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REGIONAL DEVELOPMENT ANALYSIS FOR THE DIRECTION OF COASTAL DEVELOPMENT OF BANGGAI REGENCY

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**PROGRAM STUDI PERENCANAAN DAN PENGEMBANGAN WILAYAH
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**REGIONAL DEVELOPMENT ANALYSIS FOR THE DIRECTION OF
COASTAL DEVELOPMENT OF BANGGAI REGENCY**

Thesis

As a requirement for achieving Master Degree

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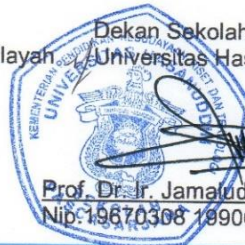
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ABSTRAK

Antonius Victor. Analisis Pembangunan Wilayah untuk Arah Pengembangan Pesisir Kabupaten Banggai (Dibimbing oleh Ahmad Munir dan Edward Morgan)

Penelitian ini bertujuan untuk memberikan rekomendasi arah pengembangan wilayah pesisir Kabupaten Banggai dengan menganalisis keunggulan wilayah dan perspektif pemangku kepentingan terhadap pembangunan pesisir Kabupaten Banggai.

Metode yang digunakan dalam penelitian ini adalah Analisis Location Quotient (LQ); Shift Share Analysis (SSA), Analisis Skalogram dan Analytical Hierarchy Processes (AHP) untuk menganalisis preferensi pemangku kepentingan terkait pengembangan Kawasan pesisir Kabupaten Banggai.

Hasil studi menemukan bahwa sektor ekonomi basis di Kabupaten Banggai adalah sektor Pertambangan dan Penggalian, dan sektor Industri Pengolahan. Hasil SSA mengungkapkan tiga sektor dengan keunggulan kompetitif, yaitu sektor Pertambangan dan Penggalian, Listrik dan Gas, dan Pengadaan Air, Pengelolaan Sampah, Limbah, dan Daur Ulang. Hasil analisa tingkat perkembangan wilayah menemukan bahwa terdapat empat Kecamatan di Kabupaten Banggai yang menjadi pusat pertumbuhan, yaitu Kecamatan Luwuk, Lamala, Balantak, dan Balantak Selatan. Prioritas utama dalam pengembangan kawasan pesisir berdasarkan preferensi pemangku kepentingan adalah pengembangan sumber daya manusia dengan kawasan yang menjadi prioritas pengembangan adalah Wilayah Pengembangan I (WP I) melalui pengembangan kegiatan wisata bahari. Rekomendasi dari penelitian ini adalah mengembangkan kebijakan pengelolaan lintas sektor sekaligus memitigasi masalah sosial dan lingkungan serta mengembangkan Sumber Daya Manusia dan sektor Pariwisata Bahari.

Keywords: Pengembangan Wilayah, Location Quotient, Shift Share, Skalogram

ABSTRACT

Antonius Victor. Regional Development Analysis for the Direction of Coastal Development of Banggai Regency (Supervised by Ahmad Munir and Edward Morgan)

This study aims to provide recommendation for direction of coastal development of Banggai Regency by analyses the regional advantages and the stakeholder perspective on coastal development of Banggai Regency.

The methods used in this study are Location Quotient (LQ) Analysis; Shift Share Analysis (SSA), to analyse the leading regional economic sector; a Scalogram Analysis, to identify the growth centres; and an Analytical Hierarchy Processes (AHP) to analyse the stakeholder preferences regarding the development of coastal region of Banggai Regency.

The study results found that the base economic sectors in Banggai Regency are the Mining and Quarrying sector, and the Manufacturing sector. The SSA results revealed three sectors with competitive advantages, namely Mining and Quarrying, Electricity and Gases, and Water Supply, Sewerage, Waste Management and Remediation Activities. The results of the level of regional development, found that there are four Districts in Banggai Regency that are the centres of growth, namely the District of Luwuk, Lamala, Balantak, and South Balantak. The main priority in the development of the coastal area based on the preferences of stakeholders is the development of human resources with the area that is the priority for development is the Development Area I (WP I) through the development of marine tourism activities. The recommendations from this study are to develop policies for management across sectors while mitigating social and environmental problems and develop Human Resources and the Marine Tourism sector.

Keywords: Regional development, location quotient, shift share, scalogr

CHAPTER I

INTRODUCTION

1.1 Background

Coastal areas are strategic areas due to unique characteristics such as, acting as a transitional area for marine and terrestrial ecosystems and functioning as a meeting point between land and sea-based economic activities. Additionally, coastal areas are very dynamic, have high productivity, and provide diverse natural resources and environmental services (Yuniastuti, 2016). Therefore, the coastal area with all its potential must be managed adequately to optimize its benefits for the welfare of the community.

Banggai Regency is one of the regencies in the province of Central Sulawesi. This area is dominated by coastal regions and has a land area of 9,672.70 km²; a sea area of 20,309.68 km²; and a coastline of 613.25 km. By the end of 2018, the administrative area of the Banggai Regency had grown into 23 districts, 46 sub-districts, and 291 villages. Of these, 22 sub-districts have coastal areas with a total of 168 coastal villages, where there are 3,376 capture fisheries households (BPS, 2019). These figures highlight the importance of the coastal areas for the social and economic development of Banggai Regency.

However, Banggai Regency faces several development issues related to coastal regions and fisheries. In the Banggai Regency Regional Medium-

Term Development Plan 2016 to 2021, several issues that is faced by the local government issues such as; relatively low welfare of fishers, a lack of infrastructure, inadequate sea transportation services, and non-optimal fishery-processed products. Therefore, the local government needs to assess these problems using an appropriate approach.

Development is an organized and coordinated effort to provide more choices for community members to meet their basic needs and improve welfare(Mahi, 2016; Rustiadi, Saefulhakim, & R.Panuju, 2018). The notion of development in its history and strategy has undergone evolutionary changes, starting from a strategy that emphasizes economic growth, then growth and employment opportunities, basic needs approach, growth and equity, and sustainable development (Mahi, 2016). The concept of sustainable development aims to achieve social and economic objectives to improve human welfare in the present while protecting long-term environmental values in order to protect the ability of future generations to meet their needs (Bardal, Reinart, Lundberg, & Bjorkan, 2021; Brundtland, World Commission on, & Development, 1987; Emas, 2015; Kjosev & Eftimov, 2015)This means that every effort made by the government concerning regional development must be able to integrating the economic, social and environmental aspect to ensure equitable and sustainable regional development.

However, government budgets for development are limited; demanding governments to manage budgets effectively. One way to maximize the benefits of government expenditure is by focusing the development budgets on the growth centre area and the competitive advantage of the region that can accelerate regional development (Dobrescu & Mihaela, 2014; Rustiadi et al., 2018). To do this, local governments need appropriate development planning that determines the current development level and the potential of each region. Mawardi (2007) argued that finite natural resources, human resources, and other development resources, require management via the existence of development priorities, which consider regional advantages. Without assessing the advantages and disadvantages of each area, regional development cannot be achieved effectively.

Furthermore, from the point of view of agglomeration economics, the development characteristics of an area can be seen from two dimensions, namely the development of the industrial sector (specialization) and the geographical development (concentration) (Fracasso & Vittucci Marzetti, 2018). The sectoral specialization focuses on the comparative and competitive advantages of a region. On the other hand, the geographical concentration looks at spatial use and interactions of various activities in the space of an area. According to Latuconsina (2017), the government can determine development

policy based on two approaches, namely the sectoral approach and regional approach.

The sectoral approach examines the potential of each region by comparing the industrial sector development of a region with other regions. It will show the industrial sector specialization in each area. Competitiveness and differences of regional industrial specialization in each region have become a focus in development planning and one of the most analysed economic phenomena among the researchers in the world (Doloreux, Shearmur, & Figueiredo, 2016; Goschin, 2014; Jovan & Bradić-Martinović, 2014; Ye, Zhu, Li, Yang, & Chen, 2018).

On the other hand, the geographical approach can discover the centres of economic growth based on the availability of infrastructure. Sukwika (2018) argued that adequate regional infrastructure would stimulate an increase in people's income along with increased economic activity due to increased mobility of production factors and trade activities. Likewise, according to Atmaja and Mahalli (2015), infrastructure has an essential significance in increasing the value of consumption, increasing labour productivity, and access to employment. Physical infrastructure has a vital role in supporting various economic and social activities in increasing economic growth, equity, and people's welfare (Wontiana & Sunarto, 2018). Therefore, governments must pay more attention to the availability of infrastructure to

ensure social and economic services to the community, thereby improving the welfare of all members of the society.

In addition, to formulate appropriate strategies and policies for coastal development, a good understanding of stakeholder concerns and preferences is required. Stakeholder preference is important to ensure a role for stakeholders in the formulation of development policies, so that the implementation of the policies will run more effectively. Dinh (2014) argued that a better understanding of stakeholder wants will help policy makers to create policies that would be achievable and supported. Based on these descriptions, it is necessary to conduct a study on the analysis of regional development as well as analysis of stakeholder preferences related to development of the coastal area of Banggai Regency, to give direction to the development policy for the coastal area.

1. 2 Research Questions

Based on the existing background, the formulation of the problems to be examined is as follows:

1. Which area are the centres of growth in Banggai Regency based on the current availability of infrastructure?
2. What are the advantages of the Banggai Regency based on industrial sectors?

3. What are stakeholder preferences related to the development of the coastal area of Banggai Regency?

1.3 Aims and Objectives

The aims of this study are to identify the centres of growth in Banggai Regency based on available socioeconomic infrastructure. Additionally, this study analyses the regional advantages by industrial sectors. Furthermore, this study will provide a direction for the development of the Banggai Regency coastal area.

1.4 Significance of The Study

The results of this study are expected to have the following outcomes;

1. Producing a reference in the development of a framework for infrastructure development in the Banggai Regency.
2. Producing a reference in the development of a framework for developing industrial sectors in the Banggai Regency.
3. Producing a reference for the establishment of a development policy for the Banggai Regency coastal area.

1.5 Study Outline

This dissertation consists of 6 chapters to analyse the Regional Development for the Direction of coastal development of Banggai Regency, Indonesia.

Chapter 1 introduces and justifies the research and includes the background, research questions, research aims and objectives, significance of the research, and study outline.

Chapter 2 discusses the literature review that explains the concept of regional development, analysis of regional economic development, growth center and development hierarchy, regional development planning, sustainable development goals, coastal development and results from previous studies.

Chapter 3 is an overview of the study area and illustrates data collection methods, and data analysis techniques which were involved in this study.

Chapter 4 presents the results of the analysis that were carried out, namely analysis development hierarchy, comparative and competitive advantage, and the stakeholder preferences.

Chapter 5 discusses the aspects that need to be considered in the process of developing a regional development strategy.

Chapter 6 presents the conclusions and recommendations of this research, including recommendations for future research, to the community and to the government of Banggai Regency.

CHAPTER II

LITERATURE REVIEW

2.1 The Concept of Regional Development

The United Nations Development Programme (UNDP) defines development as a multidimensional undertaking to achieve a higher quality of life for all people. In this concept, the people are the ultimate end, not a tool, method, or instrument of development. The development process is a systematic and continuous effort to create conditions that can provide a variety of legitimate alternatives for achieving the most humanistic aspirations of every citizen, including the necessities of life, self-esteem, and freedom (Mahi, 2016; Rustiadi et al., 2018). In addition, Latuconsina (2017) argued that development is a process where there are interrelationships and interplays among the factors that cause this development. These factors can be identified and carefully analysed to show sequences of events that will realize an increase in the level of community welfare from one stage of development to the next stage of development.

Regional development aims to strive for a balance of development between regions by utilizing their natural potential efficiently, orderly, and safely. According to Jacob and Hasan (2016), regional development is “an

effort to build and develop an area to improve the welfare of its people by taking advantage of its natural resources, human resources, institutional resources, technological resources, and physical infrastructure in an effective, optimal and continuous way". Similarly, Mahi (2016) defines the meaning of regional development as "an effort to harmoniously link natural, human, and technological resources by taking into account the capacity of the environment". This effort is needed as each region has different social, economic, cultural, and geographical conditions.

To understand the concept of regional development, it is also necessary to pay attention to the definition of a region. Rustiadi et al. (2018) define a region as "a geographical unit with specific boundaries, where its components have meaning in the description of planning and management of development resources". The boundaries are dynamic and not always physical depending on the intended use of regional boundaries such as an area for planning, implementing, monitoring, controlling, and evaluation. According to Indonesian Law number 26 of 2007 concerning spatial planning, a region is "a space that is a geographical unit and all elements related to it, whose boundaries and systems are determined based on administrative or functional aspects" (Indonesia, 2007, p.4). The area's elements include natural biophysical components, artificial resources (infrastructure), and human and

institutional forms. These elements interact functionally within defined geographical boundary.

The most classic regional concept of regional typology classifies the area concept into three categories, namely: 1) homogeneous region (uniform), 2) nodal region, and 3) planning region (programming region) (Mahi, 2016; Rustiadi et al., 2018).

1) The homogeneous region

The homogeneous region is a region that has similar characteristics, such as in terms of economy (production structure or similar consumption patterns), geography (same topography or climate), religion, or ethnicity. Homogenous regions are based on uniformity internally, such as coastal areas and mountainous regions (Mahi, 2016). Homogeneous regions are identified based on the existence of sources of similarity or prominent factors in the area (Rustiadi et al., 2018).

2) The nodal region

The nodal region is a region that functionally has a dependency between the centre and the hinterland. In line with the concept of a nodal region, an area is divided into two parts, namely the core region (central region/growth) and the hinterland region that have functional relations. The core area functions as: (1) the population (settlement) concentration; (2) service centres for hinterland

areas; (3) markets for agricultural and industrial commodities; and (4) locations of manufacturing industry concentration. The hinterland area functions as (1) supplier (producer) of raw materials, (2) labour source, (3) the area of marketing the goods and services of the manufacturing industry, and (4) the guardian of the ecological balance. According to Sudarya (2013), geographically, the centre of growth is a location with facilities that can become the pole of attraction and attract various kinds of businesses to locate their business in that area. This interdependence can cause population flows, factors of production, goods and services, communication, and transportation. A nodal region boundary is determined by the extent to which the influence of a centre of economic activity replaces and influences other centres of economic activity.

3) The planning region

The planning region is a region that shows the coherence or unity of economic decisions (Mahi, 2016). The planning area is an area that is large enough to allow essential changes in population distribution and employment opportunities, but small enough to see problems as a single unit. Rustiadi et al. (2018) argued that the planning area is not always in the form of an administrative area, but in the form of an area that is limited based on the fact that certain characteristics of the area, both natural and non-natural, are such that it needs to be planned in the planning area unit. For example, a watershed

is an area formed with a basic matrix of the unity of the hydrological cycle, so that the watershed is formed as a planning area based on the assumption of the concept of an ecological system area.

2.2 Growth Centre and Regional Development Hierarchy

The concept of growth centre theory emphasizes investment in capital-intensive industries in the centre's main urban areas. With the development of this growth pole, governments in developing countries hope to be able to stimulate and create a spread of growth (spread effect) so that it has an impact on the development of a broader regional economy (Masnawi, 2015). The growth poles theories focus on the attractiveness of activities and concentration of economic growth in poles (polycentrism), which in turn propagates development in the neighbouring areas (Camelia, Otoi, & Bucerzan, 2014).

In regional development planning, it is necessary to identify the growth centre areas that can stimulate economic growth in the surrounding areas. The development of growth centres is a way to solve problems caused by limited geographical dimensions (Mahi, 2016). Through the nodal region approach, regions that become a centre of growth can be identified. Moreover, the approach can also assess a growth centre's significance in providing multiplier effects on the surrounding areas.

Furthermore, Mahi (2016) stated that a growth centre has four characteristics, namely:

- The existence of internal relations and various activities. Domestic relations determine the dynamics of a region. There is a connection between one sector and another so that if there is a growth sector, it will encourage other industries because they are interrelated.
- There is a multiplier effect. The existence of interrelated and mutually supporting sectors will create a multiplier effect. Demand of a product not only will develop production of that product, but also its related products, which will eventually result in capital accumulation. The multiplier effect element is very instrumental in making the growth centre able to spur growth behind it.
- The existence of geographical concentration. Geographical concentration of various sectors/facilities creates efficiency among the industries that need each other and increases the attractiveness of the region.
- It fosters growth in the hinterland area. The development process will create base sectors which are the primary driving industries in the development of a region. The development of leading industries will influence the development of other sectors and other regions.

Technically, the growth centre and hinterland can be assessed through identification of the number and types of public and industrial sectors, existing facilities, and its inhabitants (Sudarya, 2013). Centres are characterized by the number of units and the number of types of facilities that

are complete compared to the hinterland. Multiple facilities that exist in that growth centre, such as places of trade, services, education, health, and other social facilities, not only serve the residents of the area but also serve people who come from the hinterland (Utari, 2015).

Physical infrastructure has a vital role in supporting various economic and social activities in increasing economic growth, equity, and people's welfare (Wontiana & Sunarto, 2018). Thus, investment, especially in regional infrastructure, plays an essential role in local development. Dobrescu and Mihaela (2014) argued that focusing public investment in confined growth centres has a substantial impact on the development of the regional economies. A centre of growth can accelerate economic growth, create jobs, and boosts productivity in the area.

However, a development strategy with a growth centre approach not only have a positive (spread) effect, but also have a negative (backwash) effect. According to Barkley, Henry, and Bao (1996), a spread effect occurs when there is an increase in the level of economic activity in the periphery, while a backwash effect occurs when there is a decline in the absolute level of economic activity in the periphery in conjunction with core expansion. The backwash effect results in migration of labour and financial capital from the hinterland to the growth centre, which in turn will lead to depopulation problems and a decline in economic activity due to a lack of capital in the hinterland (Hughes & Holland, 1994). Chiang (2018) argued that when the

positive effect is dominant than the negative one, then growth centre approach may not only promote economic growth, but also accelerate convergence among regions. On the contrary, growth pole theory may lead to a deterioration in regional equality.

Various research results have found varying evidence regarding the effects of development with a growth centre approach. Research on the effect of the spread-backwash on the Washington economy reveals that there is not a strong spreading effect from growth centres to neighbouring regions. Analysis of trade and multipliers shows that most important industries in the core region have weak backward linkages with peripherals (Hughes & Holland, 1994). Other studies reveal that both the spread effect and the backwash effect occur in various regions with different economic regional characteristics (Chiang, 2018; Ke, 2010; Ke & Feser, 2010).

Furthermore, what most influence the spread-backwash effect is also the concern of the researchers. Barkley et al. (1996) argued that the characteristics of the core and surrounding area such as size and growth rate, industrial structure, distribution of transportation and communication networks, and the spatial distribution of socio-political power determine the net effect of spread-backwash. In his research, Chiang (2018) found that the more similar the growth centre and hinterland, the more likely the spread effect occurs. On the contrary, the more differential the growth centre and hinterland, the more likely backwash effect occurs. Ke and Feser (2010) argued that the complexity

of the reverse spread effect detected in empirical studies suggests that a growth pole strategy must include an integration plan and an economic restructuring approach that addresses growth centres and neighbouring regions that are negatively affected.

2.3 Regional Economic Development

Recently, competitiveness and differences of regional industrial specialization in each region have become a focus for development planning and one of the most analysed economic phenomena in the world (Doloreux et al., 2016; Goschin, 2014; Jovan & Bradić-Martinović, 2014; Ye et al., 2018). In Indonesia, the study of regional planning and development became even more interesting after the enactment of the Law on Regional Autonomy No. 22 of 1999 (Matitaputty, 2012; Zai, 2018). The enactment of regional autonomy has implications for every local government to examine the sectors which are base sectors and have competitive advantages in their territory compared to the same sectors in other regions. By assessing the competitiveness of the region, the local government can determine the optimum strategy for economic development.

In regional development, the government sets up planning to achieve development objectives. To reach the local economic development goals, the government should prioritize economic growth according to the potential growth sector of the region (Hidayat & Darwin, 2017). According to Anisah

(2018), the determination of base and potential industries is the first step in more targeted development planning.

Furthermore, economic activities do not exist in a vacuum. Activity in one sector not only directly affects the industries in that sector but also influences other sectors through inter-sectoral linkages (Khusaini, 2015; Morrissey, 2014). In its implementation, such activity requires integrated and continuous management between all sectors. Economic activities also create economic linkages among regions. Ye et al. (2018) argued that the strength of economic linkages between regions reflects the ability of realizing regional economic collaborative development. If the economic linkages are solid, it indicates a great synergy among the regions and strong capacity for economic collaborative development.

According to Rustiadi et al. (2018), the industrial sectors of an area are divided into two groups, namely the base sector and non-base sector. The base sectors (leading sectors) are the economic sectors whose production can serve the domestic market as well as the market outside the region. The fulfilment of needs from other regions will lead to an inter-regional export and import mechanism. On the other hand, the non-base industry is a sector with economic activity that serves only the market in its area, and its export capacity is undeveloped. The income generated from economic activities in the base industry will increase investment, employment opportunities, income, and consumption. This in turn will increase demand for non-base industrial output.

Therefore, a base industry has a significant role as a prime mover, where every change in increase or decrease has a multiplier effect on the regional economy.

Location Quotient (LQ) and shift-share analysis (SSA) methods are two methods that are often used as indicators of the leading economic sectors. LQ is an index that measures the specialization of certain sectors within an area (Purba, 2017). Rustiadi et al. (2018) define LQ as a “relative comparison between the capabilities of the same sector in a wider area” (p.181), and Tohmo (2004) simply defines it as “a way of estimating trading coefficients”. A Location Quotient is used to judge whether a particular industry can constitute a regionally dominant industry (Ye et al., 2018).

To enhance the understanding of the regional economic performance over time, researchers use the SSA to examine each region's industries compared to the evolution of the whole economy and aggregate industries. This analysis might explain economic change as a combination of three factors of influence: national, sectoral, and regional locality (Goschin, 2014). SSA is a traditional tool for interregional comparison, measuring, and evaluating sectoral performance. Its widespread use is due to its simplicity, modest data requirements, and the fact that the results are relatively easy to assess and interpret (Mo, Lee, Lee, & Park, 2020).

2.4 Regional Development Planning

Regional development planning is an effort to apply economic development concepts to the spatial dimension (Harun, 2010). Regional

development planning combines analytical and graphic methods to project economic, social and physical development in a given geographic area, for a given period (Ahmad & Bajwa, 2005). Regional development planning is a government vehicle for managing its regional resources to provide welfare for its people.

The field of regional development planning studies has the scope of various scientific disciplines, namely the physical sciences (geography, geophysics), socio-economic sciences (sociology, economics), management science, to the arts/aesthetics. According to Rustiadi et al. (2018), regional development planning is a field of study that integrates various branches of science to solve development problems as well as the political, management, and administrative aspects of development planning with spatial or regional dimensions.

Regional planning involves planning the use of geographical space and activities in the area. Planning for the geographical space purpose is regulated in the form of regional spatial planning, whereas the planning of actions in the area is governed by regional development planning. It can be done through two approaches, namely the sectoral approach and regional approach. The sectoral approach is implemented by focusing attention on the activity of sectors in the region. This approach classifies economic activities into industries that are allied or considered allied. According to Yoyok and Subroto (2015), the sectoral approach is carried out by grouping development

activities into sectors; then, each industry is analysed one by one to determine what can be developed or improved from these sectors to build the region. On the other hand, the regional approach aims to classify the use of space and the interaction of various activities in the regional space (Sudarya, 2013).

Moreover, the participation of the community and stakeholders is also an important factor in regional development planning. Rustiadi et al. (2018) argued that stakeholders' participation has value in achieving the goal of development. Stakeholders' participation consists of three objectives, namely (1) as a source of information in increasing the effectiveness of planning decisions (2) as a tool for organizing agreements and support for programs and planning purposes and (3) as a way of justification for the protection of individuals and groups.

2.5 Sustainable Development Goals

Griggs et al. (2013) defines sustainable development as “the development that meets the needs of the present while safeguarding Earth’s life-support system, on which current and future generations depends”. In 2015, the United Nations General Assembly adopted the global ‘Agenda 2030 for Sustainable Development’ and its Sustainable Development Goals (SDGs). The 193 countries of the United Nation (UN) have committed to implement the 17 Sustainable Development Goals (SDGs) with its 169 associated targets. The SDGs target is aspirational and global, however, in its implementation, governments set their own national targets by taking into account their national conditions (Kumar, Kumar, & Vivekadhish, 2016). An important feature of the

agenda is its clear recognition that social and economic development hinges on the sustainable management of the natural environment and its resources (Terama, Milligan, Jiménez-aybar, Mace, & Ekins, 2016).

The SDGs aim to eliminate extreme poverty and hunger while making significant progress toward environmental sustainability and broader human well-being (Florini & Pauli, 2018). In Indonesia, Inequality, unemployment and poverty are the main issues on the implementation of the SDGs (Rahma, Fauzi, Juanda, & Widjojanto, 2019). Soubbotina and World (2004) argued that poverty is the most critical problem of sustainable development. Poverty stands in the way of achieving most other goals of development. Therefore, eradicating extreme poverty should be the priority in the development policy.

Furthermore, according to Soubbotina and World (2004), although economic growth has the potential to reduce poverty and solve social problems, there are examples when economic growth is not accompanied by human development, resulting in greater inequality, higher unemployment, loss of cultural identity, and overconsumption of natural resources. Mahi (2016) argued that an approach to development that only prioritizes growth without paying attention to the environment will even inhibit growth itself. Therefore, economic growth in regional development must be accompanied by the development of human resources as well as environmental preservation to ensure sustainable development.

Sustainable development involves meeting the needs of human societies while maintaining viable biological and physical Earth systems (Lambert, 2001). According to Balaceanu and Apostol (2012), meeting the needs of the individual implies the consumption of goods that have resulted in the determination of costs which are similar to the following categories: economic costs, social costs, environmental costs. This means that every human activity in meeting their needs will, to some extent, have an impact on economic, social and environmental conditions. (Soubbotina & World, 2004) argued that in order for development to continue indefinitely, it should balance the interests of different groups of people, within the same generation and among generations, and do so simultaneously in three major interrelated areas; economic, social and environmental.

2.6 Coastal Region Development

According to Dahuri (2001), until recently, there has been no standard definition of coastal areas. However, there is general agreement in the world that a coastal zone is a transitional area between land and sea. When viewed from the coastline, the coastal area has two types of boundaries, namely the boundary that is parallel to the coast (longshore), and the limit perpendicular to the shoreline (cross-shore). In the general provisions of Indonesian Law Number 1 of 2014 concerning Amendments to Law Number 27 of 2007 concerning Management of Coastal Areas and Small Islands, the definition of

coastal areas is “a transitional area between terrestrial and marine ecosystems that are affected by changes in the land and sea”(Indonesia, 2014, p. 4).

The coastal regions have many resources and functions. The Indonesian people have utilized Indonesia's abundant coastal natural resources as one of the primary food sources, especially animal protein, for centuries. Meanwhile, the abundant hydrocarbons and other minerals found in this region have also been utilized to support national economic development. In addition to providing these resources, Indonesia's coastal and marine areas have various other functions, such as transportation and ports, industrial zones, agribusiness and agro-industry, recreation, and tourism, as well as residential areas and waste disposal sites.

However, coastal regions are also vulnerable areas due to the complexity of human activities in the coastal areas. These activities not only relate to the relation of human to human but also the interaction of human to nature. Hizbaron and Marfai (2016) argued that while most of Indonesia's population lives in coastal areas, people living in coastal areas have low levels of education and welfare. This was followed by high damage to coastal natural resources in order to get short-term economic benefit. According to Rokhimin (2001), development activities in the coastal areas of Indonesia leave a variety of problems that threaten the sustainability of development, such as pollution, overfishing, fishing with explosives, and mining of coral reefs for building materials. Social problems such as high population pressure, low quality of

human resources, poverty in coastal communities, lack of coordination among development actors, conflicts over land use and weak law enforcement add to problems in coastal areas (Lasut, Jensen, & Shivakoti, 2008; Rokhimin, 2001).

Furthermore, potential hazards caused by nature such as land subsidence, tidal flooding, increased wave height, tsunami, abrasion, and the negative impact of climate change have increased the vulnerability of coastal areas (Hizbaron & Marfai, 2016; Marfai, 2012). These problems require careful planning and handling in dealing with stresses in coastal areas. Planners and decision-makers, in the management of the coastal zones, must see the problem that exists not only from one side but also develop a broader perspective (Dirhamsyah, 2006).

To develop a coastal area, the government needs direction and appropriate development strategies based on the potential of the region. Additionally, the government needs to synergize authorities that relates to coastal area management. A plan is needed to define the actions that need to be taken now and, consider future impacts. Strategies are needed in situations where numerous responses are required to be made under the responsibility of many authorities, in an unsupportive environment (Sudarya, 2013).

2.7 Empirical Review

In this section of the literature review, several previous studies that examine regional development analysis and development strategies in similar

contexts to the study area will be reviewed. Ekosafitri, Rustiadi, and Yulianda (2017) analysed the development of the coastal area of Central Java based on regional infrastructure; Syarief (2014) analysed the potential of the fisheries subsector in Indramayu Regency; Sudarya, Sitorus, and Firdaus (2013) examined regional development analysis to direct costal area development of Indramayu; Purba (2017) examined Superior Commodities and Development Plan and Strategy in Pakpak Bharat Regency, North Sumatera Province; and Zai (2018) analysed regional development with sectoral and regional approaches in Bogor Regency.

To analyse the current development level in each region, all authors use a Scalogram analysis. This method is widely used among authors as it can identify growth centres based on infrastructure and public services available in an area. As in the growth pole theory, Mahi (2016) argued that one characteristic of a growth centre is geographical concentration of various facilities.

Regional development analysis can also be conducted by other methods. In his research, Zai (2018) also uses the Klassen Typology to analyse the level of development, at the regency level, based on the income per capita data of each regency within the Province of Java. From the results of the study, Zai (2018) examined developed but depressed areas, rapidly developing areas, and areas that are relatively underdeveloped. This method is used in

larger areas, as the data used for this method are difficult to obtain for smaller areas such as at the district or sub district level.

In analysing the leading economic sectors, the most popular method among authors is Location Quotient (Purba, 2017; Sudarya et al., 2013; Zai, 2018). LQ is effectively used to examine the base sector in an area. From the results of this analysis, it is possible to know the base sector of a region that can meet the needs not only for within the region but also to meet the needs of outside regions. To examine further the level of competitiveness of an economic sector in an area, authors use the Differential Shift method (Purba, 2017) and the Shift Share Analysis (SSA) method (Sudarya et al., 2013; Zai, 2018). These methods can analyse the competitive advantages of an economic sector in a region. The level of competitive advantage is analysed by examining the changes in the economic structure of a region between two different times.

By considering the data availability and research objectives, the economic sector of a region can be analysed by other methods. To analyse the level of efficiency of a development area in optimizing the strength of the development sector, Sudarya et al. (2013) used the Data Envelopment Analysis (DEA) method. By using the DEA, Sudarya et al. (2013) examined the efficiency of sub-district development in the Garut Regency area, from the perspective of the labour absorption of each sector and land use efficiency. This method uses sub-district GRDP data for which this data is no longer

available at the Central Bureau of Statistics, therefore the author does not use this method.

On the other hand, Syarief (2014) used Input-Output (I-O) analysis to analyse the linkage between the fisheries sector and other industrial sectors. From the results, Syarief (2014) found that the fisheries sub-sector, in Indramayu Regency, uses more output from other sectors to be used as input for its own sector, than it does producing output that can be used by other sectors as direct inputs. This method uses a lot of data ranging from demand for goods and services from each industrial sub-sector, production surplus for each sector, public income and government income. For reasons of limited resources and time, researcher did not use this method in this study.

To determine the development strategy and direction of an area, authors use various approaches. The Approaches are either descriptive analysis of sectoral and regional linkages (Zai, 2018), or by using methods and tools in decision making such as Analytic Hierarchy Process (AHP), Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis and Multi-Criteria Decision Making (MCDM). Even though most authors use AHP or a combination of AHP and SWOT (Ekosafitri et al., 2017; Purba, 2017; Syarief, 2014), the use of approaches and methods in decision making depends on the objectives, length of research time, stakeholders, and the preferences of the authors themselves.

Regional development analysis, both based on economic sector analysis and based on regional infrastructure development, is very important to determine the current level of regional development. Current regional development information will be very useful in preparing regional development plans for the following years. Without analysing the current level of regional development, any development plan can lead to ineffective regional development, which in turn can lead to regional development disparities. In addition, input from stakeholders is also required in development planning, so that regional development can be carried out optimally and beneficial to all people.