

# INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY: APPLIED BUSINESS AND EDUCATION RESEARCH

2022, Vol. 3, No. 1, 125 – 138

<http://dx.doi.org/10.11594/ijmaber.03.01.15>

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## Research Article

### Analysis of Regional Competitiveness in the Context of Socio-Economics and Infrastructure

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#### Article history:

Submission January 2022

Revised January 2022

Accepted January 2022

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#### ABSTRACT

The research aims to analyze the variables that influence and determine the regional competitiveness of Meranti Islands Regency using Analytical Hierarchy Process (AHP) method. The research used primary data with questionnaire and interview with 40 respondents consisting of members of the Regency DPRD, sub-district heads, heads of government sections, socio-cultural and village community empowerment. The research consists of five institutional variables; socio-political, regional labor, economy, productivity and physical infrastructure. The results of regional competitiveness among sub-districts are economic variables in the Tasik Putri Puyu sub-district (0.475), Tebing Tinggi subdistrict's physical infrastructure (0.373), labor and productivity of Pulau Merbau sub-district (0.216), Rangsang Pesisir Barat sub-district's high cliff institutions (0.260) and Rangsang Pesisir sub-district's social politics (0.333).

**Keywords:** *Analytical Hierarchy Process (AHP), Socio-Economics, Regional Competitiveness*

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#### Introduction

Regional competitiveness refers to a region's ability to provide value in order to attain high and long-term prosperity while remaining open to both domestic and international competition. Each region has different competitiveness capabilities, where each city has its own characteristics of the economy, infrastructure and natural resources, as well as its own human resources. Each city tries to improve the economy and development of its region to the

maximum in order to be able to compete with other regions. Regional competitiveness depends on specific industries which, in turn, depend on the competitiveness of individual entities. Competitiveness comprises all elements of the aggregate model, taking into account the interactions between different levels of competitiveness, the product of their integrated impact, and inter- and intra-sectoral relationships (Huggins et al., 2013).

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#### How to cite:

Kornita, S. E., Rosyetti, Hamid, M., Ettika, R., & Tampubolon, D. (2022). Analysis of Regional Competitiveness in the Context of Socio-Economics and Infrastructure. *International Journal of Multidisciplinary: Applied Business and Education Research*. 3 (1), 125 –138. doi: 10.11594/ijmaber.03.01.15

The development of the Meranti Islands Regency area is an attempt to increase competitiveness, but it faces challenges due to a lack of human resource development due to low levels of education and a low quality of life in the community, as well as a lack of infrastructure and facilities to support community welfare. Regional development must be sustainable if it is to benefit the community. Competitiveness is one of the factors that can be utilized to define the concept of a sustainable city. The higher a region's competitiveness, the better. The more affluent a community is, the higher the level of welfare (Huda & Santoso, 2014). Increasing the competitiveness of developing regions (economy) is one of the considerations. Because regional competitiveness represents a region's economy and community's capacity to raise its citizens' standard of living (Robingatun et al., 2014).

Meranti Islands Regency administratively consists of nine sub-districts namely Tebing Tinggi, Tebing Tinggi Barat, Rangsang, Rangsang Barat, Merbau, Merbau Island, Tebing Tinggi Timur, Putri Puyu, Rangsang Pesisir with 101 villages/regencies. The potential economic strength of Meranti Islands Regency is not only from natural resources (SDA), but also human resources as a factor of production. Therefore, large and quality human resources are an investment that can significantly encourage economic growth in the Meranti Islands Regency. With the support of improving the quality of education and skills, it will have an impact on increasing labor productivity and increasing competitiveness.

Poor human quality, especially labor, will have an impact on sluggish economic growth. Because the relationship between human development and economic growth are interrelated. The results of Sakernas (2015) show that the education level of the workforce in the Meranti Islands Regency is still low because most of them have high school education and below. Around 18 percent of the workforce has elementary education, in fact there are still 3 percent who have never attended school and 22% who have not graduated from elementary school (BPS, 2015).

As an archipelagic Regency in terms of output, infrastructure is important in supporting

the production and distribution process which will have an impact on increasing output. In terms of labor input, transportation and communication infrastructure is also a means to increase labor mobility and connectivity. Infrastructure development is very necessary to launch and succeed in achieving various goals and desires in various aspects of life, especially to eradicate poverty and overcome ignorance. Infrastructure development will increase the mobility of people and goods between regions and between districts/cities. This increase should not only be through quantity but also quality which includes available infrastructure facilities (Syahza, 2013).

However, the existence of this infrastructure is not optimal and even tends to be lacking in this district. The condition of the road is considered apprehensive, because 50 percent are in a damaged condition. Port facilities as access for people and goods and services are still inadequate. The absence of land access that connects Tebing Tinggi Island with Sumatra Island makes dependence on sea transportation high. This limited choice of transportation makes the movement of people, goods and services slower when compared to the availability of land routes. The lack of access to transportation also causes the distribution of goods to be longer. As a result, the price of goods traded in Meranti is higher in price when compared to other districts in Riau.

Geographical aspects, lack of facilities and inequality in infrastructure development are problems in the economic development of the Meranti Islands Regency. Another obstacle in the economic performance of Meranti Islands Regency is the high poverty rate. The Central Statistics Agency (BPS) of Riau Province released the number of poor people (population below the Poverty Line) in Riau at 515,400 people. Of this number, 56,180 poor people live in the Meranti Islands Regency (30.89 percent of the total population of Riau Province).

Community wellbeing is attained through regional development that is sustainable. The level of regional competitiveness is one of the indicators used to assess the concept of a sustainable region. The greater an area's competitiveness, the greater the welfare of its inhabitants. Numerous aspects, including regional

economic variables, infrastructure and natural resource variables, and human resource variables, are evaluated when determining a region's competitiveness. (Millah, 2014).

So far, inter-regional competitiveness has been carried out by analyzing conditions at the district/city level, and between provinces, and even countries. In fact, the competitiveness between sub-districts also needs to be known to further accelerate regional development. By knowing the competitiveness between sub-districts, development will be carried out more quickly with priority on areas that need acceleration so that development can be carried out in a more planned and equitable manner.

In this regard, in addition to quality and equitable economic growth in order to reduce poverty. Investment as a growth driver must also include advancing agricultural/rural industrialisation, amassing human capital through education and training, and developing and improving rural infrastructure (physical capital). This requires significant government intervention and private participation (Siregar, 2006).

Based on the description above, the purpose of this study is to determine the competitiveness between sub-districts in terms of institutional variables, socio-political, regional economy, labor and productivity and physical infrastructure that determine regional competitiveness in Meranti Islands Regency.

## Literature Review

A phrase that is frequently used is "competitiveness" (Huggins & Thompson, 2017; Annoni & Dijkstra, 2017). Porter (1985) explicitly defined competitiveness in the 1980s, using the notions of absolute and comparative advantage to explain the economic performance of enterprises and firms themselves. Porter (1985) created the term 'competitive advantage,' which is generated and maintained domestically and helps a country to achieve an edge in a particular industry where the environment, institutions, and competitors all work in its favor. By recognizing the relationship between business performance and competitiveness, the modern concept of competitiveness implicitly distinguishes enterprise competitiveness from

country competitiveness (Aiginger & Firgo, 2017; Ketels, 2016).

Competitiveness can be considered at six levels: "micro-micro" (products and goods), "micro" (business), "meso" (sector, industry, and branch of the economy, or region), "macro" (state), "mega" (group of states) (Gardiner et al, 2012). At the macroeconomic level, it can be defined as "a country's overall economic performance as measured in terms of its ability to provide its citizens with a sustainably growing standard of living and broad access to employment for those willing to work and the ability to export goods and services to pay for imports. and, accordingly, will be summarized by world market share," (Piecuch et al, 2018).

Observation of the various dimensions of competitiveness will reveal their relationship. Regional competitiveness depends on specific industries which, in turn, depend on the competitiveness of individual entities. Competitiveness comprises all elements of the aggregate model, taking into account the interactions between different levels of competitiveness, the product of their integrated impact, and inter- and intra-sectoral relationships (Huggins et al., 2013).

The origins of the investigation of competitiveness at the regional level can be traced back to regional studies within the scope of socio-economic analysis taking into account the spatial dimension. Regional studies cover a wide range of subjects, including economic and regional growth factors, economic stability at the regional level, regional convergence and divergence, regional and national determinants of industrial location, regional economic diversity and the impact of regional situations on the number of local firms (Chrobocińska, 2020). Competitiveness is widely understood to be equated with regional development and its stimulation. As a result, the competitiveness factor is the same as the regional development factor and vice versa.

Competitiveness at the meso level is also defined as the ability at the local or regional level to generate high and growing incomes and a growing means of support for the population. According to Kruk (2010), the competitiveness of units such as voivodeships refers to

the use of existing resources (factors) that enable current and future residents to achieve and maintain a high standard of living and ensure the sustainable growth of the region. Meso-competitiveness refers to a region's adaptability to changing environmental conditions, focusing on maintaining and/or improving its position among competing regions.

Several literature sources offer several concepts of competitiveness, which present the theme mechanisms of this phenomenon and the determinants that influence success in the competitive process. The study of regional competitiveness describes the following models: decomposition model, pyramid model, European Competitiveness Index (ECI), competitiveness cap, World Economic Forum (WEF) competitiveness factor, International Management Development Institute (IMD), and World Bank (Chrobocińska, 2021). Some models, such as Porter's Diamond, frame the assessment of competitiveness at microeconomic scale (Song et. al, 2020). Competitiveness mechanisms are also described in terms of quality leadership or cost leadership (Porter, 2006). Other concepts focus on the role of strategic resources (which create added value for the company) and critical resources (which are unique and add strategic potential), which can assist in gaining long-term competitive advantage. Some concepts highlight the role of tangible and intangible resources (such as human capital, market reputation, customer loyalty, innovation) for unit competitiveness in a long-term perspective, other concepts emphasize key competencies (Chrobocińska, 2021).

Achieving competitive advantage at the regional level is a complex and time-consuming process that escapes simple measurements. Czudec (2010) rightly points out that "there are no stable and firm measures to present an optimal level of competitiveness," which may partly explain the fact that published research on provincial competitiveness or socio-economic development diversity has used methods such as the Preference Sequencing Techniques with Similarity to Ideal Solutions (TOPSIS) (Balcerzak & Pietrzak, 2016; Cheba & Szopik-Decpczyńska, 2017; Rogalska, 2018; Balcerzak, 2018), and zero unitarization (Czudec, 2013) and cluster analysis.

Regional competitiveness can be seen through the lens of the superiority of one region over another, which is achieved through material resources and intellectual potential. Competitiveness also refers to the ability of a region to generate high and continuously growing incomes as well as developing supporting facilities for its population (Meyer-Satmer, 2008; Borozan, 2008). Czudec (2013) is right to observe that "today, regional competition is growing more and more sophisticated. Victory goes to areas that put their money in new government methods and manage to unlock their hidden potential." Achieving market advantage depends on the optimal use of resources and carries risks associated with the time difference between the design and development phases of the competitive process. However, success compensates for all previous shortcomings and suffering. Ultimately, these areas become more attractive and competitive than others, which increases the interest of potential stakeholders. Their concern may be the key to the region's socio-economic growth and quality of life improvement.

The theory of competitiveness was born in industrial society. The traces appear to start from the industrial organization approach (IO-Porterian Model) which later developed into a competitive dynamics approach (Smith and Ferrier), dynamic governance (Neo & Lee), to the regional cluster approach (Krugman and Porter) as well as other approaches known in resource-based theories (Penrose, Barney, Hamel & Prahalad), as well as market-based view.

According to Chou in Irawati (2008), the most popular definition of competitiveness at the national level can also be found in the Report of the Presidential Competitiveness Commission written for the Reagan administration in 1984 as follows: "A country's competitiveness is the degree to which it can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously expanding the real incomes of its citizens. The ability to compete at the national level is based on superior productivity performance". There is another important point in defining a country's competitive ability. This means only between countries that are given the same comparative

advantage and compete in the same industry. Meanwhile, the Center for Urban and Regional Studies (CURDS) defines regional competitiveness as an area's potential to generate a high level of income and a more equitable distribution of wealth for its residents (Abdullah, 2002).

Based on the explanation above, it can be concluded that regional competitiveness is "the ability of the regional economy to achieve a high and sustainable level of welfare growth while remaining open to domestic and international competition." (Abdullah, 2002).

The main indicators considered to determine regional competitiveness are (I) Regional economy, (II) Openness, (III) Financial system, (IV) Infrastructure and natural resources, (V) Science and technology, (VI) Resources human, (VII) Institutional, (VIII) Governance and Government Policy, and (IX) Management and Microeconomics. Each of the above indicators can be explained as follows:

#### 1. Regional Economy

The regional economy is a broad performance indicator for the macro (regional) economy, encompassing added value creation, capital accumulation, consumption levels, sectoral performance, and cost of living. Macroeconomic performance indicators affect regional competitiveness through the following principles:

- a. Value added reflects the productivity of the economy at least in the short term.
- b. Long-term competitiveness requires capital accumulation.
- c. A region's success is a reflection of its economic performance in the past.
- d. Competition fostered by market systems benefits a region's economy. The tighter the competition in a regional economy, the more competitive companies will compete internationally and domestically.

#### 2. Transparency

Transparency is a proxy for the degree to which a region's economy is interconnected with other regions, as evidenced in the region's trade with other regions on a national and international scale. This indicator determines competitiveness through the following principles:

- a. The success of a region in international trade reflects the competitiveness of the regional economy.
- b. The openness of a region in both domestic and international trade improves its economic performance.
- c. International investment enables more efficient resource allocation throughout the world.
- d. Export-driven competitiveness is related to the orientation of regional economic growth.
- e. To maintain a high quality of living, integration into the global economy is necessary.

#### 3. Financial System

Financial system indicators indicate the capacity of regional banking and non-bank financial systems to promote added-value economic activities. A region's financial system has an effect on how production factors are allocated within the regional economy. This financial system indicator affects regional competitiveness through the following principles:

- a. A good financial system is absolutely necessary in facilitating the regional economy.
- b. An efficient and internationally integrated financial sector supports regional competitiveness.

#### 4. Infrastructure and Natural Resources

In this case, infrastructure is a proxy for the extent to which resources such as physical capital, geography, and natural resources can support regional economic activity with a high level of added value. This indicator supports regional competitiveness through the following principles:

- a. Physical capital in the form of infrastructure, both in terms of availability and quality, supports regional economic activities.
- b. Natural capital in the form of geographical conditions and the natural wealth contained therein also encourages regional economic activity.
- c. Advanced information technology is an infrastructure that supports business activities in competitive areas.

## 5. Science and Technology

Science and technology assesses a region's scientific and technological skills, as well as their application to economic activities that generate value. This indicator affects regional competitiveness through the following principles:

- a. Competitive advantage can be created by applying existing technologies in an efficient and inventive manner.
- b. Investment in fundamental research and innovative activities that generate new knowledge is critical for regions as they proceed through the economic development stages.
- c. Long-term investment in the form of R&D will boost the corporate sector's competitiveness.

## 6. Human Resources

In this instance, human resource indicators are used to assess both the availability and quality of human capital. These human resources factors affect regional competitiveness based on the following principles:

- a. The workforce in large numbers and quality will increase the competitiveness of a region.
- b. Training and education is the best way to increase the quality of the workforce.
- c. The attitudes and values adopted by the workforce also determine the competitiveness of the area.
- d. The quality of life of the people of an area determines the competitiveness of the area and vice versa.

## 7. Institution

Institution is an indicator that measures how far the social, political, legal and security aspects are able to positively influence economic activity in the region. The influence of institutional factors on regional competitiveness is based on the following principles:

- a. Social and political stability through a well-functioning democratic system is a conducive climate in encouraging competitive regional economic activity.
- b. Increasing the economic competitiveness of a region will not be achieved without a good legal system and independent law enforcement.

- c. The economic activity of a region will not be able to run optimally without being supported by a conducive security situation.

## 8. Governance Indicators and Government Policy

Governance indicators and government policies are intended to be used to evaluate the quality of local government administration, notably in terms of physical infrastructure provision and enforcement of local regulations. In general, the influence of governance factors and government policies on regional competitiveness can be based on the following principles:

- a. With the aim of creating a climate of fair competition, government intervention in the economy should be minimized.
- b. Local government plays a role in creating predictable social conditions and also plays a role in minimizing risk.
- c. Economic competitiveness is influenced by the effectiveness of local government administration in providing infrastructure and enforcing rules.
- d. The effectiveness of local governments in coordinating and providing certain information to the private sector supports the competitiveness of a region.
- e. The flexibility of local governments in adjusting economic policies is a conducive factor in supporting the improvement of regional competitiveness.

## 9. Management and Microeconomics

In the indicators of management and microeconomics measurements carried out are related to the question of how far companies in the regions are managed in an innovative, profitable and responsible way. The principles relevant to regional competitiveness include:

- a. The competitive price/quality ratio of a product reflects the managerial capabilities of companies in an area.
- b. The long-term orientation of the company's management will increase the competitiveness of the area where the company is located.
- c. Efficiency in economic activity coupled with the ability to adapt to changes is a must for a competitive company.

- d. Entrepreneurship is crucial for economic activity in the early days.
- e. In an established business, company management requires expertise in integrating and differentiating business activities.

Of the nine indicators contained in the study conducted by Abdullah (2002), five indicators were chosen in conducting the analysis because these five indicators are more measurable so that they are easy to compare.

## Methodology

The procedure for taking samples or respondents is carried out by purposive sampling, namely by determining samples or respondents who are considered to represent segments of community groups that are considered to have an influence or feel a major impact related to regional economic competitiveness. In this study, samples were taken as many as 40 respondents in 9 sub-districts consisting of 98 sub-districts/villages in the Meranti Islands Regency.

The data used in this study consisted of primary data obtained from interviews and also filling out questionnaires for community groups that were sampled and secondary data obtained by researchers indirectly through intermediary media (obtained and recorded by other parties) in the form of evidence, notes or reports. Historical data that has been compiled

in published and unpublished archives (documentary data). The research object variables that are the concern of the research variables that are the subject of this research are Institutional, Social Politics, Regional Economy, Labor and Productivity, Physical Infrastructure.

The data analysis method used in analyzing the economic competitiveness of Meranti Islands Regency includes descriptive analysis and Analytical Hierarchy Process (AHP).

## Results and Discussion

### Results

Based on surveys and interviews with respondents in this study with the characteristics; the number of male respondents was 36 people (90%) while the female respondents were 4 (10%). Most respondents are in the age range of 45-54 years with 18 respondents, while the least respondents are in the age range between below or equal to 24 years with 1 respondent. 1 respondent (2.5%) who graduated from junior high school, 9 respondents (22.5%) with a Diploma education, then 16 respondents (40%) with a Bachelor's education level, while respondents who took education up to a master's level were 9 respondents (22.5%). 4 respondents (10%) work as members of the Regency Regional House of Representatives, 32 respondents (80%) work as State Civil Apparatus, while 4 respondents (10%) are community leaders and business actors.

*Table 1. Weighting determinants of regional competitiveness of the Meranti Islands Regency*

Goal: Competitiveness of Meranti Islands Regency	
Institutional (L: ,117)	Legal Certainty (L: ,195) Development Financing (L: ,138) Apparatus (L: ,138) Regional Regulation (L: .276)
Socio-Political (L: .079)	Political Stability (L: .311) Security (L: ,196) Culture (L: .493)
Regional Economy (L: .349)	Economic Potential (L: .667) Economic Structure (L: .333)
Productivity and Labor (L: ,196)	Labor Cost (L: ,196) Availability of Manpower (L: ,196) Labor Productivity (L: .493)
Infrastructure (L: .266)	Availability of Infrastructure (L: ,667) Infrastructure Quality (L: .333)

The results above indicate that the determinant of the economic competitiveness of Meranti Islands Regency is the regional economy variable that has the greatest weight, namely the regional economy of 0.349. The economic potential indicator is 0.667 and the economic structure is 0.333. Physical infrastructure 0.266, with an indicator weight of 0.667 infrastructure availability and infrastructure quality 0.333. Then followed by labor and productivity factors of 0.190, having a labor productivity indicator weight of 0.493, labor costs 0.311 and labor availability 0.196.

Institutional is 0.177 with a weight of 0.391 apparatus indicator, 0.276 local regulations, 0.195 legal certainty and the lowest indicator of development financing is 0.138. The socio-political variable that has the lowest weight is 0.079. Each indicator has a cultural weight of 0.493, political stability 0.311 and security 0.196. Furthermore, the ranking of regional competitiveness between sub-districts in the Meranti Islands Regency is carried out.

The results of the weighting and ranking of variables for each sub-district in the Meranti Islands Regency are as presented in the following table:

*Table 2. Results of weighting of regional competitiveness variables between sub-districts in Meranti Islands Regency*

Sub-district	Regional Competitiveness Variables				
	Institution	Socio-Politics	Regional Economy	Labor and Productivity	Physical Infrastructure
Tebing Tinggi	0,132	0,064	0,253	0,179	0,373
Tebing Tinggi Barat	0,119	0,061	0,299	0,182	0,339
Tebing Tinggi Timur	0,107	0,141	0,245	0,185	0,323
Rangsang	0,164	0,087	0,392	0,102	0,255
Rangsang Barat	0,252	0,052	0,430	0,113	0,154
Rangsang Pesisir	0,260	0,333	0,116	0,124	0,167
Merbau	0,130	0,086	0,339	0,213	0,231
Pulau Merbau	0,125	0,086	0,240	0,216	0,334
Tasik Putri Puyu	0,070	0,105	0,475	0,140	0,209

In Table 2 it can be seen that the highest weight on institutional variables is in the coastal stimulation sub-district with a weight of 0.260, Coastal Rangsang 0.260. On the other hand, the lowest weights on the institutional variables are Tebing Tinggi Timur 0.107 and Tasik Putri Puyu 0.070. In the socio-political variable, the highest weight is in the Rangsang Pesisir sub-district of 0.333, then Putri Puyu lake is 0.105. Then the lowest competitiveness weight is in the Tebing Tinggi sub-district of 0.064 with West Tebing Tinggi of 0.061.

Furthermore, the sub-district economic variables that have the highest weight are Tasik Putri Puyu 0.475 and Rangsang Barat 0.430. On the other hand, the lowest is in the East Tebing Tinggi and Rangsang Pesisir sub-districts. Then on the variable of labor and productivity the highest weight is in the sub-districts of Pulau Merbau 0.216 and Merbau 0.213. While the

lowest weights are in the sub-districts of Rangsang Barat 0.113 and Rangsang 0.102. Next, the highest weight physical infrastructure variables are in the Tebing Tinggi sub-districts at 0.373 and Tebing Tinggi Barat 0.339. The lowest weight in the sub-district is in the sub-district of Tasik Putri Puyu 0.209 and Rangsang Barat 0.154.

## Discussion

### *Regional Economic Competitiveness Rank*

Porter (2003) acknowledges that much of the study on competitiveness has been conducted at the national level, ignoring the internal regional disparities that occur in all countries. He stated that the primary factors affecting economic success are geographical factors, such as specialized inputs, infrastructure, labor force education, and institutions that promote business clustering.



Regional economic factors are one of the factors supporting the regional competitiveness of Meranti Islands Regency because the better the economy, the higher the economic competitiveness. This is indeed inseparable from the role of the regional economy which absolutely must be supported by adequate infrastructure. However, regional economic conditions directly affect regional economic growth and development. Where, good regional economic conditions will realize increasing development and economic growth. On the other hand, if the regional economy tends to stagnate, development and economic growth in the region will also be hampered, which will have an impact on the regional and national economy.

Borozan & Strossmayer (2008) and Aiginger & Vogel (2015) differentiate between input and outcome competitiveness (cost, productivity, economic structure, and competencies) (welfare). Aiginger and Vogel (2015), as well as Aiginger and Firgo (2017), consider a more constrained and enlightened definition of cost competitiveness. Cost competitiveness is defined narrowly as the ability to reduce cost components like as taxes, wages, and energy, labor, or raw material costs. Cost

competitiveness in an enlightened sense encompasses both productivity and cost; if costs are higher, the economy can still compete by improving productivity. The economic structure of a region is largely determined by the magnitude of the role of the economic sectors in producing goods and services, the structure formed from the added value created by each sector. Describing the dependence of a region on the ability to produce in each sector.

Ketels (2016) distinguishes the definition of competitiveness from cost-centred and productivity-centered. Cost competitiveness depends on the cost of producing units in a given location; The reduced unit production costs enable the company to compete on a worldwide scale. By contrast, productivity competitiveness is determined by a location's ability to add value through the use of factors of production, or how productive the location is. Between regions, productive variables such as labor and capital flow, and spillovers and synergies occur, resulting in a regional economic structure distinct from the national economic structure. In other words, because of their structural disparities, regions cannot be classed as subsets of the national economy.

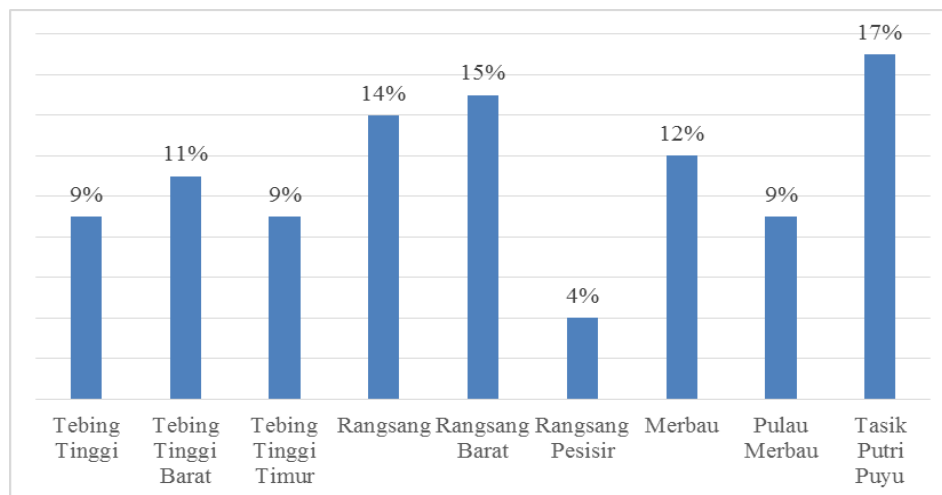


Figure 1. Regional competitiveness ranking of regional economic variables

According to Ibarra-Armenta & Trejo-Nieto (2014), competitive regions have both robust and sustainable economic growth rates and high standards of living. Additionally, as a result of economic openness and globalization, competitive locations may attract productive

investment, enabling them to attain high levels of productivity. Contemporary ideas on regional competitiveness emphasize the importance of increasing productivity while maintaining a high standard of living for the population. For example, increasing

productivity through compensation reductions will have no influence on individuals' quality of life. While this may result in a positive trade balance, it is not long-term sustainable (Huggins & Thompson, 2017). Peneder (2017) defines competitiveness as "the economic system's capacity to evolve" in accordance with societal goals, sustainably, and in a manner that enables long-term increases in living standards. Malecki (2017) shows that the concept of regional competitiveness has value when it focuses on the basis and dynamics of long-term prosperity and not on a restrictive view that only focuses on market share or resource competition.

#### *Infrastructure Competitiveness Rank*

Physical infrastructure as the main support in driving the economy both regionally

and nationally in this weighting is the most important priority in increasing the economic competitiveness of the Meranti Islands Regency. The availability of quality infrastructure will certainly require the awareness of business actors to maintain and preserve it so that it can be used sustainably.

One of the strategic infrastructures that need to be improved in quality to support a highly competitive economy is the quality of road conditions. Good road quality strongly supports economic mobility that connects sub-districts in the Meranti Islands Regency as well as with other districts/cities in Riau Province. The order of the level of competitiveness of each sub-district is based on the infrastructure variable as shown in Figure 2.

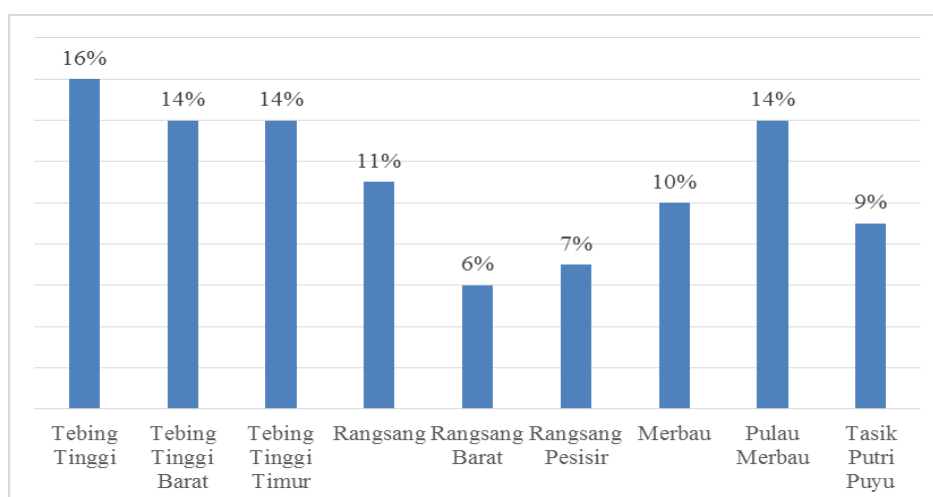


Figure 2. Infrastructure variable regional competitiveness ranking

#### *Productivity and Labor Competitiveness Rank*

The World Economic Forum (WEF) defines competitiveness as "the collection of institutions, policies, and circumstances that influence a country's level of productivity" and acknowledges that its objective is to increase human well-being (Schwab, 2017). For the IMD World Competitiveness Center, state competitiveness is "the ability of a nation to create and maintain an environment that supports the creation of more value for its companies and more prosperity for its people" (IMD, 2017).

The employment situation in the Meranti Islands Regency from 2015 to 2017 generally increased. The number of working population

in 2017 was 81,256 people (95.46 percent) of the total workforce of 85,121 people. There has been an increase from 2015, where the working population was 80,617 people (90.63 percent) of the total workforce of 88,950 people.

The labor force is divided into the working population and the unemployed. The number of unemployed in the Meranti Islands Regency decreased to 4.54 percent in 2017 after previously 9.37 percent (2015) and 11.76 percent (2014). .01 percent have the main activity of going to school, 64.95 percent taking care of the household and 9.05 percent doing other things.

Based on the analysis and perceptions of respondents, labor productivity is expected to be even better so that it can increase the economic competitiveness of Meranti Islands Regency. Regarding the availability of labor, the

number of the workforce in the Meranti Islands Regency exceeds the needs of the labor market, causing an open unemployment rate in the Meranti Islands Regency in 2018 of around 3,864 looking for work.

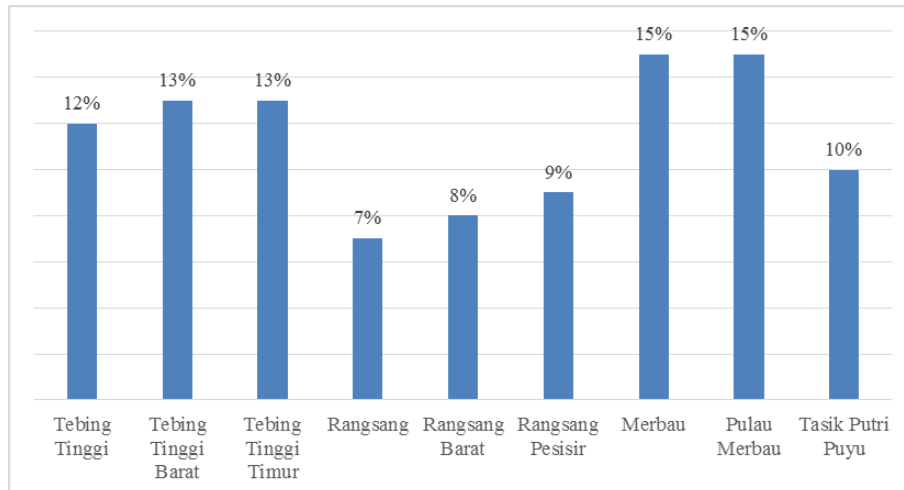


Figure 3. Regional Competitiveness Ranking of Productivity and Labor variables

#### *Institutional Competitiveness Rank*

This institutional variable is under the control of the local government. Where the local government determines the direction of policy in order to create a good condition so that it can attract investors to invest. Because the success of an institution is judged when it can provide good service, can establish a regulation correctly and be able to be firm on the violations committed.

Lengyel and Rechnitzer (2013) additionally examine competitiveness indicators such as

technological progress, human capital, productive capital, and FDI, as well as trading sectors and clusters, social capital, and institutions. According to Aranguren et al. (2017), institutional components of being a competitiveness indicator include the existence of a conversation space in which influential policymakers (including researchers) regularly convene, as well as the development of trust and cognitive proximity within these spaces.

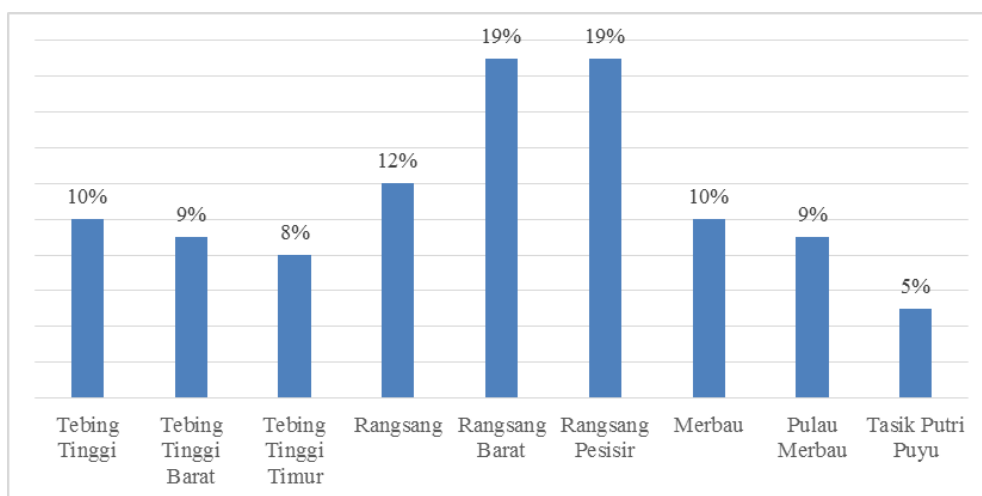


Figure 4. Institutional variable regional competitiveness ranking

### Socio-political Competitiveness Ranking

Socio-political factors are important in determining the economic competitiveness of a region. An economic activity will not be able to

run smoothly without being supported by security, stable political conditions, participation, openness, and community behavior.

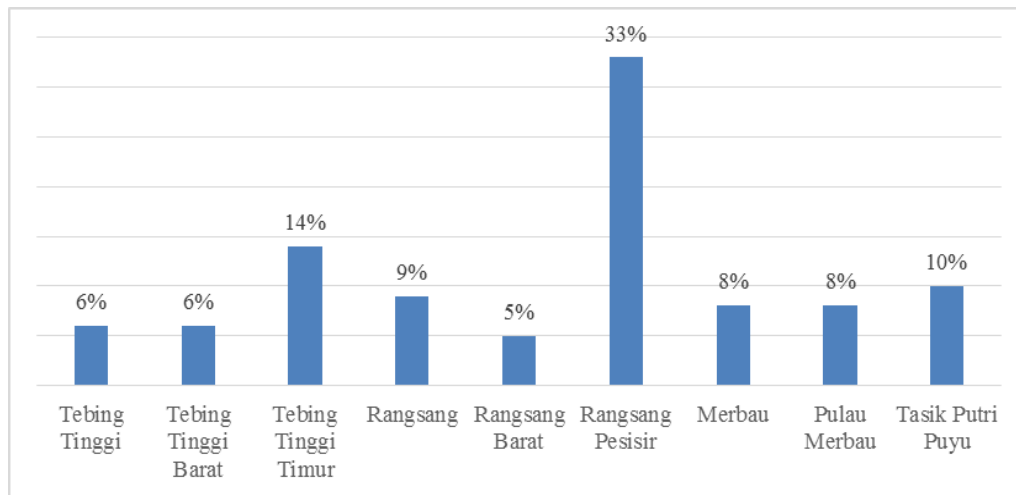


Figure 5. Socio-political variable regional competitiveness ranking

### Conclusions and Recommendations

Based on the results of the discussion and analysis carried out, in Meranti Islands Regency, from the results of the competitiveness rankings analyzed, urban areas close to the district capital have higher competitiveness than areas far from the center of government. Because the area is a coast and islands. The following conclusions can be drawn:

1. The regional competitiveness variable from the highest to the lowest in the Meranti Islands Regency is the regional economy with a weight of 0.349 with an indicator weight of 0.667 economic potential and an economic structure of 0.333. Then the infrastructure variable with a weight of 0.266 with a weight of 0.667 each indicator and the quality of infrastructure 0.333. Furthermore, the productivity and labor variables with a weight of 0.190 with the highest indicator weighting on labor productivity 0.493, labor costs 0.311 and labor availability 0.190. The institutional variable has a weight of 0.117 with a weight of 0.391 for apparatus indicators, 0.276 regional regulations, legal certainty, 0.195 and 0.138 development financing. The variable that has the lowest competitiveness is socio-political with a weight of 0.079 with a cultural

indicator weight of 0.439, political stability 0.311 and security 0.196.

2. Regional competitiveness between sub-districts which has the highest percentage of regional economic variables is sub-district 0.475. Furthermore, the physical infrastructure variable in the Tebing Tinggi sub-district is 0.373. Then for the variable of labor and productivity in Merbau Island sub-district 0.216. Next on the institutional variable Stimulus Pesisir of 0.260. And the socio-political variable is in the sub-district of Rangsang Pesisir 0.333.

Several things need to be done in the future to increase the competitiveness of Meranti Islands Regency, among others

1. The need to improve the quality of infrastructure in order to create new investor interest in the creation of an increase in regional competitiveness in every sub-district in the Meranti Islands Regency.
2. Every government in the sub-district to improve the existing economic structure both primary and secondary so that the regional economy is getting better.
3. Improvements are made to the quality of public services, such as bureaucratic services which are greatly complicated so that it can be facilitated and abuse of authority

that should not occur and so that budget transparency is carried out.

## References

- Abdullah, P., Alisjahbana, A., Effendi, S., Boediono. (2002). *Daya Saing Daerah, Konsep dan Pengukurannya di Indonesia*BPFE, Yogyakarta.
- Aiginger, K., & Firgo, M. (2017). Regional Competitiveness: connecting and old concept with new goals. *Handbook of regions and competitiveness*.
- Aiginger, K., & Vogel, J. (2015). Competitiveness: from a misleading concept to a strategy supporting Beyond GDP goals. *Competitiveness Review*, 25(5), 497–523.
- Annoni, P., & Dijkstra, L. (2017) Measuring and monitoring regional competitiveness in the European Union. *Handbook of regions and competitiveness*.
- Aranguren, M.J., Magro, E., Wilson, J.R. (2017). Regional competitiveness policy evaluation as a transformative process: From theory to practice. *Environment and Planning C: Politics and Space*, 35 (4), 703-720: <https://doi.org/10.1177/0263774X16662469>
- Balcerzak, A.P. (2018). Quality of institutions in the European Union countries. Application of TOPSIS based on entropy measure for objective weighting. *Acta Politech. Hung.*, 17, 101–122.
- Balcerzak, A.P.; Pietrzak, M.B. (2016). Quality of Institutions for Knowledgebased Economy within New Institutional Economics Framework. Multiple Criteria Decision Analysis for European Countries in the Years 2000–2013. *Econ. Sociol.*, 9, 66–81
- Borozan, D., & Strossmayer, S. (2008). Regional competitiveness: some conceptual issues and policy implications. *Interdisciplinary Management Research*, 4(1), 50-63.
- Cheba, K.; Szopik-Decpzyńska, K. (2017). Multidimensional comparative analysis of the competitive capacity of the European Union countries and geographical regions. *Oeconomia Copernic.*, 8.
- Chrobocińska, K. (2020). Selected factors in the location of service activities conducted by small enterprises. *Zesz. Nauk. Uniw. Przyr. Humanist. Siedlcach. Seria Adm. Zarz.*, 27–36.
- Chrobocińska, K. (2021). Comparative Analysis of Regional Competitiveness in Poland from 2010–2019 in the Context of the Concept of Sustainable Development. *Sustainability*, 13, 3202. <https://doi.org/10.3390/su1306320>
- Czudec, W. (2010). Regional Competitiveness and Strategies. *Econ. Manag.*, 33–42.
- Czudec, W. (2013). Competitiveness of the Podkarpackie Voivodeship against Other Regions of Eastern Poland. *Mod. Manag. Rev.* 39–50.
- Gardiner, B.; Martin, R.; Tyler, P. (2012). Competitiveness, productivity and economic growth across the European regions. *Reg. Compet.* 55–78
- Huda, M. & Santoso, E. B. (2014). Pengembangan Daya Saing Daerah Kabupaten/Kota di Propinsi Jawa Timur berdasarkan Potensi Daerahnya. *Jurnal Teknik POMITS*, 3(2). C81–C86. Doi:10.12962/j23373539.v3i2.7207
- Huggins, R., & Thompson, P. (2017) Networks and Regional Economic Growth: A Spatial Analysis of Knowledge Ties. *Environment and Planning A* 49(6), 1247–1265.
- Huggins, R.; Izushi, H.; Thompson, P. (2013). Regional competitiveness: Theories and methodologies for empirical analysis. *Bus. Econ. Res. j*, 6, 155–172
- Huggins, R.; Izushi, H.; Thompson, P. (2013). Regional competitiveness: Theories and methodologies for empirical analysis. *Bus. Econ. Res. j*, 6, 155–172
- Ibarra-Armenta, C., & Trejo-Nieto, A. (2014). Competencia territorial: un marco analítico para su estudio. *Economía, Sociedad y Territorio*, XIV (44), 49–78. Retrieved from <http://www.redalyc.org/articulo.oa?id=11129102002>
- Institute for Management Development. (2017). IMD World Digital Competitiveness Ranking 2017. Retrieved from <https://www.imd.org/global-sets/wcc/docs/release-2017/world-digital-competitiveness-yearbook-2017.pdf>
- Irawati, I., Urufi, Z., Resoboen, R.E.I.R., Aryanto, A.S. (2008). Pengukuran Tingkat Daya Saing Daerah Berdasarkan Variabel Perekonomian Daerah, Variabel Infrastruktur dan Sumber Daya Alam, Serta Variabel Sumber Daya Manusia di Wilayah Provinsi Sulawesi Tenggara. Prosiding *INSAHP5*, Semarang.
- Ketels, C. (2016). *Review of Competitiveness Frameworks*. National Competitiveness Council. Dublin, Ireland. Retrieved from <http://www.competitiveness.ie/Publications/2016/Review-of-Competitiveness-Frameworks.pdf>
- Kruk, H. (2010) *Regional Competitiveness in Environmental Matters*; Wydawnictwo Dom Organizatora: Toruń, Poland
- Lengyel, I. & Rehnitzner, J. (2013) The competitiveness of regions in the Central European transition countries. *Macrotheme Rev* 2:106–121
- Lubis, M. and Arif, S. (2015). Analisis Daya Saing Ekonomi Kota Binjai Provinsi Sumatera Utara. *Jurnal Ekonomi dan Keuangan*, 3 (1), 16-28.

- Malecki, E. (2017). Economic Competitiveness and regional development dynamics. *Handbook of Regions and Competitiveness*.
- Meyer-Stamer, J. (2008). Systemic Competitiveness and Local Economic Development. In *Large Scale Systemic Change: Theories, Modelling and Practices*; Bodhanya, S., Ed.; Mesopartner: Duisberg, Germany.
- Millah, A.N. (2013). Analisis Daya Saing Daerah di Jawa Tengah: Studi Kasus: Kota Semarang, Kota Salatiga, Kota Surakarta, Kota Magelang, Kota Pekalongan, dan Kota Tegal Tahun 2009-2011. *Diponegoro Journal of Economics*, 3(1). 1-8
- Nasution, E.K. (2015). Analisis Daya Saing Kota Tanjung Balai. *Jurnal Ekonomi dan Keuangan*, 3 (2). 72-88.
- Peneder, M. (2017). Competitiveness and industrial policy: from rationalities of failure towards the ability to evolve. *Cambridge Journal of Economics*, 41, 829-858.
- Piecuch, J.; Szarek, J. (2018). Competitiveness of the Economy of the Małopolskie Voivodeship and the Development of the Startup Ecosystem. *Probl. Glob. Agric.*, 18, 183–193.
- Porter, M. (1985). *Competitive Advantage. Creating and Sustaining Superior Performance*. Free Press, New York.
- Porter, M. (2003). The Economic Performance of Regions. *Regional Studies*, 37, 549-578.
- Robingatun. R., Hayati, R., & Indrayati, A. (2014). Daya Saing Wilayah dan Sektor Unggulan Sebagai Penentu Pusat Pertumbuhan Baru Orde II Di Kabupaten Purworejo. *Geo-Image*, 3 (1). Doi: 10.15294/geoimage.v3i1.4310
- Rogalska, E. (2018) Multiple-criteria analysis of regional entrepreneurship conditions in Poland. *Equilib. Q. J. Econ. Econ. Policy*, 13, 707–723
- Saaty, T.L. (1990). *Decision Making For Leader: The Analytic Hierarchy Process For Decision in A Complex World*, University of Pittsburgh, Pittsburgh.
- Schwab, K. (2017). *The Global Competitiveness Report 2017*. World Economic Forum.
- Siregar, H. and Wahyuniarti, D. (2006). *Dampak Pertumbuhan Ekonomi Terhadap Penurunan Jumlah Penduduk Miskin*. Institut Pertanian Bogor. Bogor.
- Song, K.H.; Choi, S.; Han, I.H.H. (2020). Competitiveness Evaluation Methodology for Aviation Industry Sustainability Using Network DEA. *Sustainability*, 12, 10323
- Syahza, A. and Suarman (2013). Strategi Pengembangan Daerah Tertinggal Dalam Upaya Percepatan Pembangunan Ekonomi Pedesaan. *Jurnal Ekonomi Pembangunan*, 14 (1), 126-139