



The Tourism Competitiveness of Districts and Cities Possesing a National Park in Indonesia

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Indonesia has comparative advantages of tropical ecosystem, wealth tourist attraction nature, the diversity of culture, living culture peculiar and demographic dividend to participate in tourism. The comparative advantages in accordance with this tourist's behavior in the experience economy era where the tourists are seeking a tourist destination that has an authentic, such as a diversity of culture and the natural environment that is distinctive. However, this comparative advantage does not correlate with the trend of the increasing number of tourist arrivals in Indonesia. It shows that there were problems in a tourism competitive advantages and knowledge related to competitiveness of tourism inadequacy. This motivates to the need for a study in measuring the effectiveness of competitiveness tourism-based ecotourism in the tourist destinations in Indonesia. This study evaluates the competitiveness of tourism in the areas which have a national park in Indonesia on providing guidelines for tourism policy makers in Indonesia. We use travel and tourism competitiveness index by using data which has been available in the government and non-government institutions. We further employ clusters and dimensional scale to analyze the data. The

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results found that the average score of competitiveness of tourism indicates the index of 3 – 4. In summary, the tourism competitiveness in the area which have a varies national park can be classified into 5 clusters of tourist attractions based on characteristics of tourism competitiveness. They are health and hygiene, environment indicator, price competitiveness and purchase power parity.

Keywords: Tourism; competitiveness; district cluster; National Park; tourism index.

1. INTRODUCTION

Based on the data published periodically by The United Nations World Tourism Organization (UNWTO) in the period of more than a decade, the performance of Indonesia tourism is still under than that some countries in Southeast Asia. Over the past twelve years, the average of foreign tourists visiting to Indonesia and foreign tourists exchange is still spotted on the fourth rank after Malaysia, Singapore, and Thailand [1]. From the aspect of human resources, Indonesia has comparative advantages of tropical ecosystem, natural tourist attraction, wealth and the diversity of culture, the living culture of the community tourism that is distinctive as well as a demographic dividend who may participate in tourism. Indonesia also had mega biodiversity, such as in diversity species, some of them are endemic (live only in Indonesia), the tropical forests area and a national park. Indonesia is the the 3rd biggest biodiversity in the world after Brazil and Zaire. Some facts about mega biodiversity, the territory of The United Nation of The Republic of Indonesia i.e. (1) having 16% reptiles and amphibian in the world (more than 600 species); (2) having 35 primate species where 25% of the species are endemic; (3) having 17% of birds species of world (1603 species), where the 25% percent of the species are endemic; (4) having 121 species of butterflies, where 44% of the species are endemic; (5) having 646 species or 12% mammal species of the world, where 36% of the species are endemic and; (6) specially in Papua, the percentage of an endemic flora reached 60-70%. When it is viewed from the natural wealth, Indonesia has the natural competitiveness is in the rank 17 from 139 countries around the world i.e. the largest tropical forest area after Brazil; having 54 national parks. Besides that, about 59% land of Indonesia is a tropical forest which producing 10% of world tropical forest products and Indonesia has about 110 million hectares as a preserved forest area, where 18.7 million hectares area becomes conservation forest products [2].

Indonesia has basically tourism products comparative advantages in terms of nature and people contact. Tourism products comparative advantages effort with the development of all of the Indonesian if a planned and systematic are the aptitude of Indonesia tourism will competitive. It is different with the competitors to Indonesia, such as Singapore and Malaysia that develop tourist products artificially in massive scale as hyper theme park while Indonesia tourism destinations follows a natural attraction and culture as a selling value.

In this era of experience economy during this, most of travelers are seeking a tourist destination which has its uniqueness attractions. The differences in climate and 3S (sun, sea and sand) is no longer enough to motivate tourists to visit one destination. Tourists are looking for the unique authentication, that is culture and its natural environment held by a destination. Tourists are also interested to participate in creating a real their own tour experience, traveled with the exertion (nature-contact) and interact with the community in destination (people-contact) [3].

Based on the analysis of supply and demand, the development of destination activity by the theme of ecotourism is one of the strategies that is capable to improve the tourism competitiveness in Indonesia. It is perfectly rational if Indonesia has the image and unique selling point based on the excellence of a natural attraction and culture. The trend in the development of a tourist who is pro sustainability in intensity competitions among destinations based on a natural attraction and culture are excellence compete which is going to be tourists' preference in the future and cannot be easily imitated by a competitor.

Tourism is the stimulant factors for national economic development and it is automatically become a major source of revenue foreign income to a large number of developing countries in the world because of these various effects on other industries [4,5,6]. Thus, it is important for tourism destinations to develop and

strengthen their position more competitive toward global market, and the competitiveness of tourism is still relevant until now.

Motivated from above explanation, this study evaluates the tourism competitiveness of districts and cities which have a national park across Indonesia enabling competitive position described in the respected region. This information can be used as a guide for most policy makers and stakeholder's tourism industry in Indonesia where tourism policy requires a sound understanding of the factors that determine the competitiveness.

2. LITERATURE REVIEW

2.1 Competitiveness

Competitiveness at a corporate level is defined as the capability of companies to design, to produce, and or to market their products that is more superior than to provide by all their competitors, considering all the prices factors and non-prices factors [7]. The competitiveness has involved many elements of productivities, efficiency, and its satisfactory profitability as a means to deliver living standards improvements and to increase social welfare [8]. In addition, that definition shows the importance of the company to the environment in which the company is operating.

According to Papadakis (1994), the competitiveness of a country can be measured by the accumulation of the competitiveness of companies operating in its boundaries; in a further, the power companies is regarded as the only important criterion in a national competitiveness. Beside the company role in determining national competitiveness [9] noted down the significant other factors can be affect national competitiveness. According to them, the competitiveness consists of the national government policies and attitudes of citizens until investment in infrastructure and the ability of manufacturing. Competitive position of a nation is also placed in the creation of a social environment and economics that support the companies to take action that promotes the interests of his own company, while at the same time increase the national competitiveness [10].

Scott & Lodge (1985), defined competitiveness as a country ability to produce, to distribute and or to serve the international economic and raise the repayment rate on its source.

Competitiveness is also about producing more goods and better quality services which is successfully marketed to consumers at home and abroad [11].

Competitiveness widely regarded as an important factor in creating national wealth [12,13,14]. The World Economic Forum (WEF) also defines competitiveness as a set of institutions, policy, and the factors that determine levels of productivity of a country (WEF, 2013). The Organization for Economic and Co-operation Development (OECD) defines competitiveness as the extent to which a country can produce goods and services that would meet the international market needs in a market conditions independent and fair and at the same time maintaining and extending real people income in long-term [15].

Oriented to the time dimensions, [16] distinguished between the competitiveness of the short term and long term. [16] thought that international competitiveness of short-term as the real exchange rate the of actual ensure the internal and external balance with domestic policy appropriately; instead of the international competitiveness long-term associated with high productivity growth in accordance with external equilibrium. The catalyst factors that determines national competitiveness, according to Porter [17] is not the only companies compete in the international market. Clark (1988) argued that competitiveness eventually depends on corporates in a country where compete in domestic and international markets. Competitiveness a corporate level generally referred to the company capacity to increase the size, extending global market share, and their profits.

2.2 Competitiveness Tourist Destination

The competitiveness of tourism increasingly important, especially for the state and the region that relies heavily on tourism [18]. A tourist destination can be considered competitive if it is exciting and satisfying potential tourists. The competitiveness of tourism destinations directly influences the reception in terms of number of visitors and expenditures. The competitiveness of tourism destination is also indirectly influence the business related to tourism, such as hotels and the retail industry in tourist destinations. Because tourism is the major contribution in economic growth, tourism industry and related issues that receives a lot of attention, especially

on the issue of competitiveness. Many countries and regions recognizing the importance of tourism economic development which begins with benefit from various resources to improve imagery and tourist attraction in the eyes of travelers globally and international tourists [19].

Competitiveness tourist destination is about the ability to optimize destinations for local people and non-resident, to give a quality tourism service, innovative and attractive to consumers and to gain domestic market share and global market, while ensuring that the available resources support tourism used efficiently and sustainably [6]. According to the UNWTO, competitiveness is defined as the capability of tourism destination to use a natural resources, culture, human, man-made and the capital efficiency to develop and provide products and the quality of tourism service, innovative, ethically, and compelling to achieve sustainable growth in the overall vision, and its strategic objectives, to increase added value in tourism sector, to increase and to diversify market component and to optimize the use and benefits attraction for visitors and local communities in perspective sustainable [20].

As discovered by Cizmar & Weber [21], a tourist destination choice continues to be one of the first decision and most important which conducted by tourists; and this decision is depend on several external factors, such as the state image, accessibility, attraction, safety, etc. On the other hand, destination choice also determines competition between companies like an airline, tour operator, hotel and other tourism services [22].

Many researchers have set competitiveness tourist kind described by [23] competitiveness tourist destination is the ability to provide living standards high for local community destination. According to Hassan (2000), the tourist creates and integrate the added value who maintains resources and retaining market position relative to competitors.

The competitiveness of destination is the measurement of variables objectively as the number of visitors, the market segment, tourist expenditure, works, added value by the tourism industry, as well as variable as measured in subjective as the culture and heritage, the quality of tourism experience, and others [24]. Bahar & Kozak (2017) argued that the most competitive destinations in the long term is who

created destinations for welfare to the local community.

The competitiveness of true destination has to be sustainable, it is not only economically, and ecologically; but also socially culture and political [23]. Crouch and Ritchie [23] added an explanation of the purpose and efforts to define the factors that make those be competitive by developing conceptual model. The concept developed by Crouch and Ritchie [23]; competitive destinations have to provide a high standard of living for its inhabitants. In other words, the competitiveness of a destination directly dependent on the economic conditions, social, and environmental offered to its inhabitants. Dwyer & Kim (2003) stated that the ultimate goal of competitiveness is to maintain and to raises the real income community. In this relation, the competitiveness of destination is not a goal, but rather than to achieve people living standards under the conditions of a free and fair market [24].

2.3 The Determined Factor Competitiveness Destination

Many researchers stressed various determined factors competitiveness tourism. Bălan, Balaure, & Veghe (2009) mentioned the determined factor competitiveness tourism among others politics and competitiveness-based technology, infrastructure, resources available, laws and regulations are important in achieving competitive advantage. Other writers show the competitiveness as an epidemic disease, economic situation, media, disaster, crime and war, technology, marketing plan, culture, education, environment, demographic change and other factors [25]. Policy makers and manager tourism sector in tourism organization play an important role in identifies factors relevant is the impact on the tourism. Policy makers have to identify and explore competitive advantage and analyze competitive position for tourist destination [26].

Comparative advantages as labor costs is low and interesting exchange rates have long believed to be the only factor that contributed to the successful of tourism market. However, as indicated by Bordas (1994), competitive advantage seems to be the key to ensure the success of long-term tourist destination. To change into comparative advantages economic benefits, the state of needing offer high is a high quality product. In this case, the important aspect

required of increasing the quality of tourism products and degree of its competitiveness such as tourism assets, visitors accommodation, transportation to, from, and in domestic; infrastructure components, the reception of local population to tourists, various skill officials and employees from tourism sector, and the destination safety and security [27] and the functions of a tour operator professional and efficiently is quite important to improve competitive advantage in tourism [28].

Bordas (2014) argued that government efforts to focus on two fields: strategic planning country tour business that guide the development of public sector and the private sector and the parties involved in business and to construct, competitive environment and should be the foundations of tourism policies. Specifically, the competitive to cluster must be made and be integrated in the provincial level, tourist destinations, or the state of being higher to create/improve the welfare of local community [24,4].

Crouch and Ritchie [23] developed comprehensive framework and ultimate for management tourist destination. The framework is based on the competitive theoretical i.e. the use of effective resources and comparative advantages [29,30], consider some categories broader than supporting factors such as human resources, physical resources, knowledge resources, capital resources, infrastructure, and history resources and culture. However, those factors are not enough in determining the tourist's competitiveness; yet it takes also understanding of relations and blends many support factors.

Crouch & Ritchie [23] and Ritchie & Crouch [19] proposed conceptual model based on the theory the comparative excellences [31] and competitive advantage [17]. This model identified that competitiveness attractions rooted in two major aspects including endowment resources destinations (comparative advantages) and its capacity to expand resources (comparative advantages) [19].

Conceptual competitiveness destination model is covering the following components: for a main element, tourist attraction consists of competitive environment components (micro), global environmental (macro), core resources and resources attraction, supporting factors and resources to the elements of secondary tourist

attraction, also the destination management [32] and determine the qualifications namely, situational factors. Even the government also considered can influence competitiveness that impact to the base determiner.

Conceptual framework to evaluate the competitiveness of tourism consisting of three levels competitions like companies and products, national industry and the national economy [19] competitiveness and four elements competitiveness consist of a structure, the provincial level, stakeholders, and related work [23]. Navickas & Malakauskaitė (1999) perform a factor analysis to a price competitiveness, infrastructure development, indicators relate to ecology, technological progress, human resources, market openness [33] and social development indicators [34]. Series of indicators are needed to create inadequate framework in evaluating the tourism competitiveness of a country. Thus, according to OECD, in the state tourism competitiveness, major indicators which are relevant in policy makers are as follows [6] PDB tourism directly, tourism inbound income per visitor according to market sources, stay in all kinds of accommodation, export tourism services, the labor force productivity tourism services the parity of purchasing power and tourism price, visa requirements to enter one country, natural resources and biodiversity, culture and creative resources, satisfaction visitors and action plan of national tourism.

3. METHODOLOGY

This study uses 17 variables that are consisted of 28 indicators where the indicators parameters are used in the measurement referring to Travel & Tourism Competitiveness Index [35], Competitiveness Monitor [18] and Indicators for Measuring Competitiveness in Tourism [6]. The discussion variable, indicators and approach the measurement of the value of the competitiveness of explained in Table 1. The 17 indicators are calculated based on the data derived from the availability of secondary quantitative data from a number of sources, such as a document and website of from various agencies that deals with the research field and The Central Bureau of Statistics of the Republic of Indonesia. The indicators of competitive edge that are used normalized to a scale from 1 to 7, where a higher score of competitiveness it is then concluded as the best destination performance [35]:

Standard formula to convert every indicator scale from 1 to 7:

$$6 \times \left(\frac{\text{country score} - \text{sample minimum}}{\text{sample maximum} - \text{sample minimum}} \right) + 1$$

To the indicators that the value is higher but shows the worse result, the normalization formula uses the following:

$$-6 \times \left(\frac{\text{country score} - \text{sample minimum}}{\text{sample maximum} - \text{sample minimum}} \right) + 7$$

The analysis of the competitiveness potential based on a score of tourism competitiveness is consisted of 29 indicators. The potential competitiveness is analyzed based on each indicator score so that will bring up performance reviews from each tourist destinations in district and city that has a national park. It is consisted of the performance reviews of rank and score [35].

Data analysis is done in two major steps. The first analysis step used cluster analysis, it classified into 47 districts and cities based on tourism competitiveness potential. The main purpose of the cluster is classifying the into groups based on a relatively homogeneous variable. The similar objects and had the same characteristics as well as the different objects from the other groups [36]. The second analysis of multidimensional analysis scaling is used to examine the similarity and dissimilarity from one object that is represented by the distance through the observation points in the field of two or three. The closer distance between each points, the similarity is the same, or it can be seen that the higher level of the correlation, and so on the contrary, the further points position to the others, less same it is (dissimilarity) or the lower correlation level [37]. To be noted that

clusters analysis is similar to multidimensional scale analysis, the difference is multidimensional scale identified based on dimensions while clusters analysis identified based on dimension, while the cluster analysis identified group character that had been clustered.

3.1 Studies Finding

The data was standardized using normalization methods on a scale from 1 to 7. Hence, it is found an index score of the tourism competitiveness of each districts and the city [35]. The result of an index score is used to determine the performance of the destination competitiveness from each districts and the city. The results of the competitiveness of destination shows the average index all districts and the city between 3 and 4. The districts highest ranges are an administrative district of Kepulauan Seribu National Park, while the lowest index score is the district of Mereuke that has National Park Lorentz and a National Park Wasur.

Then, the score index is used to group 47 districts (see Table 2) and cities based on characteristic from the competitiveness factors of districts and the city. An analysis cluster used the SPSS 23.00 by using K-Means method. The process begins with the amount of cluster first [36]. It is caused a difference geography, natural resources, and culture, this study set five different groups. The final cluster centers on analysis using K-Mean, first cluster is consisted of 16 districts and cities, second cluster is consisted of 17 districts and cities, the third cluster is consisted of 6 districts and cities, the fourth clusters are consisted of 7 districts and cities, and the fifth cluster is consisting only 1 district. Table 3 shows the average score of any group segments.

Table 1. Variable and indicators of competitiveness measurement

No.	Variable	Variable code	Indicator	Apporachment
1.	Security	X1	Criminal rate	Travel & tourism competitiveness index
2.	Health & hygiene	X2	Physician density	Travel & tourism competitiveness index
			Access to improved drinking water	Travel & tourism competitiveness index
			Access to improved sanitation	Travel & tourism competitiveness index
			Malaria incident	Travel & tourism competitiveness index
3.	Tourism	X3	Overnights in all	Indicators for measuring

No.	Variable	Variable code	Indicator	Apporachment
	performance and impact accommodation		types of accommodation	competitiveness in tourism
4.	Ability of a destination to deliver quality and competitive tourism services	X4	Labour productivity in tourism services	Indicators for measuring competitiveness in tourism
5.	Human resources	X5	Primary education enrolment rate Secondary education enrolment rate Female labor force participation Education index Human development index	Travel & tourism competitiveness index Travel & tourism competitiveness index Travel & tourism competitiveness index Competitiveness monitor Competitiveness monitor
6.	Purchasing Power Parity	X6	Purchasing power parity	Indicators for measuring competitiveness in tourism
7.	Price competitiveness	X7	Hotel price index	Travel & tourism competitiveness index
8.	Information, Communication & Technology	X8	Mobile network coverage Individuals using the internet Quality of electricity supply	Travel & tourism competitiveness index Travel & tourism competitiveness index Travel & tourism competitiveness index
9.	The travel and tourism policy and enabling conditions	X9	Travel & tourism expenditure	Travel & tourism competitiveness index
10.	Air transport infrastructure	X10	Aircraft departures	Travel & tourism competitiveness index
11.	Ground infrastructure	X11	Road density Quality of road	Travel & tourism competitiveness index Travel & tourism competitiveness index
12.	Tourist service infrastructure	X12	Number of hotel rooms	Travel & tourism competitiveness index
13.	Openness indicator	X13	Tourism openness	Competitiveness monitor
14.	Environment indicator	X14	Population density	Competitiveness monitor
15.	Cultural resources	X15	Forest cover change Oral and intangible cultural heritage expressions Number of world heritage cultural sites	Travel & tourism competitiveness index Travel & tourism competitiveness index and Indicators for measuring competitiveness in tourism Travel & tourism competitiveness index
16.	Natural Resources	X16	Attractiveness of natural assets	Travel & tourism competitiveness Index
17.	Social development indicator	X17	Tourism openness	Competitiveness monitor

Table 2. Cluster group member

Cluster	District and city	National park	Avarage index score
1	Dompu	Gunung Tambora	3,28
1	Gorontalo	Bogarinani Wartabone	3,40
1	Kepulauan Mentawai	Siberut	3,53
1	Kota Kendari	Rawa Aopa Watumohai	3,48
1	Kutai Timur	Kutai	3,87
1	Lombok Timur	Gunung Rinjani	3,41
1	Malinau	Kayan Mentarang	3,20
1	Mamasa	Gandang Dewata	3,12
1	Manado	Bunaken	3,60
1	Maros	Bantimurung & ulusaraung	3,60
1	Musi Banyuasin	Sembilang	3,19
1	Poso	Lore Lindu	3,17
1	Selayar	Taka Bonerate	3,42
1	Teluk Wondana	Teluk Cendrawasih	3,13
1	Tojo Una-una	Kepulauan Togean	2,95
1	Wakatobi	Wakatobi	3,35
2	Bangka	Gunung Maras	3,89
2	Ende	Kelimutu	3,17
2	Halmahera Tengah	Aketajawe Lolobata	3,49
2	Kapuas Hulu	Danau Sentarum & Betung Kerihun	3,27
2	Ketapang	Gunung Palung	3,15
2	Kota Palangkaraya	Sebangau	3.29
2	Kotawaringin Barat	Tanjung Puting	3.25
2	Lampung Barat	Bukit Barisan Selatan	3.15
2	Lampung Timur	Way Kambas	3.29
2	Maluku Tengah	Manusela	3.61
2	Manggarai Barat	Komodo	3.42
2	Merauke	Lorentz & Wasur	2.77
2	Pandeglang	Ujung Kulon	3.76
2	Pelalawan	Tesso Nilo	3.83
2	Siak	Zamrud	3.70
2	Sintang	Bukit Baka Bukit Raya	3.14
2	Sumba Timur	Manupeu Tanah Daru & Laiwangi Wanggameti	2.99
3	Kepulauan Seribu	Kepulauan Seribu	4.36
3	Langkat	Gunung Leuser	3.98
3	Mandailing Natal	Batang Gadis	3.51
3	Sarolangun	Kerinci Seblat. Bukit Tigapuluh & Bukit Dua Belas	3.51
3	Sleman	Gunung Merapi	4.26
3	Tanjung Jabung	Berbak	3.03
4	Banyuwangi	Gunung Merbabu	3.71
4	Bogor	Meru Betiri & Alas Purwo	3.79
4	Boyolali	Gunung Halimun Salak & Gunung Gede Pangrango	3.36
4	Jepara	Karimunjawa	3.53
4	Kuningan	Gunung Ciremai	3.52
4	Pasuruan	Bromo Tengger Semeru	3.86
4	Situbondo	Baluran	3.63
5	Buleleng	Bali Barat	4.31

Table 3. Average score factor

Competitiveness factor	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Security	2.67	4.94	2.54	6.64	5.34
Health & hygiene	4.26	3.47	4.91	4.09	6.09
Overnights in all types of accommodation	2.66	3.13	2.7	2.26	1.69
Labor productivity in tourism services	1.85	2.21	1.7	3.02	3.07
Human resources	4.34	3.92	4.75	4.03	4.68
Purchasing power parity	6.19	6.07	6.00	5.8	1.00
Price competitiveness	6.38	6.11	5.93	5.64	1.00
Information. communication & technology	2.20	1.85	3.11	3.71	3.31
The travel and tourism policy	2.16	1.45	1.67	1.58	2.16
Air transport infrastructure	1.93	2.69	3.37	3.15	3.17
Ground infrastructure	2.50	3.04	2.78	2.64	2.79
Tourist service infrastructure	1.89	1.86	3.10	5.74	7.00
Openness indicator	1.44	1.39	1.16	1.14	7.00
Environment indicator	5.96	6.41	5.03	4.33	5.29
Cultural resources	1.86	2.30	4.21	2.88	6.04
Natural resources	2.54	3.51	6.43	5.01	5.07
Social development indicator	3.17	3.08	2.59	1.88	6.65

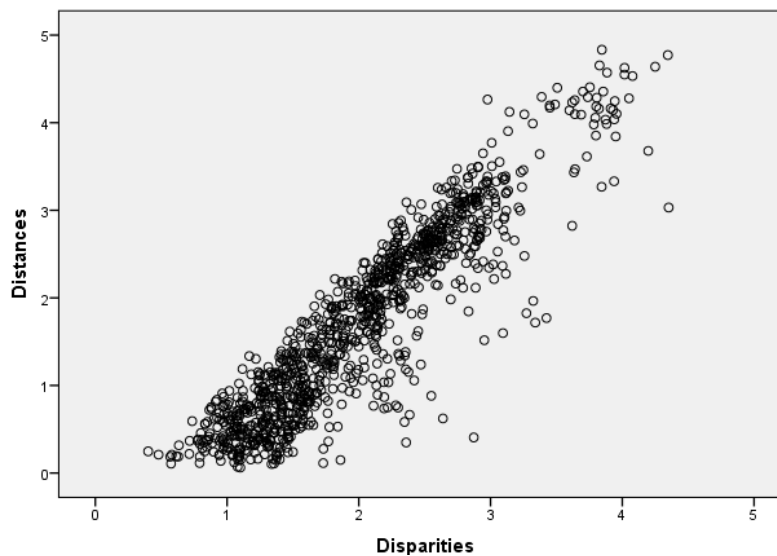


Fig. 1. Shepard diagram related distance and disparities between regions

The cluster analysis results are found; cluster 1 is a superior district in a factor of purchasing power parity and price competitive. Cluster 2 shows something different, at this cluster of the environment is the most effective management. Cluster 3 is superior in natural resources. However, in cluster 4, the average range score is slightly different, security is considered to be the superior competitiveness. On the other hand, cluster 5 where comprising only 1 district namely district of Buleleng in Bali province where the

clusters is more successful than others where other clusters have only 1 superior factor from 17 superior factors of the excellence competitiveness destination. Meanwhile, cluster 5 has 6 superior competitiveness factors namely: health & hygienic, human resources, tourist service infrastructure, openness indicator, cultural resources and social development indicator. However, in clusters 5, the performance of the competitiveness destination is on the purchasing power parity and price

competitiveness has the worst value than other clusters.

To evaluate the position of competitive districts and city based on the competitiveness destination, is used multidimensional analysis scale two dimensions. First, a measure of stress is calculated beforehand. Stress measured the value of a quality indication of the quality solution multidimensional scale. Stress measure proportional variance from the data who were given the scale of effective way that does not count by multi-dimensional scale [36]. In the present study, the size stress is 0.27 and an index conformity (R-square) 0.83. According to [36], the stress value is categorized perfectly and an index of conformity are categorized well and acceptable. For this reason, it can be said that the findings multidimensional analysis representing data used in this study. A diagram Shepard illustrated in Fig. 1 giving distribution of distance and the gap between districts and the city. As seen in linear that matches between the gap and the distance to districts and certain city.

The process multidimensional scale for further is done to describe position competitiveness of the 47 districts and city were chosen individually, formerly grouped into five clusters. Based on the results of the analysis clusters, five clusters as depicted in Fig. 2. Furthermore, the stimulus coordinates were calculated to make an outcome

comparison one by one. Table 2 shows the coordinates 47 districts and city for two dimensions. The findings of this multidimensional analysis scale shows that first dimensions are district of Buleleng and District of Gorontalo are districts and city that it is the most competitive value each other. The district has each value coordinate -3.3564 and 1.2638 . As for in the second dimension, West Manggarai district (-2.4228) and district of East Lampung (0.6796) determined as the districts and city which has the most competitive distance value. It indicates the competitive position both regions are very different from one another so the strategies to optimize the competitiveness value for both areas is also different, so are the policies to be developed in an effort to optimize of competitiveness in the region.

The next step, multidimensional analysis scale used to provide an insight about the effectiveness of a competitiveness factor that is used in determining the competitiveness of districts and the city. Before analyzing, firstly, the value of stress is calculated, the value of stress reflects 0,17 and all indexes conformity (R-square) 0.92. According to Malhotra [36] the value stress is categorized perfect and conformity index is categorized well and also acceptable 92%. In addition, Shepard diagram is depicted on Fig. 3 that shows conformity linear between the difference and the distance factors.

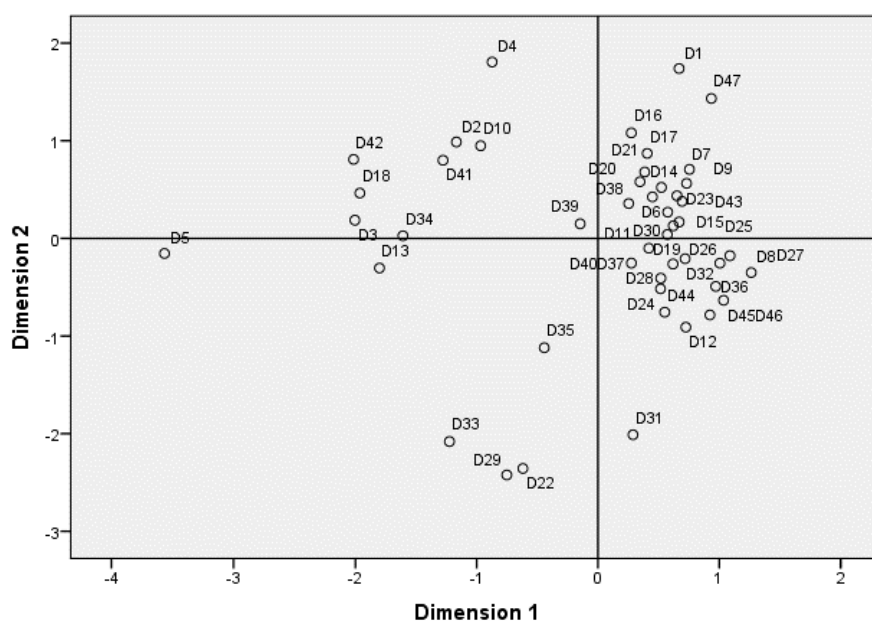


Fig. 2. A map of district perception and city based on competitiveness factor

Table 4. Coordinates districts and cities in two dimension

District and city		Dimension 1	Dimension 2
D1	Bangka	0,6691	1,7402
D2	Boyolali	-1,1676	0,9872
D3	Banyuwangi	-2,0045	0,1860
D4	Bogor	-0,8731	1,8066
D5	Buleleng	-3,5654	-0,1547
D6	Dompu	0,4494	0 4250
D7	Ende	0,7311	0,5635
D8	Gorontalo	1,2638	-0,3501
D9	Halmahera Tengah	0,7066	0,7066
D10	Jepara	-0,9674	0,9487
D11	Kapas Hulu	0,4199	-0,1010
D12	Kepulauan Mentawai	0,7247	-0,9098
D13	Kepulauan Seribu	-1,8018	-0,3034
D14	Ketapang	0,5230	0,5225
D15	Kota Kendari	0,6693	0,1678
D16	Kota Palangkaraya	0,2751	1,0806
D17	Kotawaringin Barat	0,4057	0,8708
D18	Kuningan	-1,9635	0,4639
D19	Kutai Timur	0,5717	0,0398
D20	Lampung Barat	0,3465	0,5799
D21	Lampung Timur	0,3857	0 6796
D22	Langkat	-0,6193	-2,3566
D23	Lombok Timur	0,6515	0,4364
D24	Malinau	0,5162	-0,5167
D25	Maluku Tengah	0,6212	0,1290
D26	Mamasa	1,0054	-0,2544
D27	Manado	1,0883	-0,1774
D28	Mandailing Natal	0,5180	-0,4083
D29	Manggarai Barat	-0,7519	-2,4228
D30	Maros	0,5751	0,2686
D31	Merauke	0,2890	-2,0109
D32	Musi Banyuasin	0,7189	-0,2079
D33	Pandeglang	-1,2245	-2,0809
D34	Pasuruan	-1,6084	0,2660
D35	Pelalawan	-0,4429	-1,1199
D36	Poso	0,9716	-0,4918
D37	Sarolangun	0,6187	-0,2626
D38	Selayar	0,2536	0,3571
D39	Siak	-0,1466	0,1495
D40	Sintang	0,2757	-0,2532
D41	Situbondo	-1,2782	0,7997
D42	Sleman	-2,0156	0,8087
D43	Sumba Timur	0,6934	0,3794
D44	Tanjung Jabung	0,5507	-0,7557
D45	Teluk Wondana	1,0360	-0,6346
D46	Tojo Una-una	0,2320	-0,7839
D47	Wakatobi	0,9349	1,4328

Meanwhile, Fig. 4 depicts the distribution of competitiveness factors used in determining the competitive position from district areas and cities surveyed.

Fig. 3 shows the distribution of competitiveness factors used in determining the position of

competitiveness of districts and cities. Referring to Fig. 4, it is seen the position 17 of competitiveness factors in a map of two dimensions. In dimension 1, as understood by the position of the environment indicator competitiveness factors, price competitiveness, and purchase power parity has the similar effect

and having a very optimal effect compared with other competitiveness. In other words, these factors are detected as the most significant in determining competitiveness destinations. Based on Table 4. It is proven that cluster 1 is superior in terms of competitiveness, price competitiveness, and purchase power parity and also for cluster 2 shows a superiority in terms of competitiveness environment indicator. Still in dimension 1, the position of security, health & hygienist and human resources having the same effect to the competitiveness of tourism but these factors are not factoring that are not fully affect significantly in supporting destination competitiveness. However, the information presented in Table 4 shows security competitiveness factors put a value on the most prominent on cluster 4 and competitiveness factors of health & hygienist and human resources superior in cluster 5.

The findings of multidimensional analysis scale in dimension 2 is considered as a factor of natural resources competitiveness, air transport infrastructure, social development indicator, overnight all types of accommodation, the travel tourism policy, air transport infrastructure, openness indicator has the same effect and the most significant in determining the value of the destination competitiveness compared with other factors. Based on the factor analysis of natural resource competitiveness is the most superior factor in cluster 2, factor of social development indicator has the best score in cluster 5. Still in

dimension 2, the findings are also disclosed that the determiner factors of secondary competitiveness (relatively not effective) between the regions that are analyzed as a factor of Information, Communication & Technology (ICT), cultural resources, labor productivity in tourism and tourist service infrastructure.

The findings of multi-dimensional scale analysis indicate the environment indicator, price competitiveness, and purchase power parity, natural resources, air transport infrastructure, social development indicator, overnight all types of accommodation, the travel tourism policy, air transport infrastructure, openness indicator as competitiveness factor that make a difference effectively between area that treated. In other word, these factors are detected as the most significant factors in determining destination competitiveness. If it is associated with Table 3, there are several factors of competitiveness that is appropriate and inappropriate with superior competitiveness factor based on competitiveness factors lead after each cluster. As areas in clusters 1 are a group of eminent in purchasing power parity. Cluster 2 superiors in terms of environment indicator, the group area 3 has a superior value in handling matters natural resources. While clusters 5 (Buleleng district), superior in terms of indicators of social development and indicators of openness. However, on the contrary of air transport infrastructure, overnight all types of accommodation, the travel tourism policy and air

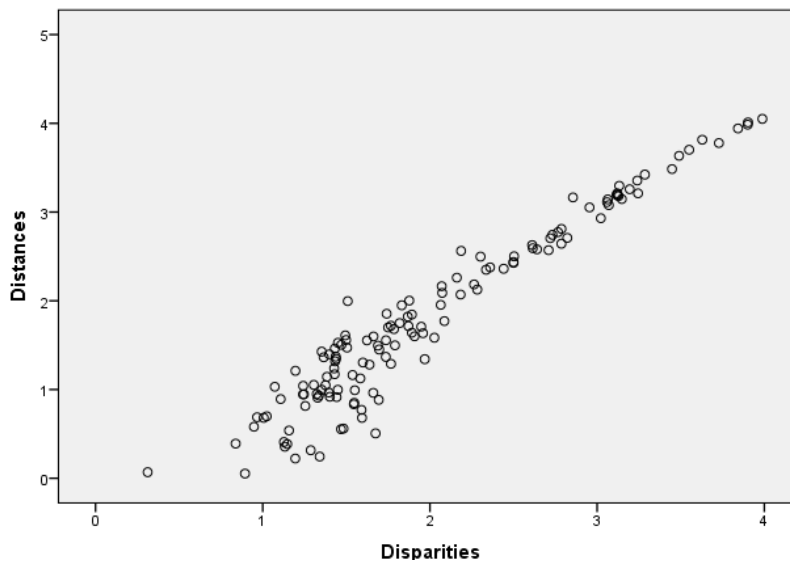


Fig. 3. A diagram Shepard related to distance and disparity competitiveness factors

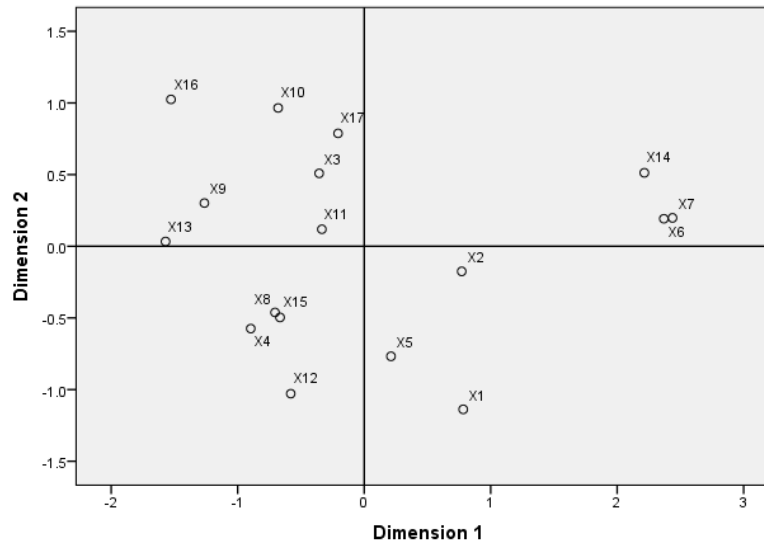


Fig. 4. Perception competitiveness factors map

X1 = security; X2 = health & hygiene; X3 = overnights in all types of accommodation; X4 = labor productivity in tourism services; X5 = human resources; X6 = purchasing power parity; X7 = price competitiveness; X8 = information, communication & technology; X9 = the travel and tourism policy; X10 = air transport infrastructure; X11 = ground infrastructure; X12 = tourist service infrastructure; X13 = openness indicator; X14 = environment indicator; X15 = cultural resources; X16 = natural resources; X17 = social development indicator

transport infrastructure which has the competitiveness factor undetectable superior in a group area treatment study was significant in determining the destination competitiveness in the treated area.

The findings are also show that the factors of secondary competitiveness determiner (relatively less effective) in the areas that are treated as a factor of competitiveness security, health & hygienist, human resources, information, communication & technology (ICT), culture resources, labour productivity in tourism, tourist service infrastructure, and cultural resources. Special note in which data are presented in Table 3, the excellence competitiveness security, health & hygienist, environment indicator, natural resources, human resources, ground infrastructure, tourist services infrastructure, openness indicator openness indicator, cultural resource and also social development indicator are also determining competitiveness, even though they are not as important as other factors.

4. DISCUSSION AND SUGGESTION

Measuring competitiveness in the districts area and city which has a national park in Indonesia, proposed grouping those areas is chosen based on 17 factors competitiveness. Therefore, competitive position in these areas was

calculated by other areas and the study aims to evaluate the effectiveness competitiveness factors in determining tourism competitiveness in one region. Based on the results, Buleleng district which its national park Bali West forms a unique group and display a superior performance in terms of the competitiveness factors of tourist service infrastructure, openness indicator, environment indicator and social development indicator. So that, it can be said Buleleng District is a tourist destination with high cost. Competitive price factors are one of the essential component factors of the tourism competitiveness as a whole, therefore it is important for policy maker to make policies on the price of Buleleng District to optimize the tourism competitiveness as a whole. The affordable small tourist costs, the more foreign tourists will come [38].

Briefly, the competitiveness factors of prices in the tourism industry take into lower charge, so that it can improve the attractiveness of the tourist destination [6]. If we look at the number of tourist statistically foreign and domestic arrival in this area, its position is the 7th in terms of tourist arrival after district of Sleman, Bogor, Gorontalo and Manado. More specifically, the results of the research implied that the territory has the same superior competitive and more success become tourist destinations in international tourism market eventhough the competitiveness

purchasing factors power parity and competitiveness in districts is quite low.

The district of Banyuwangi, Bogor, Boyolali, Jepara, Pasuruan and Situbondo who is a member of Cluster 4 only has the advantage in terms of security, however this cluster is also having competitiveness factors that is significant formed competitiveness such as the human resources factors, purchasing power parity, price competitiveness, tourist services infrastructure and natural resources. However, competitiveness on the labor productivity factor, Information, Communication & Technology (ICT), the travel and tourism policy, air transport infrastructure, openness indicator, cultural resources, social development indicator do not put an effective value yet in forming destination competitiveness in the region. One who must be carried out by the districts in this clusters is optimizing the competitiveness upon factor of the ground transport infrastructure that will provide facilities and feasibility transportation, the highways ensure the smooth and security for tourists, the air terminal, the land, the sea, and the crossing facilitate displacement passengers (tourists) from one location to another and all physical facilities and non-physical facilities associated with accessibility.

Areas which are in clusters 3 such as in Kepulauan Seribu, Langkat, Mandailing Natal, Sarolangun and Sleman have weaknesses in terms of labor productivity in tourism services, the travel and tourism policy, and enabling conditions, and social development indicator and openness indicator so it is needed to optimize the competitiveness factor through the policy. One of the state policy in order to improve performance increase the competitiveness of tourism is the factor that is one main incentive in attempts to increase tourism competitiveness. Increasing productivity is enabled the firms to compete in global tourism business more efficient and [6]. Especially this cluster was supported by competitiveness in the natural resources. This group also has the competitiveness of effective and significant in forming the competitiveness of destination is the competitiveness of purchasing power parity, price competitiveness, environment indicator.

In clusters 2, which is consisting district of Bangka, Ende, Central Halmahera, Kapuas Hulu, Ketapang, West Kotawaringin, Lampung Bangka, Ende, Central Halmahera, Kapuas Hulu,

Ketapang, Palangkaraya City, West Kotawaringin, West Lampung, East Lampung, Central Maluku, West Manggarai, Merauke, Pandeglang, Pelalawan, Siak and East Sumba have only one superior competitiveness i.e. environment indicator. Other competitiveness factors that could give the effective competitiveness of destination is purchasing power parity and price competitiveness. Meanwhile, the information competitiveness factor, communication & technology (ICT), tourist service infrastructure, and openness indicator are not so effective for management so that the value competitiveness is still low. While two of these districts has two national parks i.e. a District of Kapuas Hulu has a national park Sentarum Lake & Betung Kerihun and East Sumba has a national park Manupeu Tanah Daru & Laiwangi Wanggameti so that it could be said that this region has high comparative advantages but competitiveness factors does not have a significant destination competitiveness yet. The lowest competitiveness in this cluster is Information Communication & Technology (ICT) factors, so that one policy in this clusters that must be formulated is related to the technology and information. Along with the industrial revolution 4.0, digital is getting into the base requirements to be competitive in tourism industry. The countries that do not integrate to technology and improve the connectivity will fall behind because recently, all countries have significantly improved telecommunication infrastructures.

The Districts of Dompu, Gorontalo, Mentawai Islands, East Kutai, East Lombok, Malinau, Mamasa, Manado, Maros, Musi Banyuasin, Poso, Selayar, Teluk Wondana, Tojo Una-Una, Wakatobi and The City of Kendari just have the same competitiveness factors purchasing power parity and price competitiveness. Hence, it can be stated that a tourist destination in this area was the low-cost tourism. Meanwhile, the competitiveness factor of labor productivity in tourism services, the airport transport infrastructure, tourist infrastructure, openness indicator, and cultural resources are still needed to be optimized, especially in the development of infrastructure. Moreover, some weaknesses of the destination competitiveness in the area of air transport infrastructure are a factor that is effective in forming the competitiveness of destination. Infrastructure is needed not only to increase competitiveness by encourage more investment activity, production and trading, but also to speed up and spread the development

levels of poverty and unemployment which can be reduced (Saleh, 2014).

Based on the results, it can be concluded that excellence factors at the competitiveness of a particular region that has a national park does not guarantee that the competitiveness is effective in determining areas destinations on one, so that it is needed a policy to make it effective for all the potential tourism competitiveness. For further scheme, it must be emphasized that competitiveness factors used in the research is a very small region of literature related in it. There are many other factors that determine the competitiveness of a destination, but factors which are included in the competitiveness index counted was only involved in this study. However, it is emphasized that this study designed to illustrate relative competitiveness of districts and cities which have a national park and determine the most optimal competitiveness determiner at these regions. For that reason, it is regarded as a competitiveness based national tourism ecotourism. In the end of the findings of this study can describe the competitive policy response that play an important role in development the tourism in Indonesia in the effort to increase the economic power and create a new designed in tourism services in innovative ways.

5. CONCLUSIONS AND RECOMMENDATIONS

This study has presented an evaluation to the competitiveness of tourism in the areas which have a national park in Indonesia on providing guidelines for tourism policy makers in Indonesia. This study founds 5 geographical clusters of regencies and cities that have national parks in Indonesia based on the potential of regional tourism competitiveness. Based on this cluster, the Government of Indonesia is expected to be able to develop several alternative strategic categories in an effort to optimize tourism competitiveness in each cluster. In addition, based on knowledge of the potential of tourism competitiveness of each cluster, the Government can also determine the competitiveness development policy based on the priority scale of tourism competitiveness of each cluster. Various efforts made in optimizing tourism competitiveness in areas that have national parks are expected to be able to attract people to travel to the region, especially to national parks. So that the national park which is part of Indonesia's leading tourism sector will be able to

become an ecotourism site that is able to contribute optimal performance to tourism in Indonesia.

It is recommended for future research that the tourism competitiveness development must be explored more deeply on sustainable economically, ecology, social, culture, and politically.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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