

Formulation of tourism industry and creative economy competitiveness index of provinces in Indonesia

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Abstract: This study proposes and calculates a new index called the Tourism and Creative Economy Industry Competitiveness (TCEIC) Index or Parekraf Index which aims to determine the description of the tourism industry and creative economy of each province In Indonesia. The index is then applied to investigate the Covid-19 pandemic effects and can be used for future planning and evaluating the involved parties in tourism sectors. The data used in this research is secondary data sourced from the publication of Tourism Industry Statistics and Creative Economy 2020 which is produced by a collaboration between the Ministry of Tourism and Creative Economy and the BPS-Statistics in 2021. Factor analysis was used to compile the index, following the Organisation for Economic Co-operation and Development (OECD). The implementation of the new Parekraf index to the 2020 pandemic data found that several provinces had very low scores, i.e. Sumatera and Sulawesi. This means that the central government should synergize with local governments in those areas and should be more sensitive and responsive to the tourism industry and the creative economy, especially on indicators that have a significant impact.

Keywords: covid-19, factor analysis, tourism industry, creative economy, competitiveness index.

History Article: Submitted 15 November 2022 | Revised 16 May 2023 | Accepted 25 June 2023

How to Cite: Afifah, U. N. ., Suwandana, E., & Lestariningsih, E. (2023). Formulation of tourism industry and creative economy competitiveness index of provinces in Indonesia. *International Journal of Applied Sciences in Tourism and Events*, 7(1), 16-26. <https://doi.org/10.31940/ijaste.v7i1.16-26>

Introduction

The United Nations World Tourism Organization (UNWTO) stated that the tourism sector experienced significant development, so that it became one of the fastest growing economic sectors in the world. Tourism is allegedly one of the main sources of income for developing countries because it plays an important role in trade around the world. In addition, in 2019 tourism is ranked third in the world in terms of export earnings, representing 10 percent of Gross Domestic Products (GDP), 30 percent of service exports and one in every ten jobs in the world is in the tourism sector (UNWTO, 2020). There is a bilateral causality and positive long-run relationship between economic growth and Tourism development (Samimi et al., 2011).

Tourism sector contributes to the Sustainable Development Goals (SDGs), which are goals 8, 12, and 14 on inclusive and sustainable economic growth, sustainable consumption and production, and sustainable use of marine and marine resources. The importance of the tourism sector needs to be accompanied by tourism development in the national and local policies.

In Indonesia, the tourism sector is one of the potential sectors. An increase in revenues from international tourism visits from USD11.206 million in 2016 to USD12.520 million in 2017, with a contribution of 3.2% of the total international tourism visits to the Asia and Pacific region (Mardhani et al., 2021). Indonesia has a great potential shown by the number of tourists, which increased from 14.40 (2018) to 14.92 (2019) million tourists. Tourism sector contribution to economy from 2006 to 2018 is approximately USD 6.03–8.81 trillion, which directs contribution from USD 1.91 to 2.75 trillion in the same period.

The tourism industry and the creative economy are important pillars in Indonesia's tourism development system. At this time, the growth of the tourism sector and the creative economy shows positive growth so that the development of this sector is the focus of the government.

The Corona Virus Diseases 2019 (COVID-19) pandemic that has hit the whole world has shaken the stability of the industrial sector, including the tourism industry and the creative economy. The tourism industry is thought to be the sector most affected during the pandemic (Gössling et al., 2020). This is due to an appeal from the government to limit mobility and people are afraid to travel (Zheng et al., 2021). Several sectors that experienced a downturn during the COVID-19 pandemic are: (1) The accommodation and food and drink supply sector which experienced a decrease in output due to a decrease in the number of local and foreign tourists, because many events and activities such as meetings, parties, conferences at hotels have been canceled by the government and private agencies; (2) The Manufacturing Industry Sector, i.e. the Food and Beverage Industry, experienced a decline in output due to declining foreign demand, as seen from data on exports of food and beverage commodities; (3) The decline in rail and air transportation due to the small number of passengers as well as the cancellation of train and plane trips due to concerns about the spread of COVID-19 (Kementerian Pariwisata, 2020).

Prior to the evaluation of the tourism industry and the creative economy during pandemic for this research, we found a problem. This problem has previously been addressed by where there is a lack of standardization on the definition of the creative economy and no sample frame (Vaz et al., 2018). Currently, the tourism business sector which is categorized as the tourism industry and creative economy is engaged in 8 sub-sectors, including Tourism Transportation Services Business, Travel Services Business, MICE (Meetings, Incentives, Conferences and Exhibitions) Business, Tourism Information (Lestariningsih et al., 2019). Services Business, Tourism Consulting Services Business, Tour Guide Business, and SPA Business, as well as 16 sub-sectors The Creative Economy sub-sectors consist of architecture, interior design, visual communication design, product design, photography, craft, culinary, music, fashion, applications and game developers, publishing, advertising, television and radio, performing arts, fine arts and film, animation, and video (Kementerian Pariwisata dan Ekonomi Kreatif, 2021). The creative economy will provide great benefits for the life of the Indonesian people because through the development of the creative economy, national economic resilience can be maintained (Marlinah, 2017).

The World Economic Forum (WEF) has grouped some factors that can affect a country's global competitiveness and lowered them into indicators as a measuring tool designed later to measure a country's competitiveness index. Factors and indicators that influence the assessment of a country's tourism competitiveness index continue to be developed by WEF as an effort to improve the quality of the reports it releases. Meanwhile, the level of competitiveness within a company has the meaning as the ability of a company to design, produce and/or market product advantages over the goods offered by competitors, in terms of price quality and non-price (D'Cruz, 1992). Furthermore, the level of competitiveness of a country depends on the capacity of its industry to innovate and upgrade itself. Competitive advantage is created and sustained through a localized process (Rajagukguk, 2016).

The importance of competitiveness is due to the following three things: (1) encouraging productivity and increasing self-reliance, (2) being able to increase economic capacity, both in the context of regional economics and the quantity of economic actors so that economic growth increases, (3) believing that the market mechanism creates more efficiency (Porter, 1998).

One of the important components in the development of national tourism is looking at the competitiveness of tourism. Currently, there is a world indicator to measure tourism performance for countries in the world, namely the Travel and Tourism Competitiveness Index (TTCI) issued by the World Economic Forum (WEF). However, there is no indicator that can see the extent of the development of the tourism industry and the creative economy of the provinces in Indonesia. TTCI at the provincial level is difficult to calculate because it requires 90 indicators that explain 14 different pillars (WEF, 2022). The TTCI method is also not suitable to be used to see the competitiveness of a company.

Meanwhile, there is a Business Competitiveness Index (BCI) which is also calculated by the WEF. The Business Competitiveness Index (BCI), based on this conceptual framework, provides a data-rich approach to measuring and analyzing the fundamental competitiveness of a large number of countries in a comparative context. BCI uses a microeconomic basis to derive its value (Porter et al., 2007).

Currently, there is no indicator that can be used to see the development of the tourism industry and creative economy in Indonesia. In fact, it takes a special and serious strategy from the government to increase the competitiveness of a region (Soeswoyo et al., 2021). The TTCI calculated by WEF only calculates the comparison among countries in the world and the unit of observation is a country. Therefore, we need a measurement in the form of a new index that is able to see the comparability among provinces with the unit of observation of the tourism industry and creative economy.

This study aims to propose a new index in the tourism industry and creative economy which is able to measure the condition of the tourism business industry and creative economy by looking at the index value among provinces in Indonesia. By using indicators adopted from TTCI and BCI, this composite index of Tourism and Creative Economy Industry Competitiveness (TCEIC) or Parekraf Index in the provinces in Indonesia is built with the limited availability of data sources. The new index is then applied for the first time to the data representing COVID-19 pandemic. We hope this new index and the output of this research can be used to support the national tourism development in Indonesia.

Methodology

In formulating competitiveness, WEF issues an index, namely BCI. BCI is calculated based on two sub-indices, namely (1) company operation and strategy; and (2) national business environment. In this research, the elements used in formulating Tourism and Creative Economy Industry Competitiveness (TCIC) Index or Parekraf Index are Industry Participation in Association Members, Marketing Outside District City, Origin of Foreign Inputs, Total Income, Legal Entity, Possessing Operational Permits, and Having Business Certificate Institutions. These elements are adjusted due to the availability of data on the tourism industry and the creative economy.

The data used in this research is secondary data sourced from the publication of Tourism Industry Statistics and Creative Economy 2020 which is produced by a collaboration between the Ministry of Tourism and Creative Economy and the BPS-Statistics in 2021. The publication is the result of the Tourism Industry and Creative Economy Survey 2021 which was carried out in 34 provinces of Indonesia.

The analytical method used in this research is factor analysis. Factor analysis is a multivariate analysis that is used to reduce or summarize many variables into fewer new variables called factors (Supranto, 2004). The analysis aims to condense the information contained in a number of original variables into a simpler set of variables (factors) by minimizing the loss of information from the original variables (Hair et al., 2017).

Factor analysis is an interdependence technique that involves multivariable data and is used to analyze variables that are thought to have a relationship with each other, so that the relationship can be explained and grouped into the right latent factors (Sharma, 1996).

In factor analysis, there is a random vector X with p components having a mean and a covariance matrix. The factor model states that X is linearly dependent with several unobserved variables called the common factors (F_1, F_2, \dots, F_m), and other sources of variation with a number of p , namely $1, 2, \dots, p$ which is called error or specific factor.

The stages of formulating the new indexing in this paper adopt the method used by the Organisation for Economic Co-operation and Development (OECD) as follows:

1. Building a theoretical framework and selecting variables/indicators. The framework should clearly define the phenomenon to be measured and its sub-components, and further select individual indicators and weights that reflect their relative importance and the overall composite dimension. This process should ideally be based on what it is intended to measure and not on which indicators are available.
2. Normalizing the data
The normalization method used in this study is the Min-Max normalization. The Min-Max method converts the indicator value to a value between 0 and 1.
3. Performing factor analysis.
Stages of factor analysis include data feasibility test, variable/indicator reduction, factor formation, factor matrix estimation, factor rotation, to produce factor scores.

4. Standardizing the factor score data

Standardization of factor score data is used to reduce the range of index factor values to a value of 0 to 1. In this study, the data normalization method used is the Min-Max method and then multiplied by 100 to facilitate interpretation (Haque, 2016).

$$f'_{ij} = \frac{[f_{ij} - \text{Min}(f_{ij})]}{[\text{Max}(f_{ij}) - \text{Min}(f_{ij})]} \times 100 \quad (1)$$

where:

f'_{ij} : i^{th} factor score of j^{th} province after standardization

f_{ij} : i^{th} factor score of j^{th} province

5. Determining the weights to be used

The weights used in this study are unequal weighting. The weight is obtained from the proportion of the explained variance by each factor with the total explained variance (OECD, 2008).

$$W_i = \frac{\text{Explained varians}_i}{\text{Total explained varians}} \quad (2)$$

where $\sum W_i = 1$

6. Performing aggregation

In this study, the aggregation method used is linear aggregation.

$$\text{Parekraf Index}_j = \sum_j \sum_{i=1}^k W_i f'_{ij} \quad (3)$$

Where:

Parekraf Index_j : Tourism and Creative Economic Industry Competitiveness Index of j^{th} province

W_i : i^{th} factor weight

f'_{ij} : i^{th} factor score of j^{th} province after standardization

7. Performing composite index decomposition

The decomposition of each forming factor in the composite index can be useful to explain the conditions behind the good or bad value of the composite index in an area.

8. Observing the relationship among the composite index and other indicators

This stage is intended to assess how well the composite index is able to explain the phenomena that occurs. The results of these assessments can be used to support the analysis of uncertainty and sensitivity. Observing the relationship and the magnitude of the relationship can be done by using a scatter plot and by calculating the Pearson correlation. In this paper, we observed and compared the relationship between Parekraf Index and the (Human Development Index) HDI and GDP per capita.

Results and Discussion

Results

As previously mentioned, the selection of indicators in the Parekraf Index refers to the WEF and the data used is collected from the publication of Statistics on the Tourism Industry and Creative Economy published by the Ministry of Tourism and Creative Economy. This is important to mention in order to ensure the availability of data based on the indicators suggested by WEF. In addressing the unavailability of the data suggested by the WEF, this study uses a proxy variable that is adjusted to the 2021 Tourism Industry and Creative Economy Survey data which was

carried out in 34 provinces. With this theoretical framework, 10 variables were chosen that describe the conditions of tourism and the creative economy industry in Indonesia, which are listed in Table 1. However, after the factor analysis, there was a reduction in the variables so that X8, X9, and X10 were excluded from the model, therefore they were not continued to calculate the index value.

Table 1. Indicators that Describe the Tourism and Creative Economic Industry 2020

No.	Indicator	Symbol
1	Percentage of Tourism and Creative Economy Industry Businesses by Association Member	X1
2	Percentage of the Tourism and Creative Economy Industries that market outside the region/city	X2
3	Percentage of the Tourism and Creative Economy Industry with foreign inputs	X3
4	Total Business Revenue of the Tourism Industry and Creative Economy	X4
5	Percentage of Tourism and Creative Economy Businesses that are legal entities	X5
6	Percentage of Tourism and Creative Economy Industry Businesses that have operational permits	X6
7	Percentage of Tourism and Creative Economy Industry Businesses that have already obtained certification from the Business Certification Institute	X7
8	Percentage of Workforce in the Tourism and Creative Economy Industry by Subsector and Education Level	X8
9	Percentage of Workforce in the Tourism and Creative Economy Industry by Subsector and Ownership of Competency Certification	X9
10	Percentage of Creative Economy Enterprises by Province and Ownership of Intellectual Property Rights (HKI)	X10

The first stage is to determine the direction of the indicator and to make it uniform so that there is no misinterpretation in analyzing and reading the output. This study uses a positive direction, where the greater the indicator value, the higher the Prekraf Index in the region. Next, the Min Max data normalization is performed.

The next stage is to perform factor analysis to reduce variables. In factor analysis, to test the feasibility of a data set for factor analysis is by performing the Bartlett and Kaiser-Meyer-Olkin (KMO) test. KMO value greater than 0.5 indicates the data is feasible for factor analysis (Hair et al., 2017). In addition, the indicator reduction process considers the value of the anti-image correlation matrix (Measure of Sampling Adequacy or MSA) and the value of communality. Variables that have an MSA value of less than 0.5 must be reduced from factor analysis gradually with the smallest MSA value first. In addition, variables that have a communality value of less than 0.5 need to be eliminated according to Hair *et al.* (2010: 117). Based on the indicator reduction process, obtained 7 indicators can finally form a composite index. This process is described in Table 2.

Table 2. KMO and Bartlett's Test

Kaiser Meyer Olkin Measure of Sampling Adequacy		0.631
Bartlett's Test of Sphericity	Approx. Chi Square	148.134
	Df	21
	Sig.	0.000

The next step is to determine the weighting factor. At this stage, the factors are selected by looking at the scree plot and the eigenvalues according to the Kaiser criteria. The Kaiser criteria rule is a rule for determining the dominant factor by looking at factors that have an eigenvalue of more than one (OECD, 2008). Based on these rules, from the seven selected indicators, two dominant factors can be determined (Figure 1). The two dominant factors formed can explain 75.31 percent of the variance of the tourism industry at the provincial level.

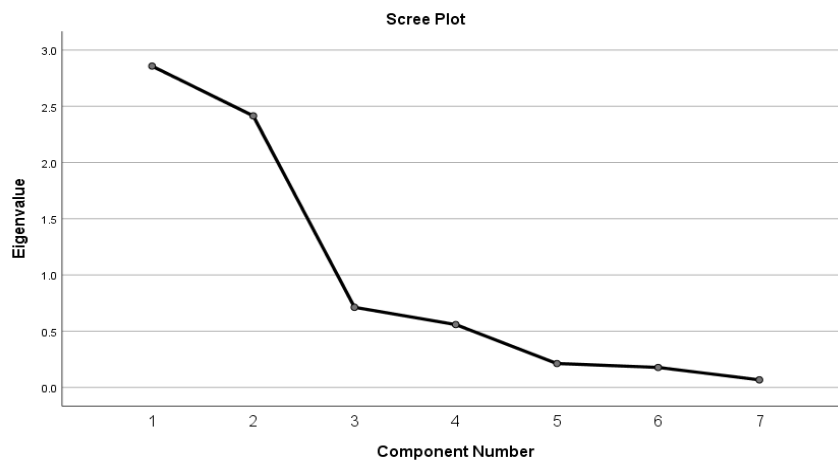


Figure 1. Scree Plot Analysis of the Indicators Forming the Parekraf Index

If there is more than one dominant factor, aggregation is carried out by weighing. Factor weighing is obtained by comparing the percentage of variance explained by a factor and the total variance that can be explained by all dominant factors. Determination of the dominant indicator in a factor is seen based on the value of the largest loading factor of an indicator. Before determining the dominant indicator in a factor, it is necessary to rotate the factor to overcome an indicator that has almost the same loading factor value in a factor. The rotation carried out is the varimax method. After that, each factor is named based on the dominant indicators that make up the factors (Hair et al., 2017). A summary of these calculations can be seen in Table 3.

Table 3. Formation of Factor Weighting after Determining Factors

No.	Factor	Indicator	Symbol	% of Variance	Weight
1	Company operation and strategy	Percentage of Tourism and Creative Economy Industry Businesses by Association Member	X1	40.81	0.54
		Percentage of the Tourism and Creative Economy Industries that market outside the region/city	X2		
		Percentage of the Tourism and Creative Economy Industry with foreign inputs	X3		

		Total Business Revenue of the Tourism Industry and Creative Economy	X4		
5	National business environment	Percentage of Tourism and Creative Economy Businesses that are legal entities	X5	34.49	0.46
		Percentage of Tourism and Creative Economy Industry Businesses that have operational permits	X6		
		Percentage of Tourism and Creative Economy Industry Businesses that have already obtained certification from the Business Certification Institute	X7		

Discussions

After getting the number and weighing factors, a factor score will be obtained for each factor. The score of the formed factor produces a value in the form of a z-score. This results in the value of the factor score having a range of values from positive to negative. A composite score with such a range will be difficult in the analysis because it cannot know the maximum and minimum values that can be achieved. Therefore, to make it easier to interpret, the factor score is transformed into an index that has a maximum value of 100 and a minimum of 0, namely by standardizing min-max multiplied by 100. This method is also used by (Haque, 2016) in the active preparation of the aging index. Furthermore, to obtain the composite index value, the results of the multiplication between the weights and the factor scores of each factor have been normalized using the following formula 3.

$$\text{Parekraf Index} = (0.54 \times \text{Factor 1}) + (0.46 \times \text{Factor 3}). \quad (3)$$

The Parekraf Index is presented for each province through Figure 2. The index size is in the range between 0 and 100. A higher index value in a region indicates that the tourism industry and creative economy in that region are more competitive than other regions. In Figure 2, areas with a high index value are indicated by a darker color, while areas with a low Parekraf Index are indicated by a lighter color. Based on the map, most areas on the island of Java have relatively dark colors, which means that during the 2020 pandemic, the conditions of the tourism industry and the creative economy on the island of Java are mostly relatively better than provinces on other islands, especially in Sumatera and Sulawesi. The condition of tourism in Java Island is relatively better because most tourists choose tourist attractions that have many supporting facilities and technologies such as the internet and information technology (Yusendra, 2015).

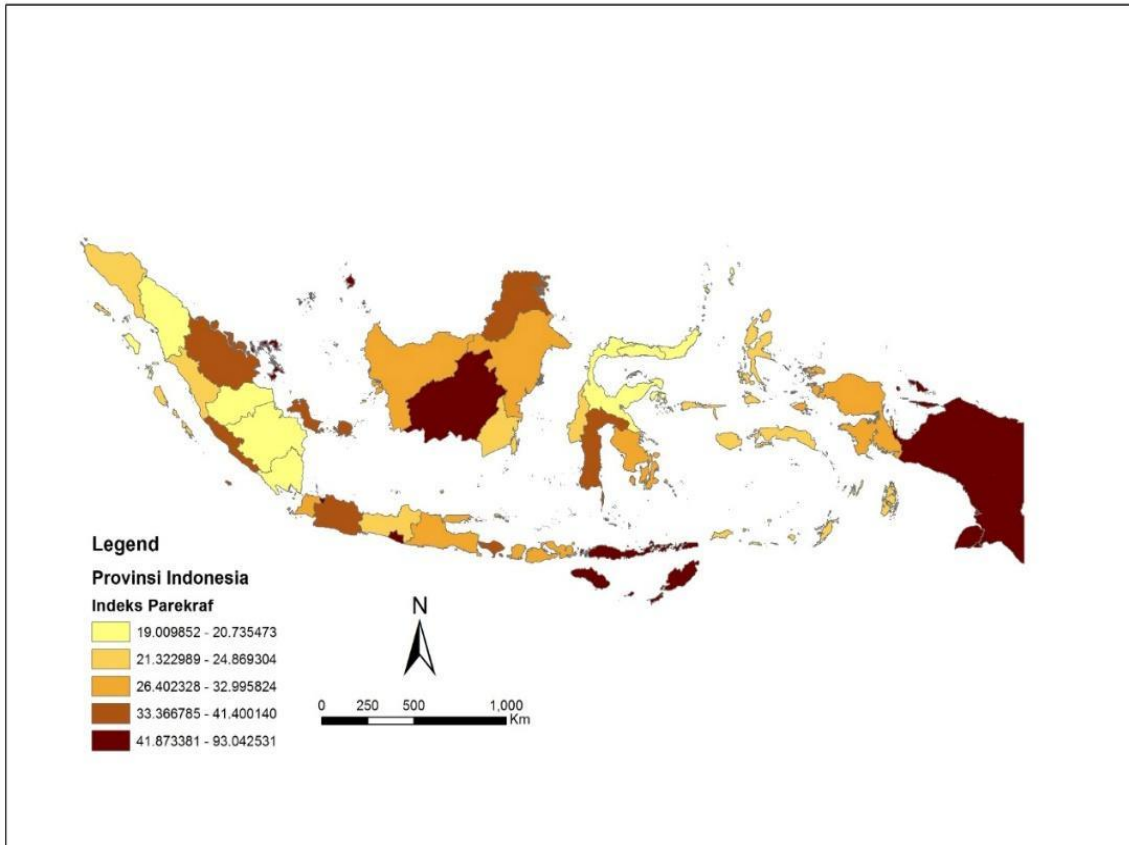


Figure 2. Distribution of the Prekraf Index in Indonesia

Table 4. Grouping of provinces in Indonesia based on the Parekraf Index

Very Low	Low	Medium	High	Very High
Sumatera Utara Jambi	Aceh Sumatera Barat	Jawa Timur Banten Nusa Tenggara Barat	Riau Bengkulu Kepulauan Bangka Belitung	Kepulauan Riau DKI Jakarta Daerah Istimewa Yogyakarta Nusa Tenggara Timur Kalimantan Tengah Papua
Sumatera Selatan Lampung	Jawa Tengah Kalimantan Selatan	Kalimantan Barat	Jawa Barat	
Sulawesi Utara Sulawesi Tengah Gorontalo	Sulawesi Barat Maluku Maluku Utara	Kalimantan Timur Sulawesi Tenggara Papua Barat	Bali Kalimantan Utara Sulawesi Selatan	

Relationship between Parekraf Index and HDI

To evaluate whether the results of Parekraf Index is scientifically acceptable, we compare its relationship with the HDI. The identification of the relationship between Parekraf Index and HDI in 2020, because we know that the HDI has been standardized for use at the national or international level. In addition, we believe that theoretically the two indices have a relationship. This is due to the importance of human capital as input and output in the components of economic development (Todaro & Smith, 2006)

The result shows that, with a 95% confidence level, there is a significant correlation between the Parekraf Index and the HDI of 0.419. This illustrates that there is a moderate and positive relationship between the two indices. The result indicates that good quality of human resources is related to the good condition of the tourism industry . and low quality of human resources is also related to low condition of tourism industry and creative economy (Figure 3).

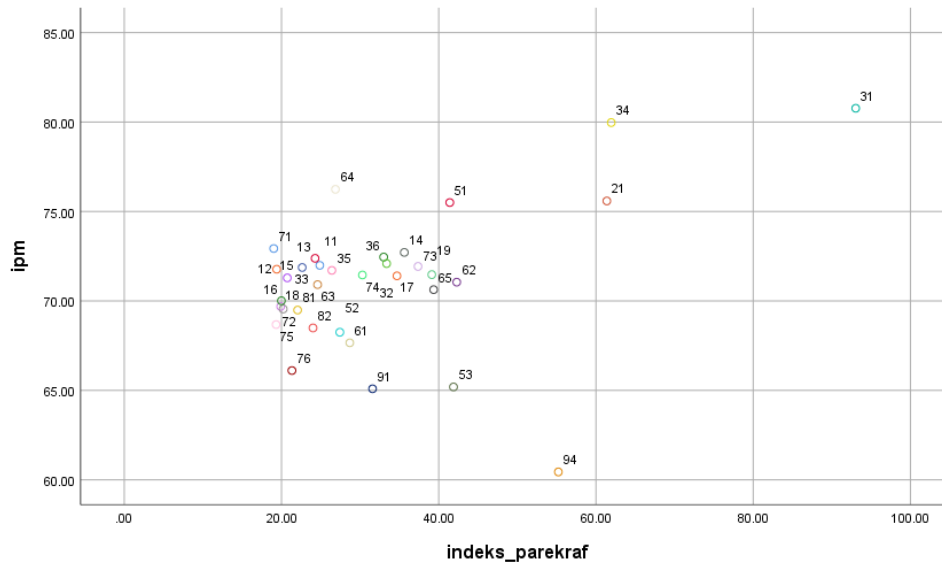


Figure 3. Scatter Plot between Parekraf Index and HDI

Relationship between Parekraf Index and GDP per Capita

Gross Regional Domestic Product (GRDP) per capita describes the economic condition of a population in a region. The better the economic condition of a population, which is marked by a large per capita GRDP value, the better the drive of the industrial sector, including the tourism industry and the creative economy. Figure 4 presents the relationship between Parekraf Index and GDP per capita with a positive relationship pattern. The results of calculations using Pearson coefficient show a correlation value of 0.617 which is significant at the 95% confidence level. This explains that the higher the GDP per capita in an area, the higher the Parekraf Index, or the development of the tourism industry in the area is getting better. The result is in line with Pedak stating that the tourism sector has a significant positive influence on GDP (Pedak & Mellander, 2018) .

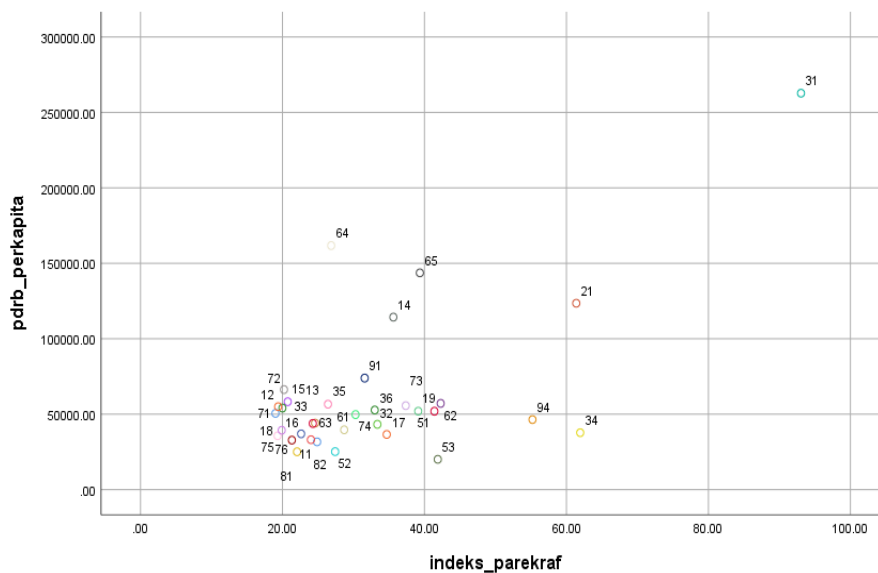


Figure 4. Scatter Plot between Parekraf index and GDRP per Capita

Conclusions

Based on the discussion, the indicator framework in this research is based on the UN WTO TTCI indicators. Based on this framework, data adjustments and indicator selection were made to obtain final 7 indicators of Tourism and Creative Economy Industry Composite (TCEIC) index or Parekraf Index. Based on the stages of forming the composite index that have been carried out, two factors are formed in building the Parekraf Index. The first factor is "Company operation and strategy", the second factor is "National business environment. The factor weights are 0.54 and 0.56.

Based on the results of grouping provinces into five groups using the quantile method, there are seven provinces that are grouped as having very low Parekraf Index, namely North Sumatera, Jambi, South Sumatera, Lampung, North Sulawesi, South Sulawesi, and Gorontalo. Then, seven provinces belong to the low Parekraf Index group, seven provinces fall into the medium or medium Parekraf Index group, and seven provinces fall into the high Parekraf Index group. The remaining six provinces are categorized as having very high Parekraf Index, namely Kepulauan Riau, DKI Jakarta, D.I Yogyakarta, NTT, Middle Kalimantan, and Papua.

The relationship or correlation between the resulting Parekraf Index and HDI shows a significant and moderate relationship. This shows that human capital has a relationship with the conditions of the tourism industry and the creative economy. In addition, the correlation between the Parekraf Index and GDP per capita shows a significant positive relationship which proves that the high level of the economy of the population in an area is related to the development of the tourism industry and the creative economy. From the relationship between the Parekraf Index and the macro indicators above, it can be concluded that the Parekraf Index is quite appropriate in describing the conditions of the tourism industry and the creative economy in Indonesia in 2020.

For the government, a policy can be taken that focuses on improvements in factor one, i.e. Company operation and strategy (X1, X2, X3, X4) because it has a greater variation in determining the value of the Creative Economy and Creative Economy Index.

References

- BPS-Statistics. (2020). *Analisi Isu Terkini 2020*. Jakarta: BPS-Statistics.
- D'Cruz, J. R. (1992). *New compacts for Canadian competitiveness*. Canada: Diane Publishing.
- Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal of sustainable tourism*, 29(1), 1-20.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis*.pdf (p. 758). Prentice Hall International. <https://doi.org/978-0138132637>.
- Hakim, M. A. A., Suryantoro, A., & Rahardjo, M. (2021). Analysis of the Influence of Tourism Growth on Economic Growth and Human Development Index in West Java Province 2012-2018. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal) Vol, 4(1)*, 160-169.
- Lestariningsih, E., Maharani, K., & Lestari, T. K. (2019). Measuring creative economy in Indonesia: Issues and challenges in data collection. *Asia-Pacific Sustain. Dev. J*, 2018(2), 99-117.
- Mardhani, M., Abd Majid, M. S., Jama, A., & Muhammad, S. (2021). Does International Tourism Promote Economic Growth? Some Evidence From Indonesia. *Geo Journal of Tourism and Geosites*, 37(3), 775-782.
- Marlinah, L. (2017). Meningkatkan ketahanan ekonomi nasional melalui pengembangan ekonomi kreatif. *Cakrawala-Jurnal Humaniora*, 17(2), 258-265.
- Ministry of Tourism and Creative Economy. (2021). *Statistik Industri Pariwisata dan Ekonomi Kreatif 2020*.
- OECD. (2008). *Handbook for Constructing Composite Indicators: Methodology and User Guide* (Vol. 63, Issue 5). <https://doi.org/10.1111/jgs.13392>.
- Pedak, M. (2018). *The Effect of Tourism on GDP*.
- Porter, M. E., Ketels, C., & Delgado, M. (2007). The microeconomic foundations of prosperity: findings from the business competitiveness index. The global competitiveness report, 2008, 51-81.

- Rajagukguk, W. (2016). Daya Saing (Competitiveness) Mendorong Pertumbuhan Ekonomi Sebuah Negara: Studi Kasus Negara Berkembang. *Maranatha Economic & Business Conference*.
- Samimi, A. J., Sadeghi, S., & Sadeghi, S. (2011). Tourism and economic growth in developing countries: P-VAR approach. *Middle-East journal of scientific research*, 10(1), 28-32.
- Sharma, S. (1996). *Applied Multivariate Techniques*. John Wiley and Sons.
- Soeswoyo, D. M., Jeneetika, M., Dewi, L., Dewantara, M. H., & Asparini, P. S. (2021). Tourism Potential and Strategy to Develop Competitive Rural Tourism in Indonesia. *International Journal of Applied Sciences in Tourism and Events*, 5(2), 131-141.
- Supranto, J. (2004). *Analisis Multivariat: Arti dan Interpretasi*. PT. Rineka Cipta.
- UNWTO. (2020). *International Tourism Highlights*.
- World Economic Forum. (2020). *Travel and Tourism Competitiveness Index Report*.
- Yusendra, A. E. (2015). Analisis faktor-faktor yang mempengaruhi keputusan pemilihan destinasi wisata bagi wisatawan domestik nusantara. *Jurnal Manajemen Magister Darmajaya*, 1(01), 46-64.
- Zheng, D., Luo, Q., & Ritchie, B. W. (2021). Afraid to travel after COVID-19? Self-protection, coping and resilience against pandemic 'travel fear'. *Tourism Management*, 83, 104261.