tourism, were used to plot the TALC for Goa. The change in accommodation pattern was plotted based on the number of hotels and the number of hotel beds for the period 1962-2018. The aim was to find the degree of compliance with the TALC stages and indicators. The exploration stage identified for the number of hotels (1983) and the number of hotel beds (2010) did not match and comply with Butler's TALC stages. Similarly, for tourism expenditure, the identified exploration stage (2010) did not comply with Butler's TALC model. The TALC stages based on the number of tourist arrivals was found closest to the TALC model suggested by Butler (1980). Thus, the number of tourist arrivals was used to plot the TALC for Goa.

Simple exponential smoothing is performed to reduce the anomalies, instabilities, or any other noise and to provide a clear view of the actual underlying behavior of the time series. Exponential smoothing can identify simplified changes in order to predict different trends and patterns. The simple exponential smoothing uses the weighted moving average of past observations (Brown, 1959). Microsoft Excel is used to smoothen out

the series and for plotting the graphs. The rounded optimum alpha obtained for the series is 0.20. The next step is to calculate the annual growth rates of the smoothened series. The standard deviation of the annual growth rate is obtained to determine the stages of the TALC as per Table 1. The standard deviation of the annual growth rates obtained after exponential smoothing for total, foreign, and domestic tourists is 8.80, 9.25, and 9.26, respectively. The graph is plotted separately for total, foreign, and domestic tourists to check for variance among the two tourist segments. The plotted graphs throw light on the differences in the development of tourism for two market segments. The graphs will help in depicting the changes occurring for the two market segments. Table 2 provides the data on the number of tourist arrivals, smoothened data, and growth rate for total, domestic, and international tourists.

Table 1
Stages of TALC

Stage	Criterion
Exploration	The number of tourist arrivals is less than 5% of the highest year.
Involvement	Annual growth rate is more than half the standard deviation to the standard deviation of annual growth rates for the entire period of study.
Development	Annual growth rate is more than the standard deviation of annual growth rates for the entire period of study.
Consolidation	When the growth rate is between zero to plus (+) half of the standard deviation
Stagnation	When the growth rate is between minus (-) half and zero of the standard deviation
Decline	Growth rate falls below minus (-) half of the standard deviation
Rejuvenation	Involvement stage after rejuvenation

Source: Adapted from Haywood (1986).

Table 2
Tourist arrivals in Goa (figures in lakhs)

Year	Total tourist	Domestic tourist	Foreign tourist	Exponential smoothing			Annual growth rate		
				Total tourist	Domestic tourist	Foreign tourist	Total tourist	Domestic tourist	Foreign tourist
1962	0.126	0.118	0.008						
1963	0.462	0.457	0.005	0.126	0.120	0.008			
1964	0.455	0.443	0.012	0.193	0.187	0.007	53.319	56.213	-8.425
1965	0.632	0.613	0.019	0.245	0.238	0.008	27.054	27.229	12.296
1966	0.632	0.610	0.022	0.323	0.313	0.010	31.491	31.365	27.139
1967	0.597	0.573	0.024	0.385	0.373	0.013	19.188	18.948	22.545
1968	0.881	0.849	0.032	0.427	0.413	0.015	11.016	10.727	17.449
1969	0.870	0.830	0.040	0.518	0.500	0.018	21.254	21.143	22.500
1970	1.067	1.019	0.049	0.588	0.566	0.023	13.597	13.206	23.240
1971	1.110	1.051	0.060	0.684	0.656	0.028	16.282	15.996	22.742
1972	0.910	0.849	0.061	0.769	0.735	0.034	12.468	12.016	22.731
1973	1.278	1.194	0.084	0.797	0.758	0.040	3.663	3.086	15.868
1974	1.816	1.712	0.104	0.893	0.845	0.048	12.042	11.501	22.204
1975	2.115	1.990	0.125	1.078	1.019	0.060	20.659	20.522	22.907
1976	2.468	2.307	0.161	1.285	1.213	0.073	19.232	19.069	21.939
1977	2.903	2.695	0.208	1.522	1.432	0.090	18.404	18.039	24.455
1978	3.222	2.996	0.226	1.798	1.684	0.114	18.149	17.649	26.020
1979	3.556	3.248	0.308	2.083	1.947	0.136	15.838	15.577	19.669
1980	3.668	3.325	0.343	2.378	2.207	0.171	14.143	13.371	25.142
1981	4.390	4.097	0.293	2.636	2.431	0.205	10.857	10.135	20.186
1982	4.772	4.492	0.280	2.987	2.764	0.223	13.313	13.713	8.573
1983	5.300	4.964	0.336	3.344	3.110	0.234	11.954	12.502	5.141
1984	6.700	6.077	0.623	3.735	3.480	0.254	11.703	11.931	8.682
1985	7.752	6.825	0.927	4.328	4.000	0.328	15.877	14.922	28.942
1986	8.341	7.365	0.975	5.013	4.565	0.448	15.824	14.129	36.489

Table 2 Continued

Year	Total tourist	Domestic tourist	Foreign tourist	Exponential smoothing			Annual growth rate		
				Total tourist	Domestic tourist	Foreign tourist	Total tourist	Domestic tourist	Foreign tourist
1987	8.614	7.668	0.946	5.678	5.125	0.553	13.278	12.270	23.561
1988	8.549	7.619	0.931	6.266	5.634	0.632	10.341	9.925	14.195
1989	8.624	7.710	0.914	6.722	6.031	0.692	7.290	7.046	9.461
1990	8.813	7.770	1.043	7.103	6.367	0.736	5.659	5.570	6.439
1991	8.351	7.568	0.783	7.445	6.647	0.798	4.816	4.408	8.344
1992	8.960	7.746	1.214	7.626	6.831	0.795	2.433	2.770	-0.371
1993	9.692	7.986	1.707	7.893	7.014	0.879	3.499	2.677	10.565
1994	10.596	8.494	2.102	8.253	7.209	1.044	4.560	2.770	18.848
1995	11.077	8.785	2.292	8.721	7.466	1.256	5.679	3.567	20.259
1996	11.261	8.889	2.372	9.193	7.729	1.463	5.402	3.534	16.507
1997	11.906	9.289	2.617	9.606	7.961	1.645	4.501	3.001	12.428
1998	12.283	9.532	2.750	10.066	8.227	1.839	4.788	3.336	11.817
1999	12.444	9.601	2.843	10.509	8.488	2.021	4.404	3.173	9.909
2000	12.685	9.768	2.917	10.896	8.711	2.186	3.682	2.623	8.128
2001	13.803	11.202	2.601	11.254	8.922	2.332	3.283	2.428	6.692
2002	15.969	13.253	2.716	11.764	9.378	2.386	4.530	5.112	2.304
2003	20.395	17.251	3.144	12.605	10.153	2.452	7.150	8.263	2.772
2004	24.490	20.857	3.632	14.163	11.573	2.590	12.360	13.982	5.642
2005	23.021	19.653	3.368	16.228	13.430	2.799	14.582	16.045	8.046
2006	24.791	20.987	3.804	17.587	14.674	2.913	8.372	9.269	4.069
2007	25.974	22.090	3.885	19.028	15.937	3.091	8.192	8.603	6.123
2008	23.715	20.204	3.511	20.417	17.167	3.250	7.302	7.722	5.136
2009	25.037	21.271	3.766	21.077	17.775	3.302	3.231	3.538	1.610
2010	26.448	22.018	4.411	21.869	18.474	3.395	3.758	3.933	2.813
2011	26.709	22.250	4.459	22.785	19.183	3.598	4.188	3.836	5.984
2012	27.880	23.375	4.505	23.570	19.796	3.770	3.445	3.198	4.788
2013	31.215	26.292	4.923	24.432	20.512	3.917	3.658	3.616	3.899
2014	40.582	35.446	5.136	25.788	21.668	4.118	5.553	5.635	5.136
2015	52.979	47.564	5.415	28.747	24.424	4.322	11.473	12.718	4.941
2016	63.307	56.501	6.807	33.593	29.052	4.541	16.859	18.949	5.057
2017	77.857	68.952	8.905	39.536	34.541	4.994	17.690	18.897	9.983
2018				47.200	41.424	5.776			

The next step was to analyze the indicators against each stage. A compliance assessment of the indicators with the stages of TALC is done based on published data. Getz (1992) stressed that published data sources are adequate for researching the development of a tourism region. Data obtained from published sources are chronologically arranged, and important events occurring during each stage are identified. Leading and lagging indicators are also identified from the same chronology.

5. Analysis and findings

5.1. The state of Goa as a unit of analysis

A former Portuguese colony, the state of Goa was liberated in the year 1961. Goa was incorporated into the Indian states initially as a union territory, and in the year 1987, it acquired the status of a state. There are two districts in the state, namely, North Goa and South Goa, with Panjim and Margao being its headquarters, respectively. Panjim is also the capital of the state. The Goan culture is a mix of Indian and Portuguese culture, unique from the rest of India (Routledge, 2001). The Goan society is at a peripheral position among Indians. There are cultural differences between the Goan society and the rest of India.

Tourism began in Goa in the 60s after it was liberated from the Portuguese rule. The tourists were attracted to Goa for its natural beauty and moderate weather conditions (Brammer & Beech, 2004). The soft and golden sand on the beaches provides a distinct experience to the tourists. Water and adventure sports, ecotourism, agriculture-tourism, medical tourism, and casino tourism are the other activities that pull the tourist to the state. The United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site of "Churches and Convents of Goa" attracts many foreign visitors. The Goan economy, to a great extent, is dependent on tourism (Trichur, 2013). Being the smallest state, Goa receives 12% of India's foreign tourists (Morrison, 2013). Goa is well connected with the other states of India and the rest of the world by an international airport, Western and Konkan railway, and National Highways.

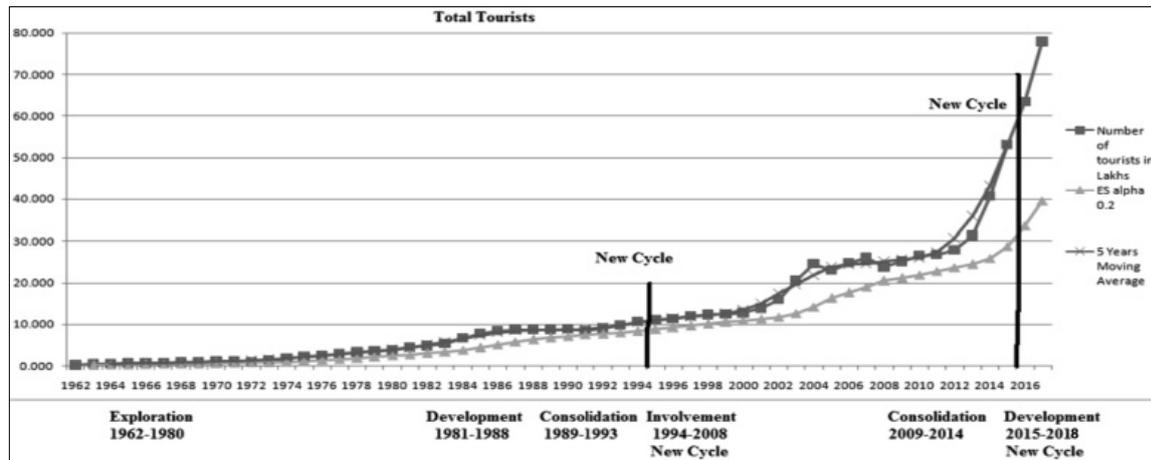
The Ministry of Tourism, Government of India, is responsible for formulating laws and regulations on tourism for the country. The Ministry of Tourism, Government of Goa, formulates policies based on the guidelines given by the Central Government for the states. The Department of Tourism has an administrative head and two zonal offices in North Goa and South Goa (Government of Goa, 2020). The Indian Government gave tourism industry status in the year 1982, and the first National Action Plan for tourism was developed (Ministry of Tourism, Government of India, 1982). Under the plan, each Indian state and Union territories were asked to develop a tourism plan. Based on the recommendations, the State Government prepared a draft plan in the year 1987 (Town and Country Planning Department, Government of Goa, 1987). The plan was disapproved due to opposition from different stakeholders. In the year 1999, a draft master plan for tourism was again developed by the Government. The recommendations of the plan were approved as the tourism policy, 2001. To date, the same policy recommendations are used by the Government for decision making.

The Goa Tourism Development Corporation (GTDC) is the commercial hand of the Government that provides tourism services (GTDC, 2020). The other stakeholders of tourism include the private sector comprising of hotels, travel agents, tour operators, taxi operators, locals, and tourists. The private sector is not actively involved in tourism planning. They are represented through organizations such as the Travel and Tourism Association of Goa (TTAG), Confederation of Indian Industries (CII), Goa Chapter and Goa Chamber of Commerce and Industries (GCCCI). The members put forth their issues and negotiate with the Government through these bodies (Gore, 2019). The role of small tourism operators is entirely ignored by the Government (Trichur, 2013). A significant number of locals are dependent on tourism for their livelihood (Breda & Costa, 2013). However, their involvement in tourism planning is minimal. Tourists do not have any influence on planning activities. The tourist feedback mechanism is not developed. Department of Tourism and GTDC are involved in the extensive promotion of the place (GTDC, 2020). Goa's image is portrayed differently from the rest of India due to its history (Newman, 2019; Routledge, 2001). The market demand for Goa tourism is primarily due to its beaches, heritage, and the availability of cheap alcohol and drugs. The introduction of casinos, water, and adventure sporting activities has also led to significant tourism demand.

5.2. Analysis of TALC stages

Figure 2 represents the TALC for total tourist arrivals. The identified sequence of stages of the TALC is exploration, development, consolidation, involvement, consolidation, and development. The TALC jumps from exploration (1962-1980) to the development stage (1981-1989), followed by consolidation (1989-1993). It skips the involvement stage in between exploration and development, indicating the rapid development of tourism from 1980 onwards. The involvement stage (1994-2008) and the second development stage (2015-2018) indicate the start of the new cycle, i.e., the rejuvenation stage. The involvement stage of fourteen years includes the intermittent year of consolidation (2000) and development (2005), but since they occur only for a year, it is assumed that they are not of much consequence. Post the first rejuvenation (1994-2008), the consolidation stage (2009-2014) is encountered instead of development, suggesting that the changes that took place during rejuvenation did not completely alter the tourism at the place. However, it was somewhat helpful in maintaining tourist numbers.

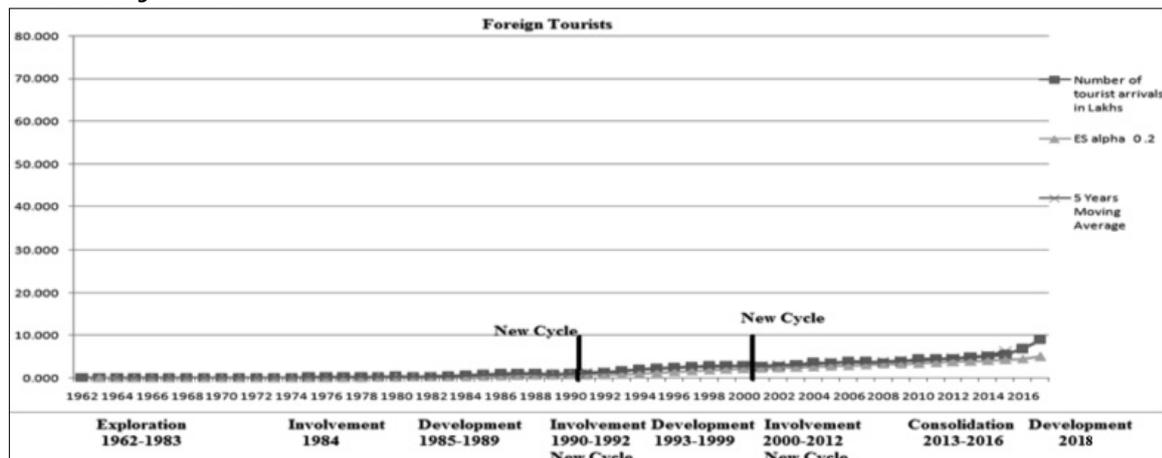
Figure 2
TALC for total tourist in Goa



Data source: Ambli (1990); Town and Country Planning Department, Government of Goa (1987); Department of Tourism, Government of Goa (2018).

Figure 3 represents the TALC for foreign tourist arrivals. The identified sequence of stages of the TALC is exploration, involvement, development, involvement, development, involvement, consolidation, and development. The initial sequence of stages, i.e., exploration (1962-1983), involvement (1984), and development (1985-1989), match the traditional TALC stages. The second involvement stage (1990-1992) and the third involvement stage (2000-2012) indicate the start of the new cycle, i.e., the rejuvenation stage. The first rejuvenation has given a boost to the tourism numbers as it resulted in the development stage (1993-1999). The second rejuvenation lasted for two years and is followed by a consolidation stage (2013-2016), similar to the case of total tourists.

Figure 3
TALC for foreign tourist

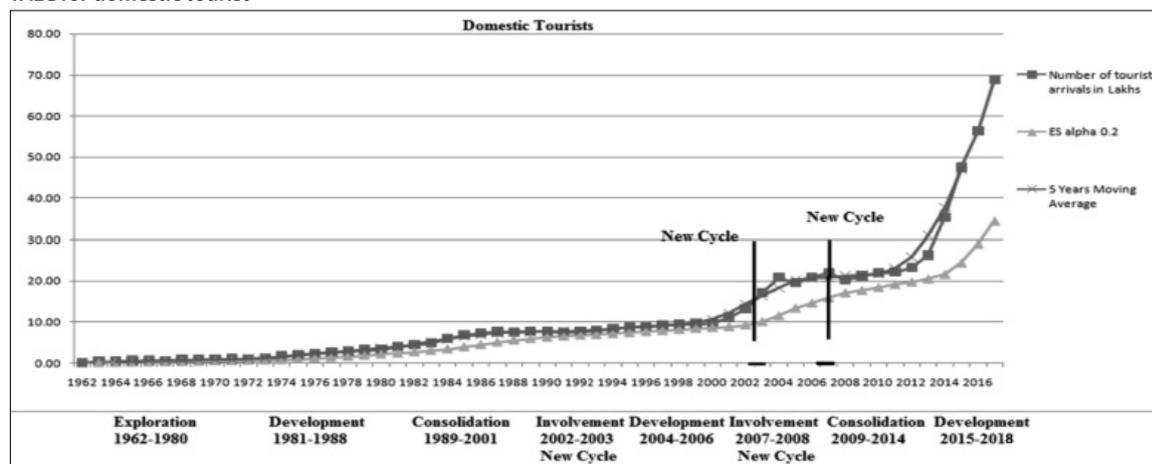


Data source: Ambli (1990); Town and Country Planning Department, Government of Goa (1987); Department of Tourism, Government of Goa (2018). Authors own research.

Figure 4 represents the TALC for domestic tourist arrivals. The identified sequence of stages of the TALC is exploration, development, consolidation, involvement, development, involvement, consolidation, and development. The TALC for domestic tourist matches the TALC for total tourists. It shows a jump from exploration (1962-1980) to development (1981-1988), followed by consolidation (1989-2001). The TALC

skips the involvement stage, indicating the rapid development of tourism after 1980. The two involvement stages (2002-2003, 2007-2008) indicate the start of the new cycle, i.e., the rejuvenation stage. Also, after the first rejuvenation (2002-2003), there is rapid growth in tourist arrivals (2004-2006), but it is soon followed by another rejuvenation (2007-2008), which has not been as successful, for it resulted in consolidation stage (2009-2014). The last development stage (2015-2018) could be the start of a third life cycle.

Figure 4
TALC for domestic tourist



Data source: Ambli (1990); Town and Country Planning Department, Government of Goa (1987); Department of Tourism, Government of Goa (2018). Authors own research.

The analysis of the TALC graphs for foreign and domestic tourists' arrivals show an extended exploration stage for foreign tourists, followed by a short involvement stage. After 1980, there was a surge of domestic tourists, whereas, for foreign tourists, the growth was a little slow. Foreign tourists' arrivals increased post-1985, while the domestic tourist arrivals showed constant growth. The rejuvenation cycle for both foreign and domestic tourists overlap, but more or less was observed from the beginning of 2000 and continued for ten years. The TALC also shows a steady increase in tourist arrivals post 2010 for both the market segments. A sudden peak is observed from 2015 onwards.

5.3. Analysis of indicators

Exploration stage (1962-1980)

The exploration stage is identified from the year 1962 to 1980 for total and domestic tourists and 1962-1983 for foreign tourists. Few authors have researched on the exploration stage of tourism in Goa (Wilson, 1997; Routledge, 2001). The first tourists who came to Goa constituted of the hippies and migrant Goans settled abroad (Newman, 2019). The hippies belonged to the Scandinavian countries and traveled to Goa from Nepal. They were attracted to the virgin beaches and the moderate climate of Goa. Drugs and alcohol were also freely available. As they did not have much money, they depended on the locals to provide them with food and shelter, and in exchange, they would give the locals their clothes and other electronic items. The locals did not mind this exchange. It became a source of livelihood for them. These locals belonged to the Kharvi community (fisher folks) and who were out of jobs due to land reforms and the use of mechanized trawlers for fishing (Trichur, 2013). The number of hippies reached their peak during 1968-1974 (Newman, 2019). In the '70s, few of the locals leased part of their houses to them. Soon the north Goa beaches of Baga, Anjuna and Calangute were occupied by tourists, who mingled along with the locals and thus gave birth to tourism in Goa (Brammer & Beach, 2004; Newman, 2019). The other classes of locals too entered into tourism. By

using their land as collateral, the families availed subsidized loans to construct rooms that could be rented by tourists or bought vehicles that could be operated as taxis (Trichur, 2013).

By the late '70s, the presence of tourists affected the local lifestyle. The locals were starting to depend on tourism for their livelihood. The civil aviation policies of the Indian Government, along with the availability of flights to India were one of the primary reasons for the tourist to come to Goa. India also had a considerably good network of domestic flights. The domestic tourist, though higher in number, constituted of mostly Goans who easily mingled with the population and did not cause much impact. The signs of demonstration effect (locals start to copy the tourists) were also observed in the late '70s, which goes against Butler's proposition that the physical and social fabric of the destination does not change. Tourism activities were not under the control of the Local Government, as there were no laws regulating tourists. The hippies stayed with the locals and mingled with the local population (Trichur, 2013). The authorities overlooked the change in the social and physical fabric of Goa due to the economic benefits of tourism. The locals who were not involved in tourism complained about the nudist and druggist tourists (Newman, 2019). Tourism allowed the locals to survive in the face of social and economic crisis. The most repressed communities living on the coasts benefitted by better conditions of living and enhance their status by hosting foreigners. Tourism also contributed to the state's integration with India (Trichur, 2013).

Table 3 shows the compliance assessment of the indicators to the exploration stage (1962-1980) for total tourists. The indicator, physical, and social fabric are not disturbed, is a leading indicator. It highlights the disturbance in the socio-cultural richness of the destination. The second leading indicator is the arrival and departure of tourists, and do not affect the locals. Both indicators pose a threat to the destination in the future

Table 3
Compliance assessment of indicators for exploration stage for total tourists

Exploration			
Indicator	Compliance	Year	Type of factor
Allo-centric tourists	Yes	1962-1980	-
Small tourist numbers	Yes	1962-1980	-
No tourist facilities	Yes	1962-1980	-
Natural and cultural attractions	Yes	1962-1980	-
High contact with locals	Yes	1962-1980	-
The physical and social fabric is not disturbed	No	Late 1970's	Leading
Arrival and departure of tourist do not affect the locals	No	Late 1970's	Leading

Source: Indicators adapted from Butler (1980); Getz (1992); Agarwal (1997); Berry (2000); Zmyslony (2011); Lee & Weaver (2014).

Involvement (not identified)

The involvement stage is only observed for foreign tourists for the year (1984). However, most of the involvement stage indicators are found to be present at the end of the exploration stage. Towards the end of the exploration stage, tourism activities expanded to other South Goa beaches, especially Colva and further down south to Canacona. Among the foreign tourists, the hippies were the largest segment of tourists and came to Goa every year between October to March. The domestic tourist had also started seeping into Goa in large numbers. Many locals took loans, built extra rooms, and got themselves involved in tourism activities (Routledge, 2001; Trichur, 2013). Some even sold off their agricultural land and built cottages on them for rentals. The construction of necessary tourist facilities and transport infrastructure was done with public money by the Local Government (Newman, 2019).

Table 4 represents the compliance assessment of the indicators for the involvement stage from 1994-2008. The indicators of the involvement stage were present during the exploration and development stages.

Table 4
Compliance assessment of indicators for the involvement stage for total tourists

Involvement (new cycle) 1994-2008	Compliance	Year	Type of factor
Increase in the number of visitors	Yes	1994-2008	-
Regularity in visitor number	Yes	1994-2008	-
Locals provide facilities for visitors	Yes	1994-2008	Leading
Public investment in infrastructure- transportation	Yes	1994-2008	Leading
High level of contact between visitors and locals	Yes	1994-2008	Leading
Some advertising to attract tourist	Yes	1994-2008	Leading
Basic market area for visitors	Yes	1994-2008	Leading
The emergence of tourist season	Yes	1994-2008	Leading
Change in the lifestyle of locals engaged in tourism	Yes	1994-2008	Leading

Source: Indicators adapted from Butler (1980); Getz (1992); Agarwal (1997); Berry (2000); Zmyslony (2011); Lee & Weaver (2014).

Development (1981-1988) (2015-2018)

Two development stages are identified for total tourists, and three development stages are observed for domestic and foreign tourists each. The first development stage was recognized for total and domestic tourists from 1981-1988. For foreign tourists, the stage lasted from 1984-1989. The Central Government declared tourism as a full-fledged industry. The Central Government wanted to promote Goa as a tourist destination across the world. India Tourism Development Corporation (ITDC), a profit-making body, was established by the Government. Under the brand name, many hotels, rest houses, and lodges were opened to take care of accommodation capacity (Ministry of Tourism, Government of India, 1982). The states were also directed to open State Tourism Development Corporations. The Government also promoted India in the international market through trade fair and travel marts. The Central Government hosted a retreat of Common Wealth Heads of States in Goa in 1983. Several roads, bridges, hotels were constructed to accommodate the delegates. The retreat gave a boost to foreign tourist arrivals in the state (Brammer & Beech, 2004; De Souza, 1990; Newman, 2019; Routledge, 2001; Trichur, 2013). The foreign mid-centric tourist had started arriving in Goa by 1985, when the charter flights from Holland, UK, and Germany were started (Breda & Costa, 2013; Trichur, 2013). The hippies influenced their parents to travel to the virgin beaches of Goa. The number of domestic tourists too increased. North Goa had developed into a tourist hub with a well-developed tourist market (Trichur, 2013).

As a part of the national strategy, the Government was giving subsidies and low-interest loans to locals who wanted to enter the tourism business (Trichur, 2013). With regard to tourist facilities, little development in terms of infrastructure and tourist attractions was seen. Tourism plans in Goa were formulated after 1987 when Goa attained statehood (Town and Country Planning Department, Government of Goa, 1987). Before that, there was not much advertising done. The first five-star hotel became operational in 1985. The other hotels came in the 1990s. Services like laundry, pharmacies were there in Goa from the 1970s. To control the development of coastal areas and to protect the beach ecology government had proposed coastal regulatory zones in 1982 (Mascarenhas, 1999; Noronha, 2004). Manmade attractions developed during this time were Government-owned museums (Brammer & Beach, 2004). The domestic airport was made functional by the Airport Authority of India (AAI) in Goa so that tourists could travel within the country (Bhaumik, 2002).

Table 5 shows the compliance assessment for the development stage (1981-1988) during the first cycle for total tourists. Cooper (1990) suggested that the leading indicators of the region can be termed as possible threats for the future survival of the region and are therefore essential to identify. However, in this case, since the leading indicator deals with providing ancillary services, it cannot be classified as a threat.

Table 5
Compliance assessment of indicators for development stage for total tourists

Development: 1981-1988	Compliance	Year	Type of factor
Mid centric / institutionalized tourists	Yes	1985	-
Rapid growth in visitation	Yes	1981-1988	-
Well defined tourist market area	Partly	-	-
Heavy advertising	No	After 1987	Lagged
External control and development	Partial	1985 onwards	Lagged
Migrant labour utilised	Yes	Mid 1980's	-
Auxiliary facilities for tourism (laundry, pharmacy, clinics)	Yes	-	Leading
Development of manmade attractions	No	-	Lagged
More extensive facilities provided by an external organisation	Yes	After 1985	Lagged
Local antagonism	Yes	Late 1980's	-

Source: Indicators adapted from Butler (1980); Getz (1992); Agarwal (1997); Berry (2000); Zmyslony (2011); Lee & Weaver (2014).

The second development stage for foreign tourists is from 1993-1999. The Indian Government implemented liberalization and Globalization policies in 1991. Under these policies, India opened its market to multinational companies and invited foreign direct investments (FDI). Operations of foreign airlines and access to information aided foreign tourists to travel to India. The depreciation of currency value brought in a substantial number of foreign tourists to Goa (Trichur, 2013).

Consolidation (1989-1993), (2009-2014)

Multiple consolidation stages are identified for total (1989-1993, 2008-2014) and domestic tourists (1989-2001, 2009-2014). The consolidation stage is not identified initially for foreign tourists, but it is observed for the later stage of the life cycle (2013-2016). By the year 1989, tourism had become the mainstay economic activity in Goa (Trichur, 2013). The consolidation stage was significant as during this time, the Central Government introduced liberalization and globalization policies in India (Brammer & Beech, 2004; Routledge, 2001; Trichur, 2013). Telecommunication satellites, the use of mobile phones, and the internet helped the domestic tourists to travel to Goa. As tourism grew, discontent among a section of the population not into tourism grew to the stage of antagonism. Many non-governmental organizations, e.g., Jagrut Goenkaranchi Fauz, Citizens concerned about tourism, were formed, and they protested against any new tourism projects and hotel constructions in the state (Alvares, 2002). The Amendment to Public Gaming Act, in 1992, opened the way for onshore casinos to be operational in Goa (Bothello, 2018).

Table 6 represents the indicators for the consolidation stage (1989-1993) for total tourists. Tourist numbers did not cross the local population until 2001. The indicator is lagged. After the liberation of Goa, many locals migrated for better prospects to European and Middle Eastern countries, resulting in a decrease in population. The migration of Indians to Goa was significant by the year 2000. These migrants belonged to the labor class and worked in the tourism, mining, and pharma sectors (Trichur, 2013). Discontent among some sections of the locals may be a threat to the destination. The locals started feeling outnumbered by the migrants and the tourists (Newman, 2019). However, other leading indicators, i.e., development of the business district, helped boost the local economy and provided livelihood to the locals. Hence the indicators cannot be considered a threat to tourism in Goa.

Table 6
Compliance assessment of indicators for consolidation stage for total tourists

Consolidation 1989-1993	Compliance	Year	Type of factor
Decrease in the growth rate of tourist number but an increase in tourist numbers	Yes	1989-1993	-
Total visitor numbers more than the population	No	Until 2002	Lagged
A significant part of the area's economy is based on tourism	Yes	Since the 1980s	Leading
Considerable emphasis on marketing and advertising	Yes	1989-1993	-
Local efforts may extend the tourist season	Yes	1989-1993	-
Many hotel chains and franchisee are represented	Yes	1989-1993	-
Older tourist facilities may become second rate	Yes	1989-1993	-
Locals not involved in tourism feel discontent	Yes	Since the 1980s	Leading
The business district takes shape within the destination	Yes	After 1987	Leading

Source: Indicators adapted from Butler (1980); Getz (1992); Agarwal (1997); Berry (2000); Zmyslony (2011); Lee & Weaver (2014).

The second consolidation stage was recognized after the new cycle (2009-2014). By this time, the tourist population was more than the locals. Tourism was extensively promoted in India as well as the world. All the big five-star chains had properties in Goa. Dance and music festivals and sports events also attracted tourist numbers.

Rejuvenation (1994-2008), (2015-2018)

The rejuvenation stage happens when new attractions take over the older ones. All three segments show two new cycles of rejuvenation. The rejuvenation stages are different for all three segments. For total tourist arrivals, rejuvenation is identified from 1994-2008 and 2015-2018. For domestic tourists, the duration of the stage is one year and lasted from 2002-2003 and 2007-2008. The rejuvenation stages for foreign tourists are from 1990-1992 and 2000-2012. The boost to tourism in the year before 1994 was provided by liberation and globalization policies of the Indian Government, which made foreign investments, the establishment of multinational hotels, boost to air transportation possible (Morrison, 2013; Reddy, 1994; Routledge, 2001; Sinha, 2002). Internet, mobile phones, Konkan Railways made access to information hassle-free (Raghuraman, 1995; Rajaraman, 2015). Introduction of Casinos in the late '90s (Bothello, 2018) and other tourism products like water sports, adventure tourism, ecotourism, agriculture tourism also helped alter tourism (Brammer & Beach, 2004; Ministry of Tourism, Government of India, 2002). Ease of travel along with Visa on arrival and E-Visa facilities further aided in the development of tourism in Goa from 1994 till early 2000 (Secretariat, 2013). Table 7 represents the compliance assessment for the rejuvenation stage.

Table 7
Compliance assessment of indicators for rejuvenation stage

Rejuvenation 1994-2008	Compliance	Year	Type of factor
May occur when there is a complete change in the attractions on which tourism in the area is based.	Partly	1994-2008	-
Rejuvenation 2015-2018			
May occur when there is a complete change in the attractions on which tourism in the area is based.	Partly	2015-2018	-

Source: Indicators adapted from Butler (1980); Getz (1992); Agarwal (1997); Berry (2000); Zmyslony (2011); Lee & Weaver (2014).

Stagnation

While plotting the graph, the stagnation stage is not identified for any of the three segments, indicating that tourism is still in its growing stages, or tourism planners are strategically avoiding stagnation. Table 8 shows the compliance assessment of the indicators for the stagnation stage for total tourists. Even though the stagnation

stage is not identified, many of the indicators are leading, suggesting that tourism was undergoing signs of stagnation with regards to the type of tourists, development of peripheral tourism, and environmental and social problems. The leading indicators could cause irreparable economic, social, or environmental damage to the destination and reduce its life cycle. The Government ignores the social, environmental, and cultural threats to the destination over the economic benefits (Kamat, 2009).

Table 8
Compliance assessment of indicators for stagnation stage

Stagnation	Compliance	Year	Type of factor
Psycho-centric tourist / organized mass tourist	Yes	Late 1980'	Leading
Heavy reliance on repeat visitation	Yes	Since 2000	Leading
Peripheral development of tourism	Yes	Since the 1990s	Leading
More artificial / manmade attractions	No	-	-
Frequent ownership change	No	-	-
Established destination image but no longer fashionable	No	-	-
Reached the carrying capacity	-	-	Not determined
Environmental, social and economic problems	Partly	Late 1980's	Leading
Low occupancy	No	-	-
The peak number of visitors is reached	No	-	-

Source: Indicators adapted from Butler (1980); Getz (1992); Agarwal (1997); Berry (2000); Zmyslony (2011); Lee & Weaver (2014).

Decline

The decline stage is not identified while plotting the TALC graph. However, many of the decline stage indicators are found to be present at the destination at different periods. For example, the average stay of tourists has come down from 10 days during the consolidation stage to 4-5 days at present (Department of Tourism, Government of Goa, 2018). The destination is in line with the change in the market segment of tourists from vacationers to weekend tourists. The rise in traffic congestion, social and cultural issues are prevalent in Goa. Many foreign and domestic tourists have purchased second homes in Goa. Table 9 shows the compliance assessment for the decline stage. The leading indicators for the decline stage are difficult to control.

Table 9
Compliance assessment of indicators for decline stage

Decline	Compliance	Year	Type of factor
Decrease in the number of tourists	No	-	-
Decrease in advertising	No	-	-
The decrease in the average stay of tourists	Yes	Since 2014	Leading
Declining market	No	-	-
No longer used by vacationers more of weekend and day trippers	Yes	Since 2010	Leading
Tourism infrastructure is neglected	No	-	-
Outside investments stop	No	-	-
Hotels convert to retirement homes, condos, apartments	Partially	-	Leading
More permanent settlers especially senior citizens	Partly	-	Leading
Traffic congestions	Yes	Since 2005	Leading
Degradation of cultural attractions	No	-	-
Rise in social problems	Yes	Since 1990	Leading
Threat of exogenous factors	Yes	Since 2000	Leading

Source: Indicators adapted from Butler (1980); Getz (1992); Agarwal (1997); Berry (2000); Zmyslony (2011); Lee & Weaver (2014).

The compliance assessment of the stages clearly shows variations between the indicators suggested by Butler (1980). The exploration, development, and consolidation stage indicators match the TALC indicators. The variation is seen for involvement, stagnation, and decline stage. Though these stages were not identified while mapping the TALC graph, the indicators were found to be existing. Many of the indicators are leading, which means that the ill effects of tourism were visible in Goa much early during the life cycle. As in any other developing country, social, cultural, and environmental impacts are evaluated with the economic impacts of tourism.

6. Conclusion

Tourism Area Life Cycle is indeed a thoroughly researched area. However, as this research points out, there are many questions that remained unanswered. Some of these questions come to the forefront only when we apply the TALC model to specific destination contexts such as the one we found in Goa, India.

Proposition 1: The pattern TALC for Goa follows the sequence of stages suggested by Butler.

The stages for the tourism area life cycle for Goa can be ascertained based on the number of tourist arrivals. The sequence of the stages is different for total, foreign, and domestic tourists. The TALC indicates two rejuvenation cycles for each segment. The stages do not precisely match the TALC. However, the TALC does give lucid patterns of development of the destination.

Authors have pointed out about the chaotic and unplanned way in which tourism has been developed in Goa (Wilson, 1997; Lea, 1993). During the exploration stage (1962-1980), tourism was an activity under the control of the locals. Tourism planning in India started in the '80s. However, no tourism plan has been successfully passed by the Government. The decision making for tourism is done on a case to case basis. The tourism policy in Goa has been primarily reactive. Tourism has developed in an ad hoc manner in response to different market forces. The Government has focused on promotion and investment, rather than on planning (Breda & Costa, 2013).

The Government of Goa established Goa Tourism Development Corporation (GTDC) in the year 1982 for increasing the accommodation capacity in the state. Many GTDC hotels were built in strategic locations across Goa. The retreat of the Common Wealth Heads of the state's to Goa in the year 1983, turned the tide for tourism in Goa. The world media extensively promoted the state. Due to the retreat, many essential roads and bridges were built. A runway on the airport for the landing of bigger jets was developed. Luxury hotels started their operations. By the end of the development stage, mass tourism was practiced in the state. Domestic tourists were attracted to Goa due to the presence of hippies on the beaches. The image of Goa is shown differently than the rest of India (Trichur, 2013). Many Indian male tourists traveled to see the hippies roaming nude on the Goan beaches. Goa was also promoted domestically through travel agents across the country. The Indian Government, under its tourism policies, provided many subsidies and loans to the locals who wanted to establish hotels, rest houses, and lodges. Subsidized loans were also provided to tourism-related services like restaurants, taxi operators, travel agents, and tour guides. With such benefits being provided, many locals ventured into tourism businesses. Travel agents and tour operators soon spread their networks not only in India but also in European Countries. The charter flight operations started due to increased demand in the European market for traveling to Goa via chartered flights. These tour operators were instrumental in persuading the Government to get necessary approvals from the Ministry of Civil Aviation for charter operation (Bhaumik, 2002).

The liberalization and globalization policies had an unprecedented impact on trade and commerce in India during the consolidation stage (1989-1993). It automatically gave a boost to the travel and tourism industry. Due to globalization, many multinational hotel chains, foreign airlines, and travel agents set base in India.

Telecommunication, satellite television, and internet services became available to the general public. The changes in the economic policies acted as a catalyst for the rejuvenation stage (1994-2008). The growth in technology provided a boost to the tourism sector. The establishment of Konkan Railways facilitated travel, especially for domestic tourists. Travel became affordable and pleasurable. The Indian Government's policy of issuing Visa on arrival and E-visa eased the travel requirements of foreign tourists traveling to the country. Changes in the Gambling Act enabled casinos to be operational. Commercializing and organizing festivals like Carnival, Shigmo, Feast of Saint Francis Xavier, International film Festival of India attracted both domestic and foreign tourists to Goa.

The rejuvenation stage (1994-2008) altered the tourism at the destination. The state saw many day and weekend visitors. Casinos became a significant attraction. Hotel aggregators like Oyo and Airbnb started flourishing during the consolidation stage. The locals preferred to register their homes with the aggregators and entertained tourists without the involvement of the Government. Differentiation in the tourism product like adventure tourism, sports tourism, water sports activities, ecotourism, agriculture tourism, hinterland tourism led to the development stage again from 2015-2018.

Proposition 2: The compliance assessment of indicators shows a considerable difference between the TALC indicators and tourism indicators in Goa.

The research brings to light the factors that have influenced the growth of tourism in Goa. Infrastructure development, economic factors, and some favorable policies of the Central and the State government have resulted in the development of tourism in Goa. However, better tourism policies that involve strategic planning should be implemented. The compliance assessment shows dissimilarities between the TALC indicators and tourism indicators for Goa. The leading and lagging indicators for each stage are identified.

Apart from the economic and Government policies, the development of entry points to Goa played a significant role in how people traveled into Goa. During the early days, the majority of domestic tourists traveled by bus. Goa had a well-maintained road network. The presence of an international airport in Goa was a big plus point for the development of tourism. Goa was the pioneer to begin charter flight operations for tourists in India. Goa is also gifted with a natural port harbor. Initially, all the movement of goods was through the port. The Government of Goa neglected the potential of water transport for a long time. There was some movement of small boats from Mumbai to Goa in the '70s and '80s, but only the rich could afford it. Cruises started coming to Goa in the latter part of the '90s. However, Goa is still a stopover destination for cruise traffic. The establishment of the Konkan Railway majorly contributed to many domestic tourists coming into Goa. The ease of travel from within the country by railways made Goa accessible to middle- and lower-class people to travel.

Proposition 2.1.: The leading indicators impact the destination negatively.

The leading and lagging indicators provide a clue to the development of the destination. The leading factors of the exploration, stagnation, and decline stage impose a threat to the destination. However, the leading factors of the development and consolidation stages show a sign of growth. It is peculiar to a developing country, where the economic benefits of tourism are most important.

The leading indicators mostly highlight the impact of tourism on the Goan society. Tourism destination itself has emergent power, which can influence the social formation within which it is constituted and can alter the future course of history (Trichur, 2013). Though tourism brought economic power to the locals, it also brought a sea of social change. Demonstration and deprivation effects were visible in Goa during the exploration stage. Tourism also altered the caste systems and the role of women in Goan society. The women stayed at home and served the tourists. Few started working in big hotels as tourism developed. Tourism has resulted in the presence of foreign colonies, mostly German and Russian, in certain villages of North Goa. No

natives are allowed entry within the colonies. The State Government is not able to close them down. Due to tourism, the Goan society is predominantly divided into three groups. The first group is composed of those whose livelihood depends on tourism. The second group is not involved in tourism and is also not affected by it in any way. The third group covers those who are not involved in tourism but are affected by the social, environmental, and cultural changes that tourism has brought to Goa. The third group is involved in policing and objecting to any changes happening due to tourism in Goa. Other social perils like sex trade, substance abuse, alcoholism, and gambling are also rampant in the state. Tourism in developed countries tends to be regarded as a social activity with economic consequences, while in developing countries it is essentially an economic activity with social consequences (Jenkins, 1980). Environmental pollution, garbage mismanagement, wildlife, and forest destruction are also issues that have surfaced in Goa due to tourism activity. In Goa, the environment is protected within the constraints of tourism.

Proposition 2.2.: The lagging indicators delay the growth of tourism at the destination.

The lagged factor of the development stage shows sluggish tourism planning in Goa. The indicators are a clue to the direction in which the destination is moving. Without proper planning, a tourism destination is sure to face a decline. Tourism planners must make sure and develop strategies so that they can avoid a decline. Sustainable tourism planning, the introduction of new tourism products, or a new market segment will ensure that the destination does not lose out on tourists.

7. Research implications

Butler (2011) had pointed out that the actual length of the life cycle for a destination cannot be determined. It is also difficult to predict when the destination would decline. The job of tourism planners and strategists is to see that the destination grows and rejuvenates itself time and again without entering into the decline stage. The patterns of development, along with the indicators, can be used to analyze the strategies adopted by tourism planners (Vodeb & Nemec Rudež, 2017). Strategy evaluation would help the planners to validate their strategies for the future. The analysis will be a blueprint for the strategy formulation process. The research reinstates the observations made by Cooper (1990) and Berry (2000) regarding leading and lagging indicators.

Policies decisions in India, Goa are taken by the Government. Tourism planning, too, comes under the purview of the Local Government. The research throws light on the dismal role played by the Local Government in preparing and implementing tourism plans. The research points out the response of the Government to market trends. The study highlights the need for tourism planning in Goa. Sustainable tourism plans with local participation have to be made so that resources can be protected. The planners can decide on strategies that will prolong the tourism life cycle. Tourism planners must tap on the abundant natural resources available in Goa, although sustainably. As cruise tourism often brings high-end tourists to the destination, a thorough environmental impact assessment should be done to tap into the cruise market.

Motivation is the underlying factor leading to the decision to travel or not to travel (George, 2005; George et al., 2010). This study adds to the theory of TALC by providing a step by step procedure for mapping the patterns of tourism development, with tourist motivation as the subtext. Determining barriers to market access is a research field with significant practical implications, observe Rodriguez-Giron and Vanneste (2018); the present paper interrelates market access and lifecycle stages as well. The TALC for Goa provides information on the way tourism has developed at the destination. The identification of stages of the TALC brings to light the periods when tourism was booming and when tourism activities were slow. The TALC on two market segments, i.e., domestic and foreign tourists, gives insight into the difference in the way they have developed. Certain factors, like promotions by travel agents, development of railways, water, and adventure sports, increase in domestic flights, have aided the domestic tourist to travel to Goa. The foreign tourists initially were

lured by golden beaches, warm climate in Goa. Introduction of charter flights, promotion of tourism through trade fairs abroad and e-visa policies of the Indian Government encouraged the foreign tourists to visit Goa.

The research also gives a complete assessment of the way tourism has developed based on the indicators at the destination. The leading indicators highlight the impact of tourism on Goan society. Some of the leading indicators highlight the economic growth of the destination. The research reinforces the fact that for a developing country, the social and cultural impacts of tourism are often ignored for economic benefits. The research provides an assessment of the factors that have led to the particular TALC stage. The research also highlights the type of factors that have contributed to the change in the life cycle. Economic factors, infrastructure development, and government policies have contributed to the change in the cycle.

References

- Agarwal, S. (1997). The resort cycle and seaside tourism: An assessment of its applicability and validity. *Tourism Management, 18*(2), 65-73.
- Albaladejo, I.P., & Martínez-García, M.P. (2017). The post-stagnation stage for mature tourism areas: A mathematical modelling process. *Tourism Economics, 23*(2), 387-402.
- Ambli, S.M. (1990). *Tourism development in Goa: A geographical study* [Unpublished doctoral dissertation]. Karnatak University, Dharwad.
- As, A., & Mathews, S. (2017). Tourism area life cycle (TALC) - A case study of the Kuruva Islands. *Journal of Tourism, 18*(2), 49-62.
- Bagri, S., Gupta, B., & George, B. (2009). Environmental orientation and ecotourism awareness among pilgrims, adventure tourists, and leisure tourists. *Tourism: An International Interdisciplinary Journal, 57*(1), 55-68.
- Bao, J., & Zhang, Z. (2006). The TALC in China's tourism planning: Case study of Danxia Mountain, Guangdong Province, PRC. In R.W. Butler (Ed.), *The tourism area life cycle, Vol. 1. Applications and modifications* (pp. 107-115). Channel View Publications.
- Berry, E.N. (2000). *An application of Butler's (1980) tourist area life cycle theory to the Cairns Region, Australia, 1876-1998* [Doctoral dissertation]. James Cook University.
- Bhaumik, P.K. (2002). Regulating the domestic air travel in India: An umpire's game. *Omega, 30*(1), 33-44.
- Botelho, A. (2018). Casinos in Goa: The challenge ahead is to implement sustainable strategies to minimize their ill-effects. *International Journal of Hospitality & Tourism Systems, 11*(2), 56-62.
- Boyd, S.W. (2006). The TALC model and its application to national parks: A Canadian example. In R.W. Butler (Ed.), *The tourism area life cycle, Vol. 1. Applications and modifications* (pp. 119-138). Channel View Publications.
- Brammer, N., & Beech, J. (2004). Use and abuse of tourism: The Goan experience. *Tourism Culture & Communication, 5*(1), 23-35.
- Breda, Z., & Costa, C. (2013). Tourism development, conflicts, and sustainability: The case of Goa. In C.A. Tisdell (Ed.), *Handbook of tourism economics: Analysis, new applications and case studies* (pp. 683-704). World Scientific.
- Brown, R.G. (1959). *Statistical forecasting for inventory control*. McGraw Hill.
- Butler, R.W. (1980). The concept of a tourist area cycle of evolution: Implications for management of resources. *Canadian Geographer, 24*(1), 5-12.
- Butler, R.W. (2009). Tourism destination development: Cycles and forces, myths and realities. *Tourism Recreation Research, 34*(3), 247-254.
- Butler, R.W. (2011). *Tourism area life cycle. Contemporary tourism reviews*. Goodfellow Publishers Limited.
- Chapman, A., & Light, D. (2016). Exploring the tourist destination as a mosaic: The alternative lifecycles of the seaside amusement arcade sector in Britain. *Tourism Management, 52*, 254-263.

- Cole, S. (2009). A logistic tourism model: Resort cycles, globalization, and chaos. *Annals of Tourism Research*, 36(4), 689-714.
- Cooper, C. (1990). Resorts in decline - The management response. *Tourism Management*, 11(1), 63-67.
- Cooper, C. (1994). The destination life cycle: An update. In A.V. Seaton (Ed.), *Tourism: State of the art* (pp. 340-346). Wiley.
- Da Conceição Gonçalves, V.F., & Aguas, P.M.R. (1997). The concept of life cycle: An application to the tourist product. *Journal of Travel Research*, 36(2), 12-22.
- De Souza, T.R. (1990). *Goa through the ages: An economic history*. Concept Publishing Company.
- Debbage, K.G. (1990). Oligopoly and the resort cycle in the Bahamas. *Annals of Tourism Research*, 17(4), 513-527.
- Department of Tourism, Government of Goa. (2018). *Statistics*. <http://www.goatourism.gov.in/statistics>
- Department of Tourism, Government of Goa. (2020). *About DOT*. <https://www.goatourism.gov.in/about-dot/>
- Dodds, R., & McElroy, J.L. (2008). St. Kitts at a crossroad. *Revista de Investigación en Turismo*, 1(2), 1-10.
- Foster, D.M., & Murphy, P. (1991). Resort cycle revisited: The retirement connection. *Annals of Tourism Research*, 18(4), 553-567.
- George, B.P. (2005). Measuring tourist attachment to holidays. *Tourism: An International Interdisciplinary Journal*, 53(3), 229-246.
- George, B.P., Henthorne, T.L., & Williams, A.J. (2013). The bells within the bell curve: Destination visitation model revisited. *Tourism Recreation Research*, 38(3), 341-348.
- George, B.P., Inbakaran, R., & Poyyamoli, G. (2010). To travel or not to travel: Towards understanding the theory of nativistic motivation. *Tourism: An International Interdisciplinary Journal*, 58(4), 395-407.
- Getz, D. (1992). Tourism planning and destination life cycle. *Annals of Tourism Research*, 19(4), 752-770.
- Giannoni, S., Hernández, J.M., & Pérez-Rodríguez, J. (2017). Market-segment targeting and long-term growth in a tourism-based economy. *Pascal Paoli University of Corsica Working Paper Series*, No. 003.
- Goa Tourism Development Corporation. (2020). *About us*. <https://goa-tourism.com/About>
- Gore, S. (2019). Stakeholder collaboration for a religious tourism mega event. *Journal of Tourism*, 20(1), 15-32.
- Haywood, K.M. (1986). Can the tourist-area life cycle be made operational? *Tourism Management*, 7(3), 154-167.
- Haywood, K.M. (2005). Legitimizing the TALC as a theory of development and change. In R.W. Butler (Ed.), *The tourism area life cycle: Conceptual and theoretical issues* (pp. 7-29). Channel View Press.
- Jenkins, C.L. (1980). Tourism policies in developing countries: A critique. *International Journal of Tourism Management*, 1(1), 22-29.
- Kamat, N.M. (2009). Wild panther in Miramar? How Goa is on the verge of environmental hara-kiri. *Atharva*, 2(6), 8-17.
- Kamat, S.B. (2010). Destination life cycle and assessment: A study of the Goa tourism industry. *South Asian Journal of Tourism and Heritage*, 3(2), 139-148.
- Kapczyński, A., & Szromek, A.R. (2008). Hypotheses concerning the development of Polish spas in the years 1949–2006. *Tourism Management*, 29(5), 1035-1037.
- Kermath, B.M., & Thomas, R.N. (1992). Spatial dynamics of resorts: Sosua, Dominican Republic. *Annals of Tourism Research*, 19(2), 173-190.
- Ketter, E., Mansfeld, Y., & Avraham, E. (2016). The role of marketing in tourism planning: Overplay, underplay or interplay? *Tourism: An International Interdisciplinary Journal*, 64(2), 135-148.
- Keynes, J.M. (1937). Some economic consequences of a declining population. *Eugenics Review*, 29(1), 13–17.
- Knowles, T., & Curtis, S. (1999). The market viability of European mass tourist destinations. A post stagnation life cycle analysis. *International Journal of Tourism Research*, 1(2), 87-96.
- Kotler, P., Haider, D., & Rein, I. (1993). *Marketing places: Attracting investment, industry, and tourism to cities, states, and nations*. The Free Press.

- Kruczek, Z. (2015). The use of the Butler cycle and the chaos theory in the interpretation of the development of the Żegiestów-Zdrój health resort. *Geotourism*, 3-4(42-43), 67-74.
- Kruczek, Z., Kruczek, Z., Kruczek, M., & Szromek, A.R. (2018). Possibilities of using the tourism area life cycle model to understand and provide sustainable solution for tourism development in the Antarctic Region. *Sustainability*, 10(1), 89.
- Lea, J.P. (1993). Tourism development ethics in the Third World. *Annals of Tourism Research*, 20(4), 701-715.
- Lee, Y., & Weaver, D. (2014). The tourism area life cycle in Kim Yujeong literary village, Korea. *Asia Pacific Journal of Tourism Research*, 19(2), 181-198.
- Ma, M., & Hassink, R. (2013). An evolutionary perspective on tourism area development. *Annals of Tourism Research*, 41, 89-109.
- Mascarenhas, A. (1999). The coastal regulation zone of Goa: Oceanographic, environmental, and societal perspectives. *Current Science*, 77(12), 1598-1605.
- Ministry of Tourism, Government of India. (1982). *Tourism policy*. <http://tourism.gov.in/sites/default/files/policy/Tourism%20Policy%201982.pdf>
- Ministry of Tourism, Government of India. (2002). *National tourism policy*. <http://tourism.gov.in/sites/default/files/policy/National%20Tourism%20Policy%202002.pdf>
- Morrison, R. (2013). *'H2O economy' in Goa found and imagined: Possibilities, potential, tips and tools*. Goa, 1556.
- Newman, R.S. (2019). *Goan anthropology: Festivals, films, and fish*. Goa, 1556.
- Noronha, L. (2004). Coastal management policy: Observations from an Indian case. *Ocean & Coastal Management*, 47(1-2), 63-77.
- Oglethorpe, M.K. (1984). Tourism in Malta: A crisis of dependence. *Leisure Studies*, 3(2), 147-161.
- Pathak, K.P. (2014). Paradigm shift in tourists behavior and its impact on tourism area life cycle: A study on Sundarbans. *DU Journal of Marketing*, 15, 187-206.
- Petrevska, B., & Collins-Kreiner, N. (2017). A double life cycle: Determining tourism development in Macedonia. *Journal of Tourism and Cultural Change*, 15(4), 319-338.
- Polli, R., & Cook, V. (1969). The validity of the product life cycle. *The Journal of Business*, 42(4), 385-400.
- Prideaux, B. (2000). The resort development spectrum — A new approach to modeling resort development. *Tourism Management*, 21(3), 225-240.
- Pulina, M., Dettori, D.G., & Paba, A. (2006). Life cycle of agrotourism firms in Sardinia. *Tourism Management*, 27(5), 1006-1016.
- Raghuraman, G. (1995). Konkan Railway Corporation: Choice of alignment in Goa. *Vikalpa*, 20(3), 53-70.
- Rajaraman, V. (2015). History of computing in India: 1955-2010. *IEEE Annals of the History of Computing*, 37(1), 24-35.
- Reddy, P.N. (1994). Industrial development in Goa: An overview. In J.S. Mathur (Ed.), *New trends in Indian industries* (pp. 292-314). Chug Publications.
- Richardson, S.L. (1986). A product life cycle approach to urban waterfronts: The revitalization of Galveston. *Coastal Management*, 14(1-2), 21-46.
- Rodriguez-Giron, S., & Vanneste, D. (2018). Determinants for tourist destinations' international markets access: The case of Southern Ecuador and Germany. *Tourism: An International Interdisciplinary Journal*, 66(3), 282-301.
- Rostow, W.W. (1960). *The stages of economic growth*. Cambridge University Press.
- Routledge, P. (2001). Selling the rain, resisting the sale: Resistant identities and the conflict over-tourism in Goa. *Social & Cultural Geography*, 2(2), 221-240.
- Secretariat, L.S. (2013). *Tourism sector in India*. Members Reference Service, Parliament Library and Reference, Research, Documentation, and Information Service (LARRDIS).
- Sinha, A. (2002). *Goa Indica: A critical portrait of postcolonial Goa*. Bibliophile South Asia.

- Strapp, J.D. (1988). The resort cycle and second homes. *Annals of Tourism Research*, 15(4), 504-516.
- Tang, C., Zhong, L., & Ng, P. (2017). Factors that influence the tourism industry's carbon emissions: A tourism area life cycle model perspective. *Energy Policy*, 109, 704-718.
- Tischer, M.C., Schiavetti, A., de Lima Silva, F.J., & da Silva-Jr, J.M. (2018). A historical perspective on the life cycle of a tourist activity: Dolphin watching in Brazil's Fernando de Noronha archipelago. *Ethnobiology and Conservation*, 7(9), 1-25.
- Toh, R.S., Khan, H., & Koh, A.J. (2001). A travel balance approach for examining tourism area life cycles: The case of Singapore. *Journal of Travel Research*, 39(4), 426-432.
- Town and Country Planning Department, Government of Goa. (1987). *Master plan for tourism development in Goa*. <https://www.goa.gov.in/departement/town-and-country-planning/>
- Trichur, R. (2013). *Refiguring Goa: From trading post to tourism destination*. Goa, 1556.
- Van Der Borg, J. (1992). Tourism and urban development: The case of Venice, Italy. *Tourism Recreation Research*, 17(2), 46-56.
- Vernon, R. (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics*, 80, 190-207.
- Vodeb, K., & Nemec Rudež, H. (2017). Which attributes are important to tourists in a mature seaside destination? A case of Opatija in Croatia. *Tourism: An International Interdisciplinary Journal*, 65(3), 267-269.
- Weaver, D.B. (1990). Grand Cayman Island and the resort cycle concept. *Journal of Travel Research*, 29(2), 9-15.
- Weaver, D.B. (2006). The 'plantation' variant of the TALC in the small-island Caribbean. In R.W. Butler (Ed.), *The tourism area life cycle: Vol. 1. Applications and modifications* (pp. 185-197). Channel View Publications.
- Wilson, A. (1969). Industrial marketing research in Britain. *Journal of Marketing Research*, 6(1), 15-27.
- Wilson, D. (1997). Paradoxes of tourism in Goa. *Annals of Tourism Research*, 24(1), 52-75.
- Zhong, L., Deng, J., & Xiang, B. (2008). Tourism development and the tourism area lifecycle model: A case study of Zhangjiajie National Forest Park, China. *Tourism Management*, 29(5), 841-856.
- Zmyslony, P. (2011). Application of the destination life cycle concept in managing urban tourism: Case of Poznan, Poland. In K. Andriotis, A. Theocharous, & F. Kotsi (Eds.), *Proceedings of the International Conference on Tourism (ICOT 2011)* (pp. 867-878). International Association for Tourism Policy.

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