

## Conference paper

# The Competitiveness of the Tourism Industry in West Sumatera with A Competitiveness Monitor Approach

Erni Febrina Harahap<sup>\*1,2</sup>, Mora<sup>1,2</sup>, Irwan Muslim<sup>1,2</sup>, Helmawati<sup>1,2</sup>, and Velya Anjely<sup>1,2</sup>

<sup>1</sup>Economic Development, Economic and Business Faculty, Universitas Bung Hatta

<sup>2</sup>Science Departement, Andalas University

## Abstract.

Competitiveness is one of the criteria to determine the success and achievement of a better goal by a country in increasing income and economic growth[1,2]. This study aims to determine the high and low indicators that determine the competitiveness of the tourism sector and the level of competitiveness of the tourism sector in the cities in West Sumatra. In this study, the measurement of the competitiveness of the tourism industry uses eight indicators used by the World tourism organization (WTO) with competitiveness monitor approach[3]. This study uses secondary data. The analytical method used in this study is the tourism index, composite index and competitiveness index. The results of the analysis show that the competitiveness of tourism in the eight indicators is only the Infrastructure Development Indicator (IDI) which shows a low competitiveness value, while the other indicators have high competitiveness.

**Keywords:** competitiveness, composite index, indicators, contribution, tourism.

Corresponding Author: Erni Febrina Harahap; email: ernifebrinaharahap@bunghatta.ac.id

Published 24 July 2023

Publishing services provided by Knowledge E

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Selection and Peer-review under the responsibility of the ELEHIC Conference Committee.

## 1. INTRODUCTION

Regional development with the aim of achieving community welfare must be carried out in a sustainable manner[4]. The level of competitiveness is one of the parameters in the concept of a sustainable city. The higher the level of competitiveness of a city represented by several economic sectors (including tourism), the level of welfare of its people tends to be better

The tourism industry is able to make a significant contribution to PAD[5]. This is what causes the regions to compete to introduce their tourism potential so that they can attract both local and foreign tourists. The development of this sector will have a considerable impact on related industries such as hotels, restaurants, travel agencies and MSMEs in tourist visiting areas because they can produce and sell souvenirs typical of the region[6,7].

## OPEN ACCESS

West Sumatra is one of the provinces where most of the area is dominated by oceans, mountains and beautiful biological landscapes, so the West Sumatra area is very good for the development of the tourism sector, from nature tourism, historical tourism, water tourism and culinary tourism.

Domestic and foreign tourist visits to West Sumatra Province have increased from year to year (table 1). However, in 2020 the number of foreign tourist arrivals fell drastically around to 83 percent, while domestic tourists fell by around 3 percent. This happened because of the Covid-19 outbreak that hit the world, including Indonesia.

Where several sea, land and air airlines do not run their fleets and the whole community is recommended not to gather and all activities are carried out by working from home so that transmission can be prevented and recover faster. The decline in the number of foreign tourist arrivals has practically made the tourism sector's contribution to the country's gross domestic product (GDP) and foreign exchange decline. In 2020, for example, the contribution of the tourism sector to Indonesia's GDP was only 4.05%, while in the previous year (2019) it was 4.7%. As for the foreign exchange for the tourism sector, the Ministry of Tourism and Creative Economy (Kemenparekraf) estimates a figure of US\$0.36 billion in 2021. This figure is much lower than the previous year's US\$3.3 billion. Meanwhile, in 2019, the tourism sector's foreign exchange was able to reach US\$16.9 billion.

TABLE 1: Number of Domestic and International Tourist Visits to West Sumatra Province in 2016-2020 (person).

Year	Domestic	Foreign Tourists	Total
2016	7.343.276	89.686	7.432.962
2017	7.783.876	56.876	7.840.752
2018	8.073.070	54.369	8.127.439
2019	8.169.147	61.131	8.230.278
2020	8.041.868	10.875	8.052.743

Tourism is a big industry that grows and develops faster than any other industry. Tourism as one of the sectors driving the Indonesian economy is a resolution for the government in increasing Indonesia's economic growth[8,9,10]. The government is willing to increase the factors that might contribute more in attracting foreign and local tourists. This study aims to analyze the competitiveness of the tourism industry in West Sumatra with the Competitiveness Monitor approach introduced by the World Travel and Tourism Council in 2001 with 8 indicators and summarized by the tourism competitiveness index and composite index[3]. The research object used is the number of foreign and local

tourist visits in West Sumatra, the available facilities and infrastructure, the number of hotels, the length of tourist visits, the purchasing power of tourists, and others.

### **The Concept of Tourism Competitiveness**

The Center for Urban and Regional Studies (CURS) defines regional competitiveness as the ability of the corporate sector in an area to generate income more equitably for the community [11,12]. In planning regional development, one must first analyze the economic potential of the area. By determining the sectors that need to be developed so that the economy can grow for the better.

Minister of National Education Regulation No. 41 of 2007 concerning process standards, defines competitiveness as the ability to show better, faster or more meaningful results. The capabilities in question are (1) the ability to strengthen its market share, (2) the ability to relate to the environment, (3) the ability to continuously improve performance, (4) the ability to establish a profitable position. Tourism has a very important role in the development of Indonesia, especially as a foreign exchange earner in addition to the oil and gas sector. As a source of foreign exchange, tourism has enormous potential. Looking at tourism trends in 2020, world travel will reach 1.6 billion people. This encourages the government to promote development in the tourism sector.

West Sumatra is one of the provinces designated by the government as a leading tourist destination in Indonesia. This is because the province of West Sumatra has many beautiful tourist destinations. Tourist destinations in this province are scattered in almost every urban district, ranging from nature tourism, culinary tourism, historical tourism and cultural tourism. The tourist destinations visited included Padang, Pariaman, Bukittinggi, Padang Panjang, Sawahlunto, Sijunjung Regency, Agam, Tanah Datar, Mentawai and South Solok.

## **2. METHOD**

Determining the competitiveness of the tourism industry can use the Competitiveness Monitor analysis introduced by the WTTC (World Travel and Tourism Council) in 2001. This analysis uses 8 indicators based on the World Tourism Organization, 2008: Human Tourism Indicators (HTI), Price Competitiveness Indicator (PCI), Infrastructure Development Indicator (IDI), Environment Indicator (EI), Technology Advancement Indicator (TAI), Human Resources Indicator (HRI), Openness Indicator (OI) and Social Development Indicator (SDI). Furthermore, there are 3 stages of determining competitiveness, namely the Tourism Index, Composite Index and Tourism Competitiveness Index.

To calculate the tourism index from the eight indicators that make up the competitiveness index, the following formula is used

$$\text{Normalization } (X_I^C) = \frac{\text{Actual Value} - \text{Minimum Value}}{\text{Maximum Value} - \text{Minimum Value}}$$

Where  $X_I^C$  : Coefficient of normalization a location (c) dan variabel (i)

To calculate the composite index:

$$Y_K^C = \frac{1}{n \sum X_I^C}$$

Where :  $Y_K^C$  : composite index;  $k$  ( $k = 1$  to  $8$ );  $C$  = location;  $K$  = competitiveness indicators;  $N$ = variable of  $k$ ;  $i$  = variabels ;  $\sum X_I^C$  = amount of total indicators.

To calculate tourism competitiveness index :

$$Z^c = \sum W^K Y_K^C$$

Where :  $Z^c$  = tourism competitiveness index;  $Y_K^C$  = association weight on each indicator;  $\sum W^K$  = calculation of the sum of the association weights of each indicator

### 3. RESULTS AND DISCUSSIONS

Based on the calculation results of 8 tourism competitiveness indicators, and with the results of the composite index calculation for the 2016 – 2020 research year, it can be seen that Padang Panjang has the highest index value in all cities in West Sumatra of 1.69 for the Human Resources Indicator (HRI) which shows human resources in Padang Panjang can providing services to tourists is better than other cities, and the lowest is Sawahlunto rated 0.41 which can be seen in table 2. For the Human Tourism Indicator (HTI) index which shows the ratio of the number of tourist arrivals with local residents, the highest is Payakumbuh with an index value of 0.75. This is superior to Padang and Bukittinggi because the population of the cities of Padang and Bukittinggi is much more than Payakumbuh.

For the Price Competitiveness Indicator (PCI), Padang is the best. This shows that many tourists spend their money in Padang City compared to other cities in West Sumatra. In addition to being a superior tourist destination, Padang is also the capital of the province and is the main destination because the airport and seaport as well as inter-provincial bus terminals are located in Padang.

For the Infrastructure Development Indicator (IDI), the highest index is in Kota Pariaman. This indicator measures the available infrastructure in the destination area such

TABLE 2: Composite Index Calculation Results for Cities in West Sumatra.

Indicators	Padang	Bukittinggi	Solok	Sawah lunto	Padang Panjang	Payakumbuh	Pariaman	West Sumatera
HTI	0,59	0,34	0,42	0,41	0,42	0,75	0,68	0,60
PCI	0,65	0,60	-	-	-	-	-	0,68
IDI	0,68	0,55	0,79	0,50	0,78	0,57	0,80	0,63
EI	0,45	0,55	0,44	0,36	0,37	0,44	0,33	0,46
TAI	0,45	0,54	0,53	0,42	0,29	0,49	0,44	0,49
HRI	0,57	0,50	0,58	0,37	1,69	0,51	0,33	0,34
OI	0,69	0,76	0,47	0,47	0,72	0,29	0,39	0,50
SDI	0,68	0,53	-	-	-	-	-	0,56

as the length of roads that are paved and in good condition. As for the Environment Indicator, Bukittinggi is superior. This indicator shows the quality of the environment and the awareness of the population in maintaining the environment and this is one of the attractions for tourists to visit[13].

Bukittinggi is also superior for the Technology Advancement Indicator compared to other cities. Due to the strong communication network, ownership of mobile phones, the rapid development of infrastructure and technology in this region. In addition, Bukittinggi also excels in the Openness Indicator, which is an indicator that shows the level of openness of the destination area to international trade and international tourists. The measurement uses the ratio of the number of foreign tourists to the total PAD. Meanwhile, the most superior Social Development Indicator is the city of Padang. Where this indicator shows the comfort and safety of tourists to travel in the destination area. The SDI measure is the average length of stay of tourists in the destination area. This shows that tourists stay longer in the city of Padang compared to other cities in West Sumatra.

TABLE 3: Results of Calculation of the Tourism Competitiveness Index of Cities in West Sumatra.

Indicators	Padang	Bukittinggi	Solok	Sawahlunto	Padang Panjang	Payakumbuh	Pariaman	West Sumatera
HTI	2,53	1,47	1,79	1,73	1,80	3,20	2,89	2,54
PCI	1,27	1,17	-	-	-	-	-	1,32
IDI	0,12	0,10	0,14	0,09	0,14	0,11	0,15	0,11
EI	1,57	1,90	1,52	1,23	1,28	1,50	1,14	1,60
TAI	1,65	1,95	1,94	1,54	1,06	1,77	1,60	1,80
HRI	2,81	2,47	2,84	1,81	8,29	2,48	1,63	1,67
OI	2,98	3,31	2,03	2,04	3,12	1,23	1,67	2,19
SDI	1,22	0,95	-	-	-	-	-	1

Judging from the tourism competitiveness index, the city with the highest level of competitiveness is the city of Padang because it excels for HTI, PCI, EI, TAI, HRI, OI, and SDI indicators. Meanwhile, the Infrastructure Development Indicator is still below 1, which means that there are still a lot of improvements and improvements to infrastructure such as the quality of roads, roads in good condition, and other infrastructure (table 3). Fluctuations and differences in the results of the evaluation of this indicator are conditions in different regions. Where geographical location and different regional potentials can be used as a potential to increase regional competitiveness[14.15].

## 4. CONCLUSION

There are several conclusions that can be obtained from the results of this study, namely the competitiveness of tourism in cities in West Sumatra can basically be superior overall by considering several indicators that have been set. Bukittinggi for the composite index is very superior in the Environment Indicator, Technology Advancement Indicator and Openness Indicator indicators. While the city of Padang excels in the Price Competitiveness Indicator and Social Development Indicator. While Payakumbuh excels in Human Tourism Indicator.

## 5. RECOMMENDATION

This research should be continued again by looking at the next competitiveness index which is very in touch with tourists and tourist objects. The need to improve services and infrastructure required by tourists. The thing that is very urgent is to always promote tourism objects in the West Sumatra region, both natural, water, cultural, culinary, and others both domestically and abroad.

## ACKNOWLEDGEMENTS

Alhamdulillah, thanks to God Almighty, this article can be completed. The author would like to thank Bung Hatta University in particular the Institute for Research and Community Service (LPPM) which has financed this research and also to the Development Economics Study Program, where the author is the supervisor of the Industrial Economics course, and also to the relevant agencies that have facilitated data collection. The author would like to thank the family who sincerely support in the completion of this paper, and colleagues for the long discussion.

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