

Sustainability Level of Heritage Cities in Malaysia

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Abstract

This article aims to measure the level of sustainability of heritage cities in Malaysia. A thousand residents of ten selected heritage cities throughout Malaysia were selected as the respondents based on the cluster sampling and simple random methods to complete the questionnaire. A Likert scale on questionnaires 1 to 5 was used to elicit feedback. Five sustainability constructs were used: economic, social, environmental, cultural heritage, and government/community role. The results showed that the items in each study construct achieved an acceptable reliability level, with a Cronbach Alpha value greater than 0.70, and also met the normality test requirements. Descriptive analyses of the frequencies, percentages, and average mean values were used to establish each construct's level of sustainability. The results of the study show that the cities that attracted high scores were Georgetown (3.94), Taiping (4.00), Melaka City (3.76), and Muar (3.71). Meanwhile, the cities that attracted moderate scores were Kuala Kubu Bharu (3.36), Jugra (3.23), Tampin (3.37), Kuala Lipis (3.28), Kota Bharu (3.65) and Kuching (3.51). The implications of this study can be used to indicate the actual situation of the level of sustainability of heritage cities and be a reference to carry out the process of improvement towards a more sustainable city by 2030.

Keywords: heritage city, sustainability level, sustainability construct, cultural heritage, Malaysia

1. Introduction

Various countries have widely used indicators of sustainable urban development, including the Global Cities Indicator (CHS, 2004), City Data Book (ADB, 2001), Sustainable Cities Index (Australian Conservation Foundation, 2010), Thailand Sustainable Development Index (ESCAP, 2007), and others. These indicators are intended to measure the sustainability of the city by assessing various parts of it. The Malaysian Urban-Rural Sustainable Development Indicator Network (MurniNet 2.0) (Arifin et al., 2014) measures urban sustainability in Malaysia; however, the indicators of sustainable urban development used by most countries, including Malaysia, only involve economic, social, environmental and institutional indicators (the role of the government and community), without including cultural heritage indicators.

The United Nations Sustainable Development Goals (SDGs), originally announced in 2015, emphasize the importance of cultural heritage indicators in sustainable urban development, particularly in historical cities (UNESCO, 2017). Thus, Appendino (2017) has added another indicator for sustainable heritage cities: the cultural heritage indicator is equivalent to the economic, social, environmental, and institutional indicators, making five indicators in total. Leus and Verhelst (2018), Wang and Gu (2020), Pham et al. (2019), Poon (2019), Karoglou et al. (2019), Salvatore (2018), and Wiktor-Mach (2019) all support the inclusion of this indicator, stating that cultural heritage indicators should be included in the measurement of sustainability because the current failure of sustainable urban development is due to the marginalization of cultural heritage.

Therefore, this research uses and introduces a new indicator, namely, cultural heritage, for measuring the level of sustainability of heritage cities in addition to using the existing indicators, namely, the economic, social, environmental and institutional indicators. The determination of the five indicators used in this research is based on the requirements and policies of sustainable development related to the SDGs (United Nation, 2019), New Urban Agenda (NUA) (Habitat III, 2016), Agenda 21 (United Nations Sustainable Development, 1992), Healthy Cities Movement (HCM) (Barton and Grant, 2012), and the 11th Malaysia Plan (Department of Town and Country Planning, 2018). According to this policy, sustainable development directly encompasses economic, social, environmental factors, cultural heritage, and the role of the government and community. By using the base of indicators provided by Murninet 2.0 and cultural heritage indicators introduced by Appendino (2017), Leus and Verhelst (2018), Wang and Gu (2020), Pham et al. (2019), Poon (2019), Karoglou et al. (2019), Salvatore (2018), Wiktor-Mach (2019) and others, an instrument containing five complete constructs was developed. Therefore, in this study, a combination of these five indicators is used as a variable for measurement which, in turn, can rank the heritage cities in Malaysia based on their respective levels of sustainability.



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2. Literature Review

Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their needs. Sustainable development combines promoting economic, social, and environmental sustainability with poverty eradication and income distribution equity as its key goals (Chamhuri et al., 2014). Limit to Growth (1972) (Meadows et al., 1972), the Brundland Report (1987) (Brundtland, 1987), the Rio Summit (1992) (UNESCO, 2017), the Decade of Education for Sustainable Development (2004-2014) (UNESCO, 2017), and, more recently, the Sustainable Development Goals (SDGs) with 17 key goals on which each country must act (United Nation, 2019).

Sustainable development in urbanization has resulted in several changes to the global urbanization agenda, including the Healthy Cities Movement, Local Agenda 21 (Local Agenda 21), and the New Urban Agenda. The New Urban Agenda aims to achieve a better, more sustainable future (Satterthwaite, 2016; Habitat III, 2016). The New Urban Agenda was adopted at the United Nations Conference on Housing and Sustainable Urban Development to create sustainable cities by 2030 (Caprotti et al., 2017).

According to Fatimah et al. (2008) and Abdul Samad et al. (2004), sustainable urban development is a joint decision-making process by the stakeholders in urban planning, such as Local Authorities, local business associations, Non-Governmental Organizations and consumers, who seek to ensure that economic activities, population welfare (including health), and ecosystems are all given integrated consideration so that current and future generations will be able to meet their needs on an ongoing basis. Essential criteria for the formation of a sustainable city are the economic, social and environmental factors, combined with the local authority's ability to make efforts to achieve the planned mission and vision of sustainable development.

In addition to the strong links existing between urbanization and job creation, livelihood opportunities, and improved quality of life, the New Urban Agenda also prioritizes cities' natural and cultural heritage as the key components of urban planning, including the best conservation and preservation efforts plus the promotion, and dissemination of knowledge about the tangible and intangible cultural heritage (Habitat III, 2016). This proves that the cultural heritage has been recognized as a key component of creating a sustainable city. Scholars such as Runnalls (2007), Tweed and Sutherland (2007), and Bandarin et al. (2011) define cultural heritage as the fifth dimension of sustainable development, whereas Appendino (2017) has demonstrated a shift in the paradigm towards the foundation of sustainability by identifying heritage as one of the main pillars for achieving sustainability.

Since Malaysia is committed to implementing the SDG agenda and adopting the New Urban Agenda in the context of sustainable urban development, as in the Second Principle of the 11th Malaysia Plan, which is designed to improve the well-being of the people, besides focusing on the National Urbanization Policy Vision 2 (DPN 2), which aims to provide Sustainable cities for Prosperity and also the National Heritage Act 2005 (Part II- Policies relating to conservation and preservation of heritage), it is important for Malaysia to possess data that measure the level of sustainability of its heritage cities. This is because 162 cities in Malaysia can be considered as heritage cities, based on the uniqueness and features of each city, including a row of historic buildings and traditional shophouses built before the Second World War (WW2). The term "sustainable heritage city" applies not only to heritage cities that are recognized by UNESCO but also includes all cities with unique cultural characteristics (Syed Zainol, 1992).

A sustainable heritage city can provide safe living facilities, adequate recreation sites, efficient water, electricity and telecommunications supplies, employment opportunities, and an efficient transportation system. At the same time, it is also able to preserve the heritage that exists because it is part of empowering the identity of a nation known for its architectural, ethnic, cultural, language and religious complexity (Hizbaron et al., 2020; Graham et al., 2016). The urban heritage, whether in tangible or intangible form, is a uniqueness that is unlikely to exist in other cities.

3. Methods

3.1. Study Area

The study area covers ten selected heritage cities in Malaysia. All of the cities were selected based on an inventory of heritage cities in Malaysia by Syed Zainol (1992). All of the selected cities represent the various hierarchies of cities in Malaysia. They were also selected from five study zones, namely: The Northern Zone (Penang-Georgetown and Perak-Taiping); Central Zone (Se-

langor-Kuala Kubu Bharu and Jugra); Southern Zone (Negeri Sembilan-Tampin, Melaka-Bandaraya Melaka and Johor-Muar); East Coast Zone (Pahang-Kuala Lipis, Kelantan-Kota Bharu); and East Malaysia Zone (Sarawak-Kuching) (Figure 1).

The selection of these ten cities was based on criteria obtained from the Operational Guideline for Implementation (ICCROM et al., 2011; UNESCO, 2019b). The criteria available on the heritage cities selected in Malaysia are: (i) a city inhabited since the 1400s to the present day by a multi-cultural society resulting from external influences such as Malay, Chinese, Indian, Peranakan Chinese, Jawi Peranakan, Eurasian, Siam and Arab Peranakan; (ii) a city that highlights the importance of the changes in human values over time or within the scope of world cultures, such as architectural or technological developments, unique monuments, town planning and landscape design (Figure 2); (iii) a city that is unique due to or strongly influenced by cultural traditions or surviving or lost civilizations; and (iv) a city that serves as a reference and example, especially with regard to building design, architectural style, technological development, and landscape, highlighting the cultural and historical influence of human civilization on other cities that emerged later.

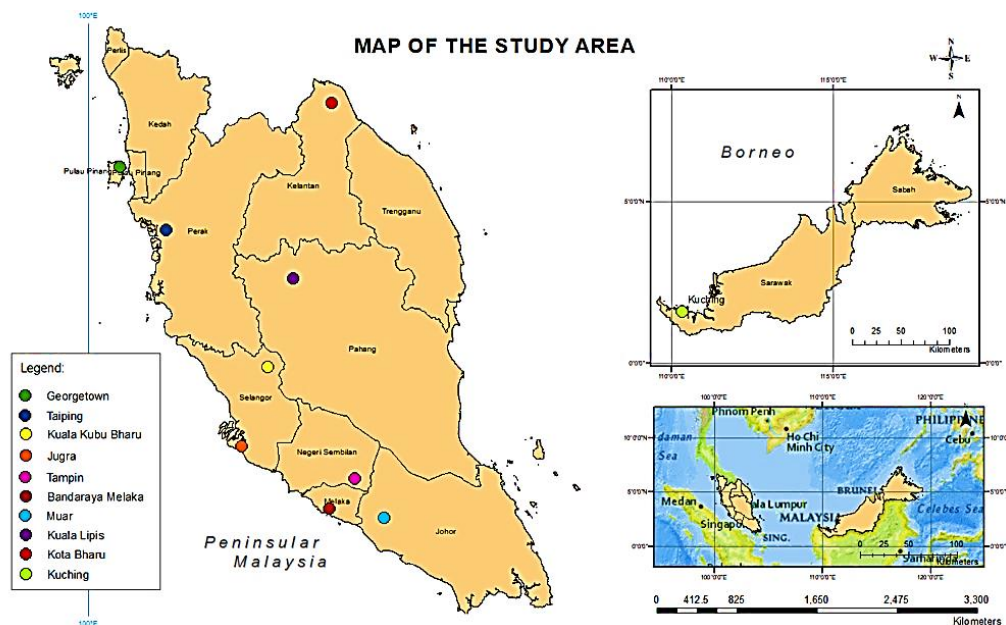


Figure 1. Study area (source: fieldwork 2021).



Figure 2. An example of the uniqueness of the traditional Malay architecture found in the heritage building of the Masjid Kampung Laut in Kota Bharu, one of the heritage cities in Malaysia. This is the oldest mosque in Malaysia, which is a national heritage site, tourist attraction and reference for architecture study (source: fieldwork 2021)

3.2. Population and Sample

The study involved 1,000 respondents from various levels of society in Malaysia, all of whom were aged over 18 years old. The selection of the study sample consisted of residents living or working in heritage urban areas, as they act as the local communities that drive the economy and witness developmental change, policy practitioners, and the recipients of both the positive and negative impacts of heritage city sustainability. To determine the number of samples required based on the total population, three criteria were used, namely: (i) Krecjie and Morgan's (1970) sample table, (ii) Cohen's (1992) table (which suggests that, if ten study variables are used for the multiple regression analysis at a significance level of 0.05, then the total sample should be 833 people); and (iii) based on the rule of thumb of Tabachnick and Fidell (1996), the appropriate sample size for the factor analysis would be 300 respondents, or 50 respondents per factor. Meanwhile, Comrey and Lee (1992) offered the following guidelines, that suggest that a sample of size 1,000 is an excellent choice. Therefore, based on the guidelines of the three conditions, this study set the total sample as up to 1,000 people. The study sample was selected based on the cluster sampling procedure, because the characteristics of the study area and population are too large and involve many subjects so, according to Chua (2006), group sampling is the best option to use in order to obtain significant results in this situation. In the first stage, five zones were selected. In the second stage, ten heritage cities were randomly selected as the study areas, based on the simple random sampling method. The number of samples required is 1,000 people, based on the population of the area (Table 1). Next, in the third stage, a total of 100 samples were selected using the simple random technique in each study area, covering various demographics, such as gender, age, race, and population status.

Table 1. Total study population and sample

City	Residents	Sample
Georgetown	207,743	100
Taiping	212,562	100
Kuala Kubu Bahru	26,648	100
Jugra	7,371	100
Tampin	32,917	100
Bandaraya Melaka	331,790	100
Muar	152,255	100
Kuala Lipis	16,285	100
Kota Bharu	491,237	100
Kuching	658,549	100
Total	2,137,357	1000

3.3. Instrument

The research instrument used is a questionnaire was subjected to factor analysis, namely: exploratory factor analysis (EFA) and confirmation factor analysis (CFA). Factor analysis was performed to identify and rearrange many of the questionnaire items into components under each specific variable and achieve model matching accuracy (Chua, 2014). The questionnaire consists of six sections: sections A-F (Table 2). Each section contains information related to the study constructs, namely: Section A (Economic Prosperity), Section B (Social Well-Being), Section C (Environmental Well-Being), Section D (Cultural Heritage), Section E (Role of Government and Community) and Section F (Respondent's profile).

3.4. Instrument Reliability

Table 3 shows the reliability of the heritage urban sustainability constructs with the Cronbach's Alpha values to measure the internal consistency level of the constructs. The Cronbach's Alpha values are based on the reliability index classification: a value of 0.90-1.00 is very high, 0.70-0.89 is high, 0.30-0.69 is moderate, and 0.00-0.30 is low (Babbie, 1992). Good reliability values lie between 0.70 and above (Mohamad et al., 2015). The analysis results show that the Cronbach's Alpha value is 0.70-0.95, which is high to very high. Therefore, the instrument employed for this study has a high level of reliability according to the classification set by Babbie (1992).

3.5. Method for the Data Analysis

Data were analyzed using descriptive methods to obtain the values of the frequencies, percentages and means of each variable plus the average means. The level of each variable is separated into

three categories to facilitate understanding: low level, moderate level, and high level. Cut-off points were utilized to make it easier to understand these levels (Table 4).

Table 2. Questionnaire information

Section	Construct	Construct Explanation	Item No.	Source
A	Economic Prosperity	Economic prosperity refers to human mobility, business/investment activities and economic growth contributing to employment opportunities, income, and human influx.	13	Adapted from the Department of Town and Country Planning (2019) and Choon et al. (2011)
B	Social Well-Being	Social well-being refers to basic amenities, communications and utilities, safety and public order. Basic facilities lead to the infrastructure being provided for all residents. Safety and public order are related to social problems in society and communication/utilities are related to transportation networks and domestic services, such as the water and electricity supply, that will lead to social well-being.	9	Adapted from the United Nations Sustainable Development (1992) and Choon et al., (2011)
C	Environmental Well-Being	Environmental quality refers to physical health, which is the element of air, sound, smell, congenital diseases and clean water supply. Secondly, land use involves saturated built-up areas that will improve the quality of the environment.	8	Adapted from Takano (2003); O’neill and Simard (2006); Lafond and Heritage (2009)
D	Cultural Heritage	Cultural heritage refers to a tangible culture, that is culture that can be seen and touched, such as buildings, monuments and others. In contrast, intangible culture is culture that cannot be seen and touched, such as practices, customs, art, and so on, as well as the preservation and conservation of heritage that involves restoration, repainting, modification, and other actions to ensure the survival of the cultural heritage.	9	Adapted from Appendino (2017); Abdul Aziz (2011) and Syed Zainol (1992)
E	Role of Government and Community	The role of the government and community refers to community involvement, environmental management, tourism and heritage management, and risk management, as efforts to preserve the cultural heritage.	18	Adapted from the Local Agenda 21 (1992) and Tan et al., (2018)
F	Respondent's Profile	Information on the participants’ gender, race and population status.	3	Designed according to the needs of the study

Table 3. Values of the alpha coefficient

Construct	Item No.	Alpha Coefficient Value
Economic Prosperity	13	.878
Social Well-Being	9	.898
Environmental Well-Being	8	.745
Cultural Heritage	9	.914
Government and Community Role	18	.974

Source: fieldwork 2021

Table 4. Cut-off point levels for each study construct

Scale	Level
Score 1.00 - 2.33	Low
Score 2.34 - 3.66	Moderate
Score 3.67 - 5.00	High

Source: Chua (2006)

4. Results

4.1. Respondent's Background

Table 5 lists the 1,000 respondents from the ten cities that were selected for this study. The analysis results show that a total of 361 people were male and 639 people were female. The race breakdown shows that 846 people were Malay, 56 were Chinese, 62 were Indian, 30 were Sarawak natives, three were natives of Sabah, and three were other races. The population status was that 780 people were born locally and raised in the study area, while the remaining 220 people were non-locals, who had come to live in the area for work, study and other reasons.

Table 5. Respondent's background

Respondent's Background		Frequency	Percentage (%)
Gender	Male	361	36.1
	Female	639	63.9
Race	Malay	846	84.6
	Chinese	56	5.6
	Indian	62	6.2
	Sabah Native	3	0.3
	Sarawak Native	30	3.0
	Others	3	0.3
	Population Status	Locals	780
	Non-Local Residents	220	22.0

Source: fieldwork 2021

4.2. Georgetown

As a result of the descriptive analysis, the level of sustainability of Georgetown according to each construct is shown in Table 6. The economic prosperity construct shows a high average level, with a mean value of 4.38, and the social well-being construct has a mean value of 4.10 on average. Meanwhile, the environmental well-being construct showed a moderate average level, with a mean value of only 2.71. The cultural heritage and government and community role constructs also showed a high average level of mean values of 4.03 and 4.50, respectively. Finally, the overall level of sustainability that combines the five constructs is high, at 3.94.

Table 6. Sustainability levels in Georgetown

Construct	Low		Moderate		High		Mean	SD	Average Level
	N	%	N	%	N	%			
Economic Prosperity	-	-	7	7.0	93	93.0	4.38	.53416	High
Social Well-Being	-	-	17	17.0	83	93.0	4.10	.46300	High
Environmental Well-Being	6	6.0	93	93.0	1	1.0	2.71	.29617	Medium
Cultural Heritage	-	-	22	22.0	78	78.0	4.03	.58486	High
Government and Community Role	-	-	9	9.0	91	91.0	4.50	.57787	High
The Level of Sustainability of the Entire City							3.94	.49121	High

Source: fieldwork 2021

4.3. Taiping

The economic prosperity construct in Taiping shows a high average level, with a mean value reading of 4.54. Similarly, the social well-being construct also showed a high average level and a mean value reading of 4.01. The environmental well-being construct showed a moderate average level, with a slightly lower mean reading of only 2.79. Meanwhile, the cultural heritage construct for Taiping showed a high average level, with a mean reading of 4.08, and the government and community role construct also showed a high average level of 4.56. The overall level of sustainability of Taiping is high, with a mean value of 4.00 (Table 7).

4.4. Kuala Kubu Bharu (KKB)

The analysis results found that the average level of all of the constructs for Kuala Kubu Bharu is moderate, as shown in Table 8. The economic prosperity construct showed a mean reading of 3.19, and the social well-being construct is 3.63. Next, the environmental well-being construct is 3.36, the cultural heritage construct is 3.30 and the government and community role construct is

3.31. Finally, the overall level of sustainability of Kuala Kubu Bharu is moderate, with a mean reading of 3.36.

Table 7. Sustainability level of Taiping

Construct	Low		Moderate		High		Mean	SD	Average Level
	N	%	N	%	N	%			
Economic Prosperity	-	-	6	6.0	94	94.0	4.54	.52454	High
Social Well-Being	2	2.0	11	11.0	87	87.0	4.01	.51998	High
Environmental Well-Being	3	3.0	94	94.0	3	3.0	2.79	.32840	Medium
Cultural Heritage	-	-	14	14.0	86	86.0	4.08	.46078	High
Government and Community Role	-	-	9	9.0	91	91.0	4.56	.57814	High
The Level of Sustainability of the Entire City							4.00	.48237	High

Source: fieldwork 2021

Table 8. Sustainability level of Kuala Kubu Bharu

Construct	Low		Moderate		High		Mean	SD	Average Level
	N	%	N	%	N	%			
Economic Prosperity	9	9.0	72	72.0	19	19.0	3.19	.55496	Moderate
Social Well-Being	1	1.0	60	60.0	39	39.0	3.63	.55411	Moderate
Environmental Well-Being	1	1.0	77	77.0	22	22.0	3.36	.42821	Moderate
Cultural Heritage	7	7.0	67	67.0	26	26.0	3.30	.63365	Moderate
Government and Community Role	6	6.0	69	69.0	25	25.0	3.31	.61241	Moderate
The Level of Sustainability of The Entire City							3.36	.55667	Moderate

Source: fieldwork 2021

4.5. Jugra

Table 9 shows the level of each sustainability construct tested in Jugra. All of the constructs tested showed only a moderate average level. The economic prosperity construct has a mean reading of 3.12, the social well-being construct has 3.37, the environmental well-being construct has 3.36, the cultural heritage construct has 3.34, and the government and community role construct has only 2.99. Finally, the overall level of sustainability Jugra is moderate, with a mean reading of only 3.23.

Table 9. Sustainability level of Jugra

Construct	Low		Moderate		High		Mean	SD	Average Level
	N	%	N	%	N	%			
Economic Prosperity	5	5.0	83	83.0	12	12.0	3.12	.43379	Moderate
Social Well-Being	3	3.0	77	77.0	20	20.0	3.37	.47559	Moderate
Environmental Well-Being	-	-	80	80.0	20	20.0	3.36	.37406	Moderate
Cultural Heritage	8	8.0	68	68.0	24	24.0	3.34	.58383	Moderate
Government and Community Role	12	12.0	80	80.0	8	8.0	2.99	.57624	Moderate
The Level of Sustainability of the Entire City							3.23	.48870	Moderate

Source: fieldwork 2021

4.6. Tampin

Table 10 shows the levels of each sustainability construct in Tampin. The economic prosperity construct has a moderate average level, with a mean reading of 3.34, and the social well-being construct has only a moderate average level, with a mean reading of 3.60. The environmental well-being construct also has a moderate average level, with a mean reading of 3.02. In addition, the cultural heritage and the role of government and community constructs also had moderate average levels, with mean readings of 3.44 and 3.48, respectively. Finally, the overall level of sustainability of Tampin is moderate, with a mean reading of only 3.37.

4.7. Bandaraya Melaka

Table 11 shows that the level of economic prosperity in Bandaraya Melaka has a high average level, with a mean value of 4.32. Furthermore, the level of social well-being has a high average

level and a mean value of 3.92. However, the level of environmental well-being in Bandaraya Melaka has only a moderate level, with a mean value of 2.76. The study's findings also found that the average level of the cultural heritage sustainability and the role of government and community constructs are high, with mean values of 3.93 and 3.87, respectively. Finally, the overall level of sustainability for Bandaraya Melaka is high, with a mean reading of 3.76.

Table 10. Sustainability level of Tampin

Construct	Low		Moderate		High		Mean	SD	Average Level
	N	%	N	%	N	%			
Economic Prosperity	8	8.0	63	63.0	29	29.0	3.34	.70001	Moderate
Social Well-Being	3	3.0	52	52.0	45	45.0	3.60	.70646	Moderate
Environmental Well-Being	2	2.0	91	91.0	7	7.0	3.02	.40742	Moderate
Cultural Heritage	6	6.0	63	63.0	31	31.0	3.44	.77697	Moderate
Government and Community Role	4	4.0	58	58.0	38	38.0	3.48	.76142	Moderate
The Level of Sustainability of the Entire City							3.37	.67046	Moderate

Source: fieldwork 2021

Table 11. Sustainability level of Bandaraya Melaka

Construct	Low		Moderate		High		Mean	SD	Average Level
	N	%	N	%	N	%			
Economic Prosperity	-	-	9	9.0	91	91.0	4.32	.52660	High
Social Well-Being	1	1.0	30	30.0	69	69.0	3.92	.47602	High
Environmental Well-Being	4	4.0	96	96.0	-	-	2.76	.28718	Moderate
Cultural Heritage	1	1.0	29	29.0	70	70.0	3.93	.53794	High
Government and Community Role	-	-	40	40.0	60	60.0	3.87	.56100	High
The Level of Sustainability of The Entire City							3.76	.47774	High

Source: fieldwork 2021

4.8. Muar

The level of sustainability of each construct in Muar is shown in Table 12. The economic prosperity construct has a high average level, with a mean value of 3.93. The social well-being construct also has a high average level, with a mean reading of 3.95. Meanwhile, the environmental well-being construct has a moderate average level, with a slightly lower mean reading of 2.98. Next, the cultural heritage construct has a high average level and a mean reading of 3.82. The government and community role construct also has a high average level, with a mean reading of 3.87. Finally, the overall level of sustainability of Muar is high, with a mean reading of 3.71.

Table 12. Sustainability level of Muar

Construct	Low		Moderate		High		Mean	SD	Average Level
	N	%	N	%	N	%			
Economic Prosperity	-	-	22	22.0	78	78.0	3.93	.52060	High
Social Well-Being	4	4.0	28	28.0	68	68.0	3.95	.67653	High
Environmental Well-Being	5	5.0	90	90.0	5	5.0	2.98	.42451	Moderate
Cultural Heritage	2	2.0	38	38.0	60	60.0	3.82	.62361	High
Government and Community Role	3	3.0	31	31.0	66	66.0	3.87	.65222	High
The Level of Sustainability of the Entire City							3.71	.57949	High

Source: fieldwork 2021

4.9. Kuala Lipis

Table 13 shows the level of sustainability of each construct in Kuala Lipis. All of the constructs have a moderate average level in Kuala Lipis. The mean reading for the economic prosperity construct is 3.12; the social well-being construct is 3.41; the environmental well-being construct is 2.97, the cultural heritage construct is 3.50, and the government and community role construct is 3.39. Finally, the overall level of sustainability of Kuala Lipis is moderate, with a mean reading of only 3.28.

Table 13. Sustainability level of Kuala Lipis

Construct	Low		Moderate		High		Mean	SD	Average Level
	N	%	N	%	N	%			
Economic Prosperity	9	9.0	74	74.0	17	17.0	3.12	.59151	Moderate
Social Well-Being	3	3.0	66	66.0	31	31.0	3.41	.63365	Moderate
Environmental Well-Being	6	6.0	89	89.0	5	5.0	2.97	.42270	Moderate
Cultural Heritage	6	6.0	55	55.0	39	39.0	3.50	.68430	Moderate
Government and Community Role	3	3.0	65	65.0	32	32.0	3.39	.67118	Moderate
The Level of Sustainability of the Entire City							3.28	.59466	Moderate

Source: fieldwork 2021

4.10. Kota Bharu

Table 14 shows the level of sustainability of each construct of Kota Bharu. The economic prosperity construct has a high average level, with a mean reading of 3.93. The social well-being construct also has a high average level, with a mean reading of 3.68. Meanwhile, environmental well-being has a moderate average level, with a mean reading of only 2.85. Next, the cultural heritage construct has a high average level, with a mean reading of 3.97, while the government and community role construct has a high average level, with a mean reading of 3.84. Finally, the overall level of sustainability of Kota Bharu is moderate, with a mean reading of only 3.65.

Table 14. Sustainability level of heritage City in Kota Bharu

Construct	Low		Moderate		High		Mean	SD	Average Level
	N	%	N	%	N	%			
Economic Prosperity	1	1.0	26	26.0	73	73.0	3.93	.50761	High
Social Well-Being	5	5.0	40	40.0	55	55.0	3.68	.60817	High
Environmental Well-Being	5	5.0	88	88.0	7	7.0	2.85	.47686	Moderate
Cultural Heritage	1	1.0	25	25.0	74	74.0	3.97	.56044	High
Government and Community Role	5	5.0	25	25.0	70	70.0	3.84	.65226	High
The Level of Sustainability of The entire City							3.65	.56106	Moderate

Source: fieldwork 2021

4.11. Kuching

The findings for Kuching are shown in Table 15. The economic prosperity construct has a high average level, with a mean value reading of 3.80. The social well-being construct is only at a moderate level, with a mean value of 3.50, and the environmental well-being construct is moderate, with a mean value reading of 2.92. Meanwhile, the cultural heritage construct is at a high average level with a mean value of 3.70. Finally, the construct of government and community roles is only at a moderate average level, with a mean value of 3.65. Finally, the overall level of sustainability of Kuching is moderate, with a mean reading of only 3.51.

Table 15. Sustainability level of Kuching

Construct	Low		Moderate		High		Mean	SD	Average Level
	N	%	N	%	N	%			
Economic Prosperity	3	3.0	29	29.0	68	68.0	3.80	.63483	High
Social Well-Being	6	6.0	58	58.0	36	36.0	3.50	.71040	Moderate
Environmental Well-Being	8	8.0	89	89.0	3	3.0	2.92	.39957	Moderate
Cultural Heritage	5	5.0	37	37.0	58	58.0	3.70	.76376	High
Government and Community Role	5	5.0	39	39.0	56	56.0	3.65	.76330	Moderate
The Level of Sustainability of the Entire City							3.51	.65437	Moderate

Source: fieldwork 2021

4.12. The Level of Sustainability of the Entire Heritage City in Malaysia

The heritage cities that were found to have a high level of sustainability are Georgetown, Taiping, Melaka City and Muar only. Taiping recorded the highest average mean value of 4.0. The heritage cities that were found to have a moderate level of sustainability are Kuala Kubu Bharu, Jugra, Tampin, Kuala Lipis, Kota Bharu and Kuching. Jugra had the lowest average mean value, of only 3.23 (Figure 3). Overall, there is still a lot of work to be done to ensure that the sustainability level

of these heritage cities improves. The authorities need to focus on constructs that record the moderate average values in each city and find solutions about how to increase those levels. Increasing the level of sustainability of each construct will have a positive impact on the community life in the heritage city, making it more prosperous and livable, in line with the SDGs.

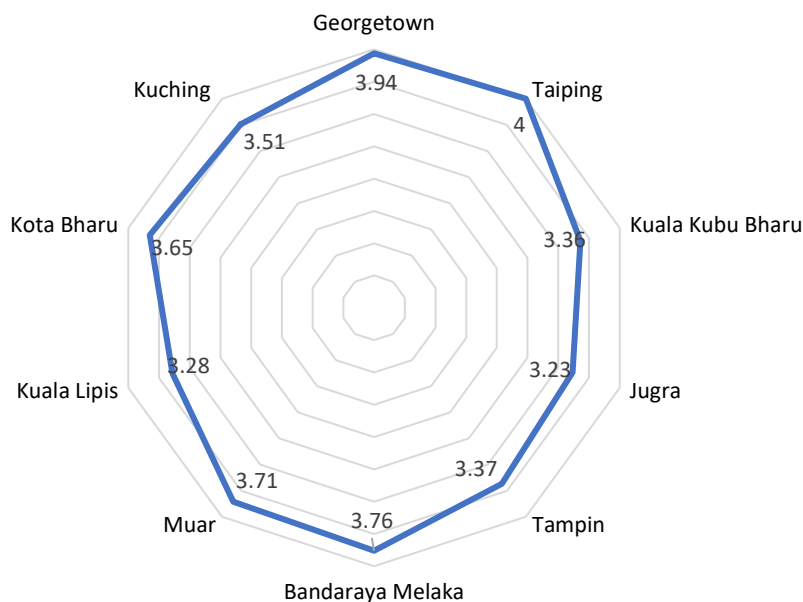


Figure 3. The level of sustainability (source: fieldwork 2021)

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5. Conclusion

In conclusion, the descriptive analysis findings for the level of sustainability in the ten selected heritage cities of Malaysia shows that most are at a high or medium level, with a mean score between 2.34 and 5.00. Their overall levels of sustainability are: Georgetown (3.94 = high), Taiping (4.00 = high), Kuala Kubu Bharu (3.36 = moderate), Jugra (3.23 = moderate), Tampin (3.37 = moderate), Melaka City (3.76 = high), Muar (3.71 = high), Kuala Lipis (3.28 = moderate), Kota Bharu (3.65 = moderate) and Kuching (3.51 = moderate). In light of these findings, all parties, especially the local authorities of those cities with only moderate levels of sustainability, need to take steps to plan and develop their cities to ensure a better future, without neglecting the constructs already discussed here. This coincides with the effort to make the heritage city an inclusive, livable, and prosperous city for the community by 2030, as targeted by the SDGs. In conclusion, the level of sustainability of heritage cities needs to be constantly improved to have a positive impact on the lives of the communities in heritage cities, as recommended by the SDGs. This is because cultural heritage supports sustainable economic development, the formation of prosperous communities, the nurturing of a conducive environment and so on. Cultural heritage is able to generate an economy based on heritage tourism, form a harmonious society by cultivating a sense of belonging as a result of the identification of origins, conserve the use of natural resources by reusing existing heritage elements and so on. The values brought by cultural heritage cross borders and complement every existing dimension of sustainable urban development.

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