MEASURING LANGKAWI SUSTAINABILITY AS TRAVEL DESTINATION: VALIDATION THROUGH CONFIRMATORY FACTOR ANALYSIS

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Abstract

The environment and natural resources are is a reason that can attract tourist to visit. The main highlight of one particular tourism destination depends on the attractiveness and the beauty of its nature. Based on past literatures, limited study that focuses on the sustainability of the environment thus, this paper aims to validate several constructs that will be used to measure the sustainability of destinations. As Langkawi is one of the top destinations in Malaysia and recognized as a Global Geopark by United Nations Educational Scientific and Cultural Organization (UNESCO), it is a need to conduct a further research especially in term of sustainability. A total of 318 local and international tourists participated in this study and the data was collected by using self-administrated questionnaires. To confirm the construct, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) was adopted. The finding indicates that there are 15 constructs that can represent the destination sustainability. The study's practical implication and limitation are discussed.

Keywords: *Destination Sustainability, Confirmatory Factor Analysis (CFA), Langkawi, Malaysia*

1. Introduction

The world tourism industry has been grown leaps and blooming as one of the income generator to the world. As reported by World Travel & Tourism Council (WTTC, 2019), the total contribution of world tourism industry to gross domestic product (GDP) was USD8,811.0 billion in year 2018 and it prediction to rise by 3.6% in year 2019. As shown in table 1, the total contribution of world tourism industry has increase from year 2012 to 2018. This increase number in GDP every year shows that the tourism industry has growing rapidly.

Table 1: World Tourism Industry Contribution to GDP 2012 to 2017

Year	Total Contribution to GDP (USD Billion)
2018	8811.0
2017	8,272.3
2016	7,936.7
2015	7,606,7
2014	7,287.8
2013	7,017.8

2012	6,758.8

(Source: WTTC, 2019)

Tourism industry also become one of the income generator to Malaysia, whereby in 2018, tourism industry has contributedRM190.3 billion to Malaysia GDP and it has be increase up to 2.63% compared to 2017 (WTTC,2019). Table 2 shows that the increasing figure in term of the contribution of tourism industry to Malaysia's GDP. This fact shows that Malaysia tourism industry has growing and has received more tourist every year. Malaysia becomes one of the popular tourism destinationin the world. According to New Straits Time (2017), among 136 countries in the world, Malaysia has ranked at 26th place as a one of the competitive travel destination. Tourism industry not only give the income to Malaysia, but it also helps society by giving them job opportunities. According to WTTC (2019), in year 2018, tourism industry in Malaysia has contribute around 1,766,700 jobs and it forecast to be increase up to 2,401,300 in year 2029. This job opportunity is good to the nation whereby it can reduce unemployment rate as well as can help the society in Malaysia.

Table 2: Malaysia Tourism Industry Contribution to GDP 2012 to 2018

Year	Total Contribution to GDP (MYR Billion)
2018	190.3
2017	181.4
2016	169.4
2015	155.5
2014	157.2
2013	139.8
2012	125.1

(Source: WTTC, 2019)

Malaysia has make a proactive action in encouraging the international tourists to visit Malaysia by highlighting the attractiveness of Malaysia (Zainuddin, Radzi&Zahari, 2016). This action shows a positive result whereby in year 2016, the number of tourist who visit Malaysia is 26.76 million tourists compare to 2015 which is 25.72 million.However, there are some issues that occur in 2017 which can lead the decreasing number in tourist arrival in year 2017. The number of tourists visiting Malaysia in 2017 is 25,948,459 tourists which is has decrease 3.0% compare to 2016. However, Malaysia maintain to increase the revenue which is 82.2 billion compare to 2016 which is 82.1 billion

Table 3: Number of Tourist Arrivals and Receipts, 2006 to 2018

Year	Arrivals	Receipts (MYR)
2018	25.83 million	84.1 billion
2017	25.94 million	82.2 billion
2016	26.76 million	82.1 billion
2015	25.72 million	69.1 billion
2014	27.44 million	72.0 billion
2013	25.72 million	65.4 billion
2012	25.03 million	60.6 billion

2011	24.71 million	58.3 billion
2010	24.58 million	56.5 billion
2009	23.65 million	53.4 billion
2008	22.95 million	49.6 billion
2007	20.97 million	53.4 billion
2006	17.55 million	36.3 billion

(Source: Tourism Malaysia, 2019)

Langkawi is one of the popular destination in Malaysia. Langkawi has gifted with 99 stunning island that will promise an unlimited experience trip to its traveller. CNN Travel (2017) has claim that Langkawi is one of the top island in Malaysia due to its beauty in term of nature and also historical places. Lembaga Pembangunan Langkawi, (LADA,2017) is one the authority that responsible in developing Langkawi as one of top holidays destination. LADA has promoted Langkawi to the world by emphasising the attractiveness of Langkawi such as island with clear crystal water, duty-free shopping center, rare flora and fauna, mountain and rainforest which very suitable for those who loves nature. Langkawi also rich with historical places such as TasikDayang Bunting, MakamMahsuri, BerasTerbakar and many more. For those who loves extreme activities, Langkawi also offer a lot of outdoor activities such as climbing a mountain, Sky Trail, Langkawi Zipline Adventure, scuba diving, ATV Adventure and many more. All these activities actually can attract variety type of traveller such as traveller who loves nature, traveller who seek for extreme activities or only for recreation.

All those attraction has triggered potential traveller to come and visit Langkawi thus, the number of tourist's arrival to Langkawi are keep increasing every year as shown in table 4. In 2017, Langkawi has received 3.68 million of arrival compare to 2016 which is 3.63 million. This figure isforecasted to be increase in next following year due to start in 9th August 2017, there are direct flight from China to Langkawi which can lead to more China tourist in Langkawi (The Star Online, 2017).

Table 4: Number of Tourist Arrivals to Langkawi, 2011 to 2016

Year	Arrivals
2017	3.68 million
2016	3.63 million
2015	3.62 million
2014	3.60 million
2013	3.41 million
2012	3.06 million
2011	2.81 million

(Source: LADA, 2018)

Langkawi also known as a Global Geopark by United Nations Educational Scientific and Cultural Organization (UNESCO) inyear 2007 until 2011 and its continually to year 2012 until 2015 (LADA, 2017). According to UNESCO (2017), Global Geopark is a nature area where it will be keeping the sites and landscapes. Geopark is also known as one way in sustaining the development

and balance between culture and environment (LADA,2017).In order to develop one particular destination, it will involve many constructions to serve better facilities and services to traveller. However, rapid development should emphasize the environment so that it can be maintained for a long time. Past study in tourism has explore in many perspectives such as environmental management, responsible tourism, environmental impact and many more. However, limited study was found to focus on the destination sustainability. Due to limited study on destination sustainability, the construct for examine the sustainable destination are not well develop. Thus, this study attempts to validate severalconstructs that will be used to measure the sustainability of destinations.

In term of sustainability, there are 3 element that need to be consider which is economic factor, social factor and environmental factor. In term of economic factor in Langkawi, due to the popularity of Langkawi, the number of tourist arrival also increase. This can lead to the growth of economic sector in Langkawi. As mention by Marzuki (2008) in his research, tourism in Langkawi has contribute a positive impact to the states by increasing the income to the Langkawi as well as local community by providing a job opportunity. In line with that, a research by Salleh, Othman, Idris, Halim et al. (2014) found that, tourism industry has given a positive effect to the economic, social and culture, but tourism industry has given a bad impact to the environment at Langkawi. Not only that, according to New Straits Times (2017), there are the evident claims that the natural environment has deteriorated and there are also the issues in term of water quality, land structure and marine life.Current study also conducted an interview with policy maker and a few representatives from travel agents. The same issues as rise from them whereby most of them mention that Langkawi has faced the environmental problem. Due to this issue, the current study would like to measure the destination sustainability that only focus on the environmental factor.

2. *Literature Review*

Destination Sustainability

Sustainability in tourism industry can be define as the combination of existing and future economic, social and environmental influences, concentrating on the need of traveller, the industry, environment as well as host societies (United Nations World Tourism Organization, UNWTO, 2018). UNWTO (2018) also claim that sustainable tourism will focusing on how tourism destination meets the need of present tourists and communities and improving the chances in future. Sustainability in tourism aspect has been examined in numerous studies such as tourism sustainability (Ng, Chia, Ho& Ramachandran, 2017); sustainable education (Liu, Horng, Chou & Huang, 2017); sustainable hotel practices (Reid, Johnston &Patiar, 2017)and tourism sustainability (Lopez, Virto, Manzano & Miranda, 2018).Study by Ng, Chia, Ho and Ramachandran (2017) has examine the success of sustainability in Tioman's Island by using Sustainable Ecotourism Indicator System (SEIS) among stakeholders. There are three stakeholders who involve in this study which is 39 of government officer, 104 of local people and 105 of traveller. This study looks into the relationship on several influence factors which is community, tourism and resource. The result shows that all the relationship is reach a sustainability moderate level which is 58.89% and the highest sustainable performance is the influence of tourism on community which is 64.29%. This finding can conclude that Tioman Island is can be categorized as potentially sustainable.

Study by Liu, Horng, Chou and Huang (2017), was to foster student critical idea on how to use creative techniques to avoid environmental loss caused by growing of tourism and hospitality industry, vacation and recreation behaviour. This study has adapted a few models which is Torrance Test of Creative Thinking (TTCT) and creative problem solving (CPS) to measure student's creativity to prevent environmental damage through co-competition course. This study involves of 196 students from tourism and hospitality department. In order to measure TTCT, research using two constructs which is norm-based and validity indicators. There are four items in norm- based which is fluency, originality, thoroughness and flexibility. For validity, there are two indicator which is verbal and graphic response. For CPS, there are six types that researcher uses to help students to generate creative idea which is mind mapping, brainstorming, mandala, synectics, listing technique and force relationships. The main co-competition course that involves in this study are tourism management, leisure or recreation management, hospitality management and

others related department. The results show that co-competition course will boost students' critical thinking in term of sustainability and it's also will increase student creativity. Not only that, the integration between courses and CPS can changes the student's awareness and their knowledge and behaviour towards environment sustainability.

In other hand, study by Reid, Johnston and Patiar (2017) has examine the hotel practices in the of environmental among Asia Pacific hotels who listed as green building certification program. The study attempts to look into the geographically differences which is involved of 38 from urban locales, 19 for coastal and 7 for others location. The findings show that the highest sustainable practice within urban location are India (105 hotels), Australia (57 hotels) and China (53 hotels). For hotel that located at coastal, the highest sustainable practices are Philippines (64 hotels), Thailand (43 hotels) and Maldives (35 hotels). A study by Lopez, Virto, Manzano and Marinda (2018) is to examine the residents' attitudes towards the sustainability of archaeological site. This study was measuring the residents' attitudes by using ten construct which is place dependence, place identity, affective attachment, community participation, perceived socio-economic benefits, perceived cultural benefits, residents' support, economic sustainability, market sustainability and social sustainability. All these constructs were adopted from past study and this study using 7-point Likert scale. The target respondents are the local community who stay at Trujillo. There are 250 respondents who participate in this study and only 226 questionnaire that complete and can be use. The data was analysed by using PLS-SEM. The finding indicates that, perceived benefits have a strong relationship with tourism sustainability which is t-value at 9.45. Residents' support also has a significant relationship with tourism sustainability (t= 8.23). This can be concluded that perceived benefits and residents' support plan an important role to the tourism sustainability.

3. Methodology

The aims of this study are to validate several constructs that will be used to measure the sustainability of destinations. The specific destination will be Langkawi, Malaysia and this paper will use quantitative method by using non-probability sampling technique. The participant will spend around 5 to 10 minutes to fill up the questionnaire and the participant for this study will be tourist who visiting Langkawi.

Measurement and Procedure
This questionnaire will be divided into two part which is demographic profile and destination sustainability. For sustainability part, the question will be focus on environmental factor which is 18 questions are develop for this study and using 5-point Likert scale which is 1 (strongly disagree) to 5 (strongly agree).These questions are adopted from the past study and some adjustment has been done to make sure the suitability of question with current study. The question was adopted from several studieswhich is Choi &Sirakaya (2005) and Hassan,Noordin&Sulaiman (2010). There is also some question that newly develop where by those question is specific focusing on the Langkawi, Malaysia. Furthermore, in term of demographic profile, there is 6 questions was asked. These questions will give an overview of respondents' characteristic such as gender, age, nationality which divided into 2 set which is Malaysian and non-Malaysian, frequency in visited Langkawi and the important source of information when deciding travel destination.

To make sure a right respondent who participate in this study, data was collected at Langkawi. This will make a respondent can answer the question and imagine the place around them. Respondents were approached at several places such as restaurant, beach, airport, jetty and also several popular places such as Langkawi Cable Car, Eagle Square and Langkawi Wildlife Park and Bird Paradise. This study manages to distribute 325 questionnaires to the tourists however, there are some questionnaire that cannot be used due to incomplete answer, thus the final number is 318 respondents.

Data Analysis
For this study, there are two stages on data analysis in order to validate the constructs. The data analysis will start with the Exploratory Factor Analysis (EFA) by using SPSS. In this step, the study will measure the factor loading for each construct. The acceptable value for this construct is the value of factor loading should be more than 0.5. For any construct have the low factor loading

(< 0.5), those question will be deleted. For second stage, this study analyse the construct by using Confirmatory Factor Analysis (CFA) to confirm the construct. This step will be analyse using SEM-AMOS. For CFA, the current study will analyse a several dimensions to confirm the constructs to find the accurate value for each construct.

4. Result and Discussion

Profile of Respondents

As mention before, 318 respondents wereparticipating in this study whereby 48.4% are male and another 51.6% are female. Most of the respondents are come from second age group which is 25 to 30 years old (79), followed by 31 to 34 years old (66), 18 to 24 years old (62), 35 to 40 years old (59) and 41 years and above is 52 respondents. 244 respondents are from local tourist which is 105 respondents are Malay, 88 are Chinese, 51 are Indian and 74 respondents are from others ethnicity group. On the hand, 74 respondents are international tourist which comprise of Poland (4), Denmark (3), United Kingdom (3), France (3), Netherlands (4), Russian (3), Australia (6), Canada (6), Egypt (8), China (10), Qatar (5), United Arab Emirates (4), Brunei (5), Singapore (3) and Indonesia (5). In term of occupation, 18.9% of respondents work as private employee, 17.9% are student, 17.3% working in government sector and 16% of respondents have their own business. There rest are retired, housewife and unemployed where by each them are 10.7%, 10.4% and 8.8% respectively. 91 of respondents claim that their monthly income in a range between RM 3,000 to RM5,000 whereas 62 respondents are earned around RM5,001 to RM7,000 per month and 59 respondents said that they able to generate income around RM7,001 to RM9,999 per month.

Under respondent profile, the current research also asks the respondent about their travel behaviour. The first question that has been ask to the respondents are the type of accommodation that they will choose during the holidays. There are seven type of accommodation that become the choice of respondents which is 4-star hotel (20.4%), 3-star hotel (19.8%), budget hotel (19.2%), campsite (12.3%), apartment (11.3%), homestay (8.8%) and guest house (8.2%). 116 of respondents claim that they will stay around 4 days at one particular destination and 115 of respondents will stay around 5 days. Another 87 respondents are more likely to stay 3 days at one particular destination before they go to visit other places. 40.9% of respondents said that the purpose of visit is for leisure and 32.4% are for recreations. 23% visit Langkawi are for shopping and 3.8% are for business and professional purposes. 60.1% of respondents are visit Langkawi by themselves without took any package and only 39.9%who come by travel package. The study also asks about the frequency of respondents come and visit Langkawi, and the study found that 86 of respondent are already visit Langkawi for 5 times, 82 of them had visit Langkawi for 4 times and the rest are 2 and 3 times which is 78 and 72 respectively.

The current study also asks the respondents about how they get the information about Langkawi. Due to the grow in technology these day, most of respondent use that platform to gather the information where by 287 of respondents claim that they know about Langkawi from social media. 251 of respondents know about Langkawi from word of mouth, website (218), travel agency (214), blog (212) and family and friends (161).For the traditional platform such as television (28), billboard (10), magazine (15), and newspaper (9) are not very reliable nowadays and its not really can influence the respondents to visit Langkawi.The overall of respondent's profiles and travel behaviour of respondents has been state in table 5.

Table 5: Profile of Respondents and Travel Behaviors

Variable	Study	Percent
Gender		
Male	154	48.4
Female	164	51.6
Age		
18-24	62	19.5
25-30	79	24.8
31-34	66	20.8

35-40	59	18.6
41 years and above	52	16.4
Nationality		
Malaysian		
Malay		
Chinese	105	33.0
Indian	88	27.7
Others	51	16.0
	74	23.3
Non-Malaysian		
Poland	4	1.3
Denmark	3	0.9
UK	3	0.9
France	3	0.9
Netherlands	4	1.3
Russian	3	0.9
Australia	6	1.9
Canada	6	1.9
Egypt	8	2.5
China	10	3.1
Qatar	5	1.6
UAE	4	1.3
Brunei	5	1.6
Singapore	3	0.9
Indonesia	5	1.6
Occupation		
Government	55	17.3
Private Employee	60	18.9
Businessman	51	16.0
Retired	34	10.7
Housewife	33	10.4
Student	57	17.9
Unemployed	28	8.8
Level of Monthly Income	13	4.1
Below RM1,000	45	14.2
RM1,001 – RM3,000	91	28.6
RM3,001 – RM5,000	62	19.5
RM5,001 – RM7,000	59	18.6
RM7,001 – RM9,999	48	15.1
Above RM10,000		
Type of Accommodation		
Hotel-4star	65	20.4
Hotel-3star	63	19.8
Budget Hotel	61	19.2
Campsite	39	12.3
Homestay	28	8.8
Guest House	26	8.2
Apartment	36	11.3
Length of Stay		
3 Days	87	27.4
4 Days	116	36.5
5 Days	115	36.2

Purpose of Visit

Business and Professional	12	3.8
Leisure	130	40.9
Recreations	103	32.4
Shopping	73	23.0

Travel Arrangement

Package	127	39.9
Non-Package	191	60.1

How many times did you travel to Langkawi?

2 times	78	24.5
3 times	72	22.6
4 times	82	25.8
More than 5 times	86	27.0

How did you get information about Langkawi?

Social Media	287	20.4
Magazine	15	1.1
Newspaper	9	0.6
Television	28	2.0
Word of Mouth	251	17.9
Billboard	10	0.7
Blog	212	15.1
Travel Agency	214	15.2
Website	218	15.5
Family or Friends	161	11.5

Respondent also asked to rank the level of importance among several sources of information in deciding the destination holidays. As shown in table 6, the new source of information such as social media (51.6%), word of mouth (58.8%), travel blog (50.6%), travel agency (50.9%), website (54.4%) and family or friends (48.7%) are rated as the importance source in deciding the destination. However, respondents have ranked the traditional platform are not really important to them when they want to decide the travel holiday destination. From this finding it can be conclude that the traditional platform is not applicable in advertising nowadays because most of traveller will look for reliable sources that more easy, high technology, save time and less cost to them to decide in choosing travel destination.

Table 6: The percentage of important sources in deciding choice of destination

Source of Information	Not important at all	Not Important	Neutral	Important	Very important
Social Media	-	-	-	48.4%	**51.6%**
Magazine	**62.6%**	33.3%	4.1%	-	-
Newspaper	**56.9%**	37.4%	5.7%	-	-
Television	**50.3%**	49.7%	-	-	-
Word of Mouth	-	1.9%	2.2%	36.8%	**58.8%**
Billboard	44.7%	**55.3%**	-	-	-
Travel Blog	-	-	-	**50.6%**	49.4%
Travel Agency	-	-	-	49.1%	**50.9%**
Website	-	-	-	**54.4%**	45.6%
Family / Friends	-	1.3%	6.3%	**48.7%**	43.7%

Exploratory Factor Analysis

Factor analysis was conducted on 18 questions of destination sustainability. The principle component analysis that used in this study is Varimax rotation to obtain the factors. According to Hair et al. (1998), the best value for factor analysis are the factor loading are more than 0.5. Thus, the study will eliminate some items with low loadings (<0.5). As can see in table 7, all out of 18 questions, 17 questions have been categorised into threecomponents and one question has been deleted due to low factor loadings which is question 4. As can see in table 7, all those three factors have a very high Cronbach's Alpha value which is factor 1 (0.864), factor 2 (0.830) and factor 3 (0.827). Based on the finding of EFA, it can be concluded that there are three dimensions in measuring the destination sustainability which is behaviour and attitude awareness, sustainability and environmental.

Table 7: Exploratory Factor Analysis

	Component			Eigenvalue	Variance (%)	Cronbach's Alpha
	1	2	3			
Environment Sustainability				6.23	34.58	0.864
S7	0.616					
S8	0.832					
S9	0.809					
S10	0.702					
S11	0.691					
S12	0.593					
S13	0.585					
Natural Environment				2.25	12.51	0.830
S14		0.744				
S15		0.734				
S16		0.648				
S17		0.789				
S18		0.717				
Tourism Development				1.65	9.14	0.827
S1			0.680			
S2			0.822			
S3			0.775			
S5			0.666			
S6			0.821			

Confirmatory Factor Analysis

In order to confirm the finding in EFA, the current research conduct a CFA by using AMOS. There are two stages in CFA for this study which is single dimension and multiple dimension. For CFA, the current study will report the most common indices that use in AMOS which is Chi-square, Goodness-of fit Index (GFI), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA)which the recommended value has been summarize in table 8.

Table 8: Summary Recommended Value for Fit Indices

Fit Indices	Authors	Recommended Value
GFI	Chau (1997)	> 0.90
	Segars and Grover (1993)	> 0.90
CFI	Bentler (1990)	> 0.90
	Hatcher (1994)	> 0.90
TLI	Bentler&Bonett (1980)	> 0.90

| RMSEA | Byrne (2001) | < 0.08 |
| | Hu &Bentler (1999) | <0.05 |

Firstly, current research conducts a CFA by using single dimension. In this step, the current study has combine all 17 items into one dimension.The result for single dimension did not provide a good result with Chi-square value of 1019.07 (df=119), which was not significant at the p<0.05. Other finding also does not meet the requirement for example, GFI = 0.667, CFI = 0.618, TLI = 0.564 and RMSEA = 0.154. The factor loading for each item also very low which majority of items has factor loadings of 0.40 to 0.60.

Next, the current study has construct a multi dimension which is in this stage, the current study construct 2 group of items. This two group was generated from EFA in order to explore the factor loading value for two dimensions. In this step, the value for fit indices is slightly increase from single dimension however, the value still not provide a satisfactory result. The Chi-square for two group of dimensions are 552.44 (df = 103). The finding also shows that the current result does not meet the criteria for fit indices which is GFI = 0.802, CFI = 0.798 TLI = 0.764 and RMSEA = 0.117. However, all the items able to obtain high value of factor loadings which as majority of item has factor loading value 0.60 to 0.80.

Lastly, the current study has developed a multi dimension with three group of items as propose in EFA. This step can help to confirm the number of items that can be used for this study. The result shows that the value for fit indices are not significant with the value of Chi-square 378.27 (df = 166), GFI = 0.878, CFI = 0.888 TLI = 0.869 and RMSEA = 0.085. Thus, the result indicates that the model need to further modification to achieve a significant value. The study decides to delete some items by looking to the highest value of modification indices (MI) as proposed by Bentler, (1992). The study has decided to remove two items that have high MI value which is question 9 and question 17. After modification process has made, the result shows that the value for fit indices are acceptable with the value Chi-square 209.80 (df = 87), GFI = 0.923, CFI = 0.936 TLI = 0.923 and RMSEA = 0.067 as presented in table 9.

Table 9: Fit Indices for CFA Models (N = 318)

Model	Chi-Square	df	GFI	CFI	TLI	RMSEA
Multiple Dimension – 3 groups (15 items)	209.80	87	0.923	0.936	0.923	0.067
Multiple Dimension – 3 groups (17 items)	378.27	166	0.878	0.888	0.869	0.085
Multiple Dimension – 2 groups (17 items)	554.44	103	0.802	0.798	0.764	0.117
Single Dimension – (17 items)	1019.07	119	0.667	0.618	0.564	0.154

Construct Validity and Reliability
After measurement model was confirmed, this study also calculates the reliability and validity of the destination sustainability. According to Fornell and Larcker (1981), convergent validity is acceptable when the value of factor loading for all items are higher than 0.50 and AVE score is larger than 0.5. However, according to Fornell and Larcker (1981), if AVE less than 0.5 but CR is more than 0.6, the convergent validity is still acceptable.The results show that the AVE for behaviour and attitude awareness is 0.475 which is below than 0.50 but based on rule of thumbs by Fornell and Larcker (1981), this value still can be acceptable due to CR is 0.817. The result also indicates that, the AVE for sustainability is 0.548 with CR of 0.823. Lastly, the finding also shows that the AVE value for Environmental factor are 0.512 and the CR is 0.838. Therefore, the finding shows that all fit indices is acceptable at 15 items as shown in table 10.
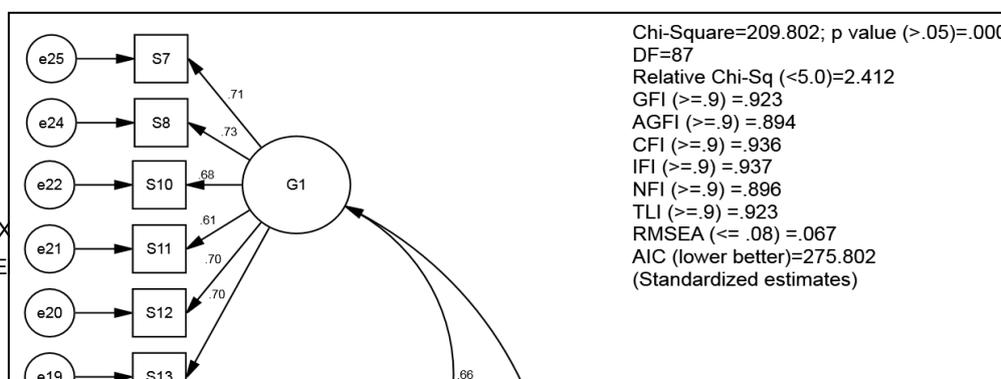

Chi-Square=209.802; p value (>.05)=.000
DF=87
Relative Chi-Sq (<5.0)=2.412
GFI (>=.9) =.923
AGFI (>=.9) =.894
CFI (>=.9) =.936
IFI (>=.9) =.937
NFI (>=.9) =.896
TLI (>=.9) =.923
RMSEA (<= .08) =.067
AIC (lower better)=275.802
(Standardized estimates)

Figure 1: Final Destination Sustainability Model

Table 10: Measurement Properties of the (15-item) destination sustainability (N = 318)

Code	Factor and Items	Factor Loading	AVE	CR
	Environment Sustainability		**0.475**	**0.817**
S7	Tourism development must promote positive environmental ethics among all parties that have a stake in tourism	0.71		
S8	Regulatory environmental standards are needed to reduce the negative impacts of tourism development	0.73		
S10	Tourism at this site is developed in harmony with the environment	0.68		
S11	Tourism at this site is directed into areas with suitable facilities	0.61		
S12	I feel disappointed with air pollution	0.70		
S13	I feel disappointed with beach pollution	0.70		
	Natural Environment		**0.548**	**0.823**
S14	I believe Langkawi Geopark is sustainable	0.87		
S15	I believe the nature of Langkawi is still on original condition	0.81		
S16	Tourist development do not affect the sustainability of Langkawi	0.52		
S18	The involvement of visitor in nature activity (such as: birdwatching, jungle trekking,	0.64		

snorkelling, island hopping, Mangrove boat tour)
do not affect the natural beauty of Langkawi

	Tourism Development		0.512	0.838
S1	Community environment must be protected now and for environmental sustainability the future	0.64		
S2	The diversity of nature must be valued and protected	0.81		
S3	I think that tourism development should strengthen efforts for environmental conservation	0.72		
S5	Tourism needs to be developed in harmony with natural and cultural environment	0.63		
S6	Proper tourism development requires that wildlife and natural habitats be protected at all times	0.76		

5. Discussion and Implications

Although destination sustainability is very important in tourism sector, its components has not been clearly defined in order to measure the destination sustainability. Very limited study in tourism industry have examined the main construct for destination sustainability. Due to this reason, the current study attempts to fill the gaps by examine in greater depth the constructs that specifically to measure destination sustainability. Data was collected with 318 local and international travellers at Langkawi, Malaysia. In order to confirm the construct, EFA and CFA were conducted. The result from EFA found that, among 18 items, only 17 items are acceptable with factor loading more than .0.50 and it was dimension into 3 distinct factors. Then, CFA was conducted to confirm the finding on EFA. 4 steps have been made before a final finding can be made. This study has developed a single dimension and multiple dimension to find the best results. Out of 17 items, 2 items were deleted due to low factor loading and high modification indices. Thus, the final number of items is 15. Based on the finding, it clearly shows that in order to measure sustainability of one particular destination, there are 3 aspect that we need to look at which is behaviour and attitude awareness, sustainability and environmental aspect. All the factor loading for each item are higher than 0.50 and the AVE and CR also accepted as shown in table 10.

The finding obtained in this study have an implication to many parties. First of all, this research will give a big contribution to the body of knowledge by developing and testing a scale to measure destination sustainability that specifically to Langkawi, Malaysia which may be utilized for cross-destination comparison in destination sustainability perception. This paper also helps to expending the research on destination sustainability in tourism area. Furthermore, finding of this paper also provides some knowledge to the policy makers by understanding the perception of traveller towards the sustainability of Langkawi, Malaysia. This can help the policy maker to evaluate the travel destination to make sure its sustain and can attract more tourist to come. Lastly, this study also can help marketer who involve directly in tourism industry. As state at early data finding, this research also come out with the travel behaviour of respondents. This might be givea idea to the marketers to advertise their products or services at a right medium to attract a right potential customer such as using a new technology such as social media, website, travel blog and others to market their products and services instead of using traditional advertising tools.

6. Limitations and Future Research

There is some limitation in this study, Firstly, this study only focusses on the destination sustainability in term of environmental factor. When we talk about sustainability, the basic element that we need to look for is environmental factor, economic factor and society factor. Even though Langkawi has strong on economic and social factor, there is a need to measure it as a sustainability factors. Thus, the future research can be extended by measuring economic and social factor together with environmental sector. The current study also focusing on one particular destination which is Langkawi. The level of sustainability in Langkawi might be different compare to other

travel destination which may influence the result of finding. Due to that, the future research is advised to explore more on the sustainability of destination at another travel destination and can develop a cross-destination research to see the differences of perception among traveller. Lastly, the current research only focuses in qualitative research design and did not take into consideration on qualitative part. Qualitative research can help researcher to explore more on the perception of tourists toward the sustainability. Thus, it is suggested for future research to explore the sustainability in qualitative method to gain more understanding into this.

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