



PLANNING MALAYSIA:
Journal of the Malaysian Institute of Planners
VOLUME 18 ISSUE 3 (2020), Page 118 – 127

SOCIO-ECONOMIC CARRYING CAPACITY ASSESSMENT FOR BUKIT TINGGI

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Abstract

This paper discusses an assessment of social and economic carrying capacity (CC) in Bukit Tinggi. Bukit Tinggi is a new and emerging highland tourism destination located in Malaysia, thus assessing the present CC level is imperative to ascertain the sustainability of destination competitiveness. The economics of socio CC has been a growing area. The fundamental concept of CC revolves around the analysis of behavioural dynamics, succession, and establishing a dynamic balance of natural ecosystems. This paper, hence, looked into the present socio-economic CC level in Bukit Tinggi in order to understand the extent of tourism developments enabled in Bukit Tinggi without affecting tourists' tourism experience. The CC data on social (tourist arrival, safety and well-being, place identity, tourism experience) and economic (employment demand/supply, business growth/supply demand, tourism income) aspects were gathered from visitors via self-administered questionnaire survey approach. The findings revealed that more efforts and immediate attention should be given to the socio-economic CC in Bukit Tinggi mainly because all the studied variables displayed moderate CC level values.

Keywords: Bukit Tinggi, economic carrying capacity, social carrying capacity

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INTRODUCTION

The fundamental concept of carrying capacity (CC) is related to the analysis of behavioural dynamics, succession, and establishing dynamic balance of natural ecosystems (Zelenka & Kacetl, 2014). Initially coined in the fields of wildlife and the management spectrum (Liu & Borthwick, 2011), Canestrelli and Costa (1991, p. 296) defined CC as '*...the maximum number of visitors that can be accommodated by a given destination under conditions of maximum stress*'. Clarke (2002, p. 410), in agreement with Canestrelli and Costa (1991), asserted CC as '*...the role that social institutions and technologies play in determining the impact of human numbers on the supporting environment*'. Comprehending CC is crucial in planning and managing tourism development, as well as its activity, particularly for destinations that operate on architecture- and nature-based resources. Unlike other types of tourism resources (e.g., entertainment, sports, and businesses), architecture- and nature-based resources are often linked with specific image of a destination that should be protected for authenticity purpose. Having mentioned that, CC plays an integral role in visitor management and destination sustainability. Bukit Tinggi is a new and emerging highland tourism destination in Malaysia, thus assessing the present CC level is imminent to ascertain the sustainability of destination competitiveness.

LITERATURE REVIEW

Socio-economic status reflects one's standing in referral to education, income, and occupation. In precise, socio-economic status has been vastly applied to measure one's financial situation that is often associated with the ability to enjoy privilege, power, and control. Assessing both social and economic CC has dated back to the 1980s, whereas the interconnectedness of these two dimensions has been proven to contribute to the comprehensiveness of the CC framework (Vanessa et al. 2018).

Socio and ecological CC are distinct and widely used to understand visitors' perceptions of and behaviour towards a certain destination (Leujak & Ormond, 2007). In line with this notion, Mauerhofer (2010, p. 14) elaborated socio CC as '*...the limit of growth or development of each and all hierarchical levels of human or social integration within a certain spatial range, shaped by unilateral, multilateral, and /or interdependent processes within an individual and between individuals or groups of individuals*'. Subash Joshi and Rajiv Dahal (2019) asserted that the concept is inclined towards maximising the utilisation of an area without jeopardising tourist satisfaction, as well as the ability for the locals to uplift their socio-economic status.

By and large, economic CC refers to the degree to which an area can be changed prior to monetary exercises that occur in a region and are influenced antagonistically. The economic CC, according to Saleem (1994), signifies the threshold point that offers the highest level of benefit or earning retention to the

system. Gibbs (2007) outlined economic CC in the tourism context as the amount of money investors are willing to invest, as well as the monetary value linked with sellable products and ecosystem services. At a greater level, economic CC for a tourism destination relies on both the sort and the measure of fiscal resources that the destination can use to develop its tourism industry without the destination being adversely affected.

METHODOLOGY

A total of 300 self-administered questionnaire survey forms were randomly distributed to domestic and international tourists who visited Bukit Tinggi. The respondents should satisfy the selection criteria (age 18 and above, and visiting Bukit Tinggi for more than 24 hours). Assistance was provided to the respondents while they completed the questionnaire survey to ensure that the answers were indeed valid. The survey forms were re-checked to ascertain completion in order to avoid missing data. The gathered data were complemented with secondary data obtained from the readily available reports and statistics. The level of CC was assessed using a 5-point Likert Scale. The answers were categorised into three satisfaction levels (mean values): exceeding 3.27 is classified as excellent (green), values between 3.26 and 1.70 are categorised as moderate (yellow), and below 1.70 is considered as poor (red).

RESULTS

The economic carrying capacity assessment

Overall, the economic CC indicators displayed a moderate level of CC with a mean value of 2.39 (yellow). Table 1 tabulates the results of economic CC in Bukit Tinggi.

Table 1: Results of economic carrying capacity in Bukit Tinggi

INDICATORS	Mean	M	C
Indicator 1: Employment Demand/ Supply			
Increase in tourists' arrival has contributed to foreign workers influx.	2.44	2	
There are enough workers to serve the tourists.	2.19	2	
Tourism development has created job opportunities for the young locals.	2.55	2	
Local community is involved actively in tourism industry.	2.34	2	
Indicator 2: Real Estate Value			
Increase in tourists' arrival has contributed to increase in real estate value.	2.54	2	
There is a need to build more shops and stalls.	2.56	2	

INDICATORS	Mean	M	C
Indicator 3: Business Growth/ Supply Demand			
The number of rooms is insufficient during peak season.	2.35	2	
Tourism in this location has high potential to flourish.	2.71	2	
Indicator 4: Tourism Income			
High demand for accommodation has contributed to increase in accommodation price.	2.54	2	
Tourist visit is contributed by accommodation price affordability.	2.02	2	
Tourists are satisfied with the souvenir product price.	2.08	2	

EMPLOYMENT DEMAND AND SUPPLY

The data analysis had led to the following results: [1] increase in tourists arrival at Bukit Tinggi has contributed to the influx of foreign workers (mean value of 2.44), [2] there are sufficient workers to serve the tourists (mean value of 2.19), [3] tourism development has created job opportunities for the young locals (mean values of 2.55), and [4] local community is actively involved in tourism industry (mean value of 2.34). Most of the employment supply in Bukit Tinggi had been directly involved with tourism, such as tourist shuttle drivers, hotel accommodation workers, restaurant workers, as well as hotel management and entertainment service workers.

Result of [1] could be translated into an altered landscape in workforce status, whereby this unexpected change has become vivid over the years. Results of [3] and [4] support finding [1], in which the situation raised concerns over the domination of foreign workers that had led to questionable benefits gained by the local community. More importantly, it was interesting to observe a perceptible variance between results [1] and [2]. In this paper, the scenario reflected the high number of foreign workers occupied in the agriculture industry and logging activity. Having said this, it is of this study interest to raise a significant issue to be pondered upon: to what extent will the tourism industry be expanded, and how will the setbacks of the development be equalised with the monetary benefits gained?

Real Estate Value

Two items were employed to measure the CC of real estate value in Bukit Tinggi: [1] increase in tourist arrival has contributed to increase in real estate value (mean value of 2.54), and [2] there is a need to build more shops and stalls (mean value of 2.56). These outcomes were more inclined towards moderate levels of CC. In this paper, the results served as a competitive edge, both positively and negatively. The positive aspect involved the probable expansion on both

residential and infrastructure developments, as these two are in line with the empowerment of MM2H (Malaysia My Second Home) Program (to retain loyal tourists and expatriate), as well as in line with the notion of providing user-friendly and world-class infrastructures (to build the foundation for place making). Residential development may be triggered through conversion of some traditional village houses located in Bukit Tinggi Village into shop lots. On the contrary, the negative aspect denotes the gravity of environmental deterioration stemming from massive construction activities, of which in 2014, turned to be the cause of eight earthquake-like occurrences.

BUSINESS GROWTH

In correspondence to the objective, strategic business system and business survival criteria, as prescribed by Jones (2016), were utilised in this study. The former criterion was incorporated into the accommodation sector as ‘the number of rooms is insufficient during peak season’ (mean value of 2.35). Meanwhile the latter criterion was linked with tourism development as ‘tourism in this location has high potential of growth’ (mean value of 2.71). The resulting moderate level for room availability during peak season reflected the adequate number of accommodations provided in Bukit Tinggi. In light of growth potential, the result indicates involvement of tourism-related bodies in planning strategic and pragmatic business framework, whereby more importantly, the stakeholders are to develop the framework by prioritising environmental sustainability and sustainability of business practice (from the stance of the global tourism market).

TOURISM INCOME

Three items were utilised for measurement: [1] high demand for accommodation has contributed to an increase in accommodation price (mean value of 2.54), [2] tourist visit is contributed by the accommodation price affordability (mean value of 2.02), and [3] tourists are satisfied with the souvenir price (mean value of 2.08). Business logic with demand and supply works in a complementary cycle, both positively and negatively. In this paper, the result of [1] appeared to be strongly influenced by Business Growth results (see previous section). In detail, notwithstanding the sufficient number of room available, the accommodation supply could have experienced the escalating pattern when the tourism sector in Bukit Tinggi is acknowledged by the global tourism market. Of which, in return, would exert influence on item [2]. In regard to souvenir price, the observed mean value should receive immediate attention from the service providers. Result of [3] explicitly disclosed the issue of over-priced merchandise that signified unsuccessful business plans.

The social carrying capacity assessment

Overall, social CC indicators exhibited a moderate level of CC with a mean value of 2.76 (yellow). Table 2 presents the outcomes of economic CC in Bukit Tinggi.

Table 2: Results of social carrying capacity in Bukit Tinggi

INDICATORS	Mean	Colour
Indicator 1: Tourists arrival		
There is an increase in tourists' arrival.	2.50	
Tourists are welcomed by local community.	2.57	
Indicator 2: QOL Safety & Well-Being		
High number of tourists negatively contributes to safety issue.	3.50	
Visitation motivation is influenced by tourism products comfortability.	2.51	
Indicator 3: Place identity		
Tourism negatively affects local values and traditional customs.	2.74	
Locals practice traditional customs.	2.34	
Increase in tourists' arrival influences preservation of traditional customs.	2.53	
Indicator 4: Tourism experience		
Local community is cold towards tourists.	3.60	
Increase in tourists' arrival decreases tourism experience.	3.42	
Increase in tourists' arrival does not affect quality of services.	2.37	

Tourist arrival

It is evident that the tourism industry has changed the landscape of Bukit Tinggi from a thickly and lush green rainforest to a splendid design small town, which has attracted the interest of people to come and enjoy what it has to offer. The 80.8% growth rate clearly indicates that the tourism industry has emerged as a financial lifeline for the local residents of Bukit Tinggi. More importantly, Bukit Tinggi has earned international recognition as one of the top tourism destinations in Malaysia only after seven years of operation. In line with the objective of this paper that aims to evaluate the impact of tourist arrival on local residents, the CC assessment items were set as follows: [1] there is an increase in tourist arrival (mean value of 2.50), and [2] tourists are welcomed by local community (mean value of 2.57). In reference to the mean values, the results showed that the local residents would welcome more tourism activities in Bukit Tinggi (to empower financial lifeline). Of more importance, the results signified a slightly earthbound response in terms of tourist population size. As such, more attention should be directed towards the influx of tourists in order to maintain the favourable acceptance level.

Safety and Well Being

Safety and well-being are two aspects that have been paid attention to across all types of fields, including health, workplace, sports, construction, entertainment, nursing, education, and tourism. These two aspects are incontestably significant within both tourism and travel domains, whereby in this rapidly changing landscape of the tourism industry, safety and well-being have become indispensable for CC. In precise, safety and well-being have gained much interest as they are interconnected with tourism experience, tourist perception, good rapport of tourists-locals, and destination image. In this paper, safety and well-being were measured using two items: [1] high number of tourists negatively contributes to safety issues (mean value of 3.50), and [2] visitation motivation is influenced by tourism products comfortability (mean value of 2.51).

The result for item [1] could be translated into two perspectives; first, tourists are not perpetrators, as suggested by conventional knowledge; and second, the raised concerns over non-tourists who take advantage to commit crimes that tarnish Malaysia's tourism industry reputation. Despite the range of efforts undertaken by the appointed organisations in handling safety and security issues, more need to be done as a non-friendly and crime-laden destination is bound to leave an unfavourable impression that unquestionably puts pressure on the tourism industry.

Place Identity

Halmi and Severovice (2016, p 77) claimed that '*destination management can be identified as a strategic approach to the coordinated management of all elements ...such as amenities, access, marketing ...with the aim of a better management [for the purpose of] ...building a strong and vibrant brand identity*'. From the stance of academic research, local festivals and historical heritage are the tourism identities in Bukit Tinggi.

Place identity of Bukit Tinggi was measured by collecting data based on the following three items: [1] tourism negatively affects local values and traditional customs (mean value of 2.74), [2] locals practice traditional customs (mean value of 2.34), and [3] increase in tourist arrival influences preservation of traditional customs (mean value of 2.53). The mean values suggest that the tourism activity in Bukit Tinggi no longer prioritises traditional customs. Such outcome may derive from the fact that the small town of Bukit Tinggi is not fundamentally designed or operated based on the locals' traditional concept. Rather, it is a destination that sells European-styled and Japanese-tailored attractions.

Nevertheless, the results could be an indicator that, despite the nature of a tourism destination, local values and traditional customs are aspects sought by tourists. Hence, the moderate level of satisfaction (CC) was noted for item [3]. Given the fact that preserving the local values has been exhausted (e.g., cultural

events and educational awareness), considerable efforts are still needed to enhance the vibrant identity of Bukit Tinggi. Figures 1 and 2 illustrate the international culture performance and the identity showcased at Bukit Tinggi.



Figure 1 Cultural performance in Bukit Tinggi



Figure 2 Japanese culture in Bukit Tinggi

Tourist experience

The IGI Global (2018) has defined tourism experience as ‘...a set of activities in which individuals engage on their personal terms, such as pleasant and memorable places, allowing each tourist to build his or her own travel experiences so that these satisfy a wide range of personal needs’. In meeting the study objective, tourist experience was assessed using three items: [1] local community is cold towards tourists (mean value of 3.60), [2] increase in tourist arrival decreases tourism experience (mean value of 3.42), and [3] increase in tourist arrival did not affect quality of services (mean value of 2.37).

Similar to the outcomes for tourist arrival, an increase in tourist population size displayed nil or no negative impact on the local residents’ acceptance level. Put simply, local residents do enjoy the presence of tourists in Bukit Tinggi. Within the context of tourist experience, although the high number of tourists did not affect the quality of experience (density is in corroborative as a cause of facilities/amenities ineffectiveness), it was learned that density did exert intangible force on the quality of service. Overall, the CC of place identity for Bukit Tinggi was at a moderate level (mean score of 3.13).

DISCUSSION AND CONCLUSION

The tourism development in Bukit Tinggi has led to socio cultural change in local values. Originally, the Bukit Tinggi resort was designed to capture the international identity while taking advantage of the highland climate. Upon offering a nice and cold environment, coupled with varying culture values, an interesting attraction is offered for both the local and international people. Nonetheless, an issue seemed to emerge when the management of Colmar

Tropicale only provided international cultural dance performances for visitors' entertainment. This undoubtedly can erode the value of local identity.

Due to the high number of staff turn-over due to job vacancy in other sectors, it is relatively difficult to maintain competent staff to entertain clients to their highest level of satisfaction. The respondents had voiced their disappointment towards front desk service, delay in response, staff attitude, and lack of supporting knowledge that may aid information sharing. Apart from the aforementioned issue, the accommodation service provider in Bukit Tinggi seemed to be struggling to address the following: types of service provided, sufficient number of personnel to provide assistance to visitors, maintenance cost for equipment (especially sports and leisure equipment), and maintenance cost for safety (in reference to wild animals, insects, and pests).

The environmental issues reported in Bukit Tinggi included illegal acts of land encroachment detected in Janda Baik, illegal land clearing activities in Lentang Forest Reserve and Kelawai, as well as illegal land expansion by foreign immigrants (to expand agricultural activities and for residential need).

Concerns were also raised by the respondents in terms of price of goods. Regardless being the highland destination that is often associated with higher price and influenced by growing demand, accessibility, distance, number of service providers, and destination image/branding; the business strategy should weigh in the competitiveness edge from other tourism destinations (local and international) that might offer the same attractions, aside from giving a serious thought to the mass production and/or high accessibility to goods. For instance, a wide range of French- and European-based eateries could also be found in Kuala Lumpur, and merchandise (e.g., t-shirts and keychain) is easily purchased from other places.

Tourism is indeed a fast-growing industry and a valuable sector, as it contributes significantly to the regional and local economic development, albeit the adverse impacts on both environment and social contexts. In precise, uncontrolled tourism development has caused massive land exploitation that has further resulted in environmental deterioration, as well as ineffective tourism planning and management, which influenced overexploitation of cultural and social resources, while unsuccessful business strategy that leads to unequal economic activity of the area.

The very Concept of Tourism CC stems from the notion that overcrowding tourists is a harmful scenario that may be detrimental to the resources found in a destination. As a new tourist attraction, the establishment of CC (model, framework, and assessment) for Bukit Tinggi is vital to ascertain the sustainability and longevity of the tourism sector. The urgent need is not only triggered by the growing number of visitations, but the importance is also flagged by issues of environmental education, environmental awareness, climate change, global warming, environmental footprint, and nature-based resources footprint.

ACKNOWLEDGEMENT

This reported research outcome is the result of work carried out by Long-Term Research Grant researchers under funding of the Ministry of Higher Education, (Long Term Research Grant Scheme 2011) [LRGS Grant No: 304 / PPBGN / 650,571].

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Received: January 2020. Accepted: 14th May 2020