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Economic Inequality Analysis Between the Coastal Regions in Bengkulu Province 2018-2022

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ABSTRACT: Bengkulu Province in Sumatra exhibits lower economic growth than the average national level. Over the past five years, its average economic growth rate has been 4.82%, significantly below the national average of 5.31%. Economic disparities are evident between cities and regencies within the province, with coastal areas dominating yet showing significant variations in economic growth. This research used secondary data from the Bengkulu Provincial Statistics Agency for 2018-2022. It applies Klassen typology analysis and the Williamson Index to measure regional development disparities. The Klassen typology categorises Bengkulu City as an advanced and rapidly growing area, while Muko-Muko Regency and North Bengkulu Regency are identified as rapidly developing regions. Conversely, Kaur Regency and Seluma Regency are categorized as relatively underdeveloped areas. The Williamson Index analysis reveals significant disparities among the regencies/cities, with an average index of 0.385, indicating an increasing trend over the years. These disparities are influenced by regional characteristics and natural resource differences, hindering equitable development. These findings are expected to serve as a reference for the government in formulating appropriate policy strategies to reduce disparities and enhance economic growth in Bengkulu Province. Strategies such as job diversification and increased employment opportunities in the fisheries and processing industries can help address the disparities and poverty in coastal areas.

Keywords: regional inequality, Klassen typology, Williamson index

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INTRODUCTION

Bengkulu Province is a province in Indonesia, specifically on the island of Sumatra, with low economic growth and development. The average economic growth rate for Bengkulu Province from 2018 to 2023 was 4.82%, well below the national economic growth rate of 5.31%. Bengkulu Province consists of 10 regencies/cities where economic growth varies widely, with most areas below the national economic growth rate (Badan Pusat Statistik, 2022).

The economic growth of Bengkulu Province remains low compared to the national average. Additionally, each regency/city within Bengkulu Province shows variations in economic growth, resulting in economic inequality among several regions. According to Sjafrizal (2012), differences in economic sector development between regions are a common occurrence in the economic development process of an area. Differences in demographic characteristics between regions are the cause, leading to varying capacities in each area for economic growth. Additionally, the availability of natural resources also impacts the production levels of each region.

Coastal areas with extensive coastlines and substantial natural resource potential dominate Bengkulu Province. The province has a coastal length of approximately 525 kilometres, stretching from Muko-Muko Regency in the

north to Kaur Regency in the south. The natural resources in the coastal areas, particularly the fisheries and tourism sectors, have significant potential and will support economic growth in these regions. Most regencies/cities in Bengkulu Province are coastal areas, except for Rejang Lebong, Lebong, and Kepahiang regencies. (Mutmaidah, 2018). The regencies/cities in Bengkulu Province largely have coastal areas, with fisheries and marine sectors as key drivers of local economic growth. However, the economic growth index among the coastal regions of Bengkulu Province varies, leading to economic disparities between areas (Sukwika, 2018).

The economic inequality between regions impacts regional development by limiting service accessibility, including social and economic infrastructure. Development has led to some areas becoming advanced, developing, or remaining underdeveloped. (Ginting, 2015). The ADHK Gross Regional Domestic Product (GRDP) growth rate of several regencies and cities in the coastal areas of Bengkulu Province can indicate economic growth and development. Here is the translated table content:

Table 1. GRDP of Regencies/Cities at Constant Prices by Business Field (Million Rupiah)

Regency/City	**2018**	**2019**	**2020**	**2021**	**2022**
South Bengkulu	3,444,032	3,615,034	3,624,589	3,742,512	3,871,613
North Bengkulu	4,960,303	5,204,593	5,216,353	5,425,361	5,595,963
Kaur	2,153,486	2,260,793	2,263,549	2,333,342	2,421,452
Seluma	2,735,843	2,870,668	2,870,325	2,932,951	3,018,644
Mukomuko	3,166,013	3,325,258	3,326,056	3,438,685	3,041,023
Central Bengkulu	2,750,436	2,887,020	2,885,344	2,951,444	3,041,023
Bengkulu City	14,552,353	15,339,352	15,301,488	15,833,198	16,733,994

Source: BPS Bengkulu Province, 2023

Table 1. shows that there has been an increase in per capita income by region in Bengkulu Province from 2018 to 2022; however, there is a significant disparity between urban and rural areas. This may indicate an imbalance in regional development within Bengkulu Province. This condition is a consequence of development, which results in regional disparities. Moreover, the diversity of potential and natural resources and the demographic conditions between urban and rural areas cause per capita income and economic growth to differ, resulting in inequality in economic development. This statement is supported by research results (Rumagit, 2014; Sondakh, 2023).

Generally, regions with an economic base in the primary sector (agriculture, fisheries, and marine) tend to lag in development. The strong relationship between the upstream sector (fisheries and marine) and the downstream sector (industry) forms a solid foundation for developing the economic structure of a region. (Sirojuzilam, 2008).

This disparity can indicate inter-regional inequality among cities and regencies in Bengkulu Province, particularly in terms of development (Bado & Zulkifli, 2021). The disparity is because of the lack of access to education and less access to credit or insurance; therefore, they cannot potentially maximize their resources. In addition, this argument is strengthened by the fact that increasing economic growth can reduce the impact of the income gap. (Waluyo, 2004). Identifying the causes of developmental disparities is necessary to anticipate and address existing inequalities to optimize development growth. This study aims to assess the economic growth positions of regencies and cities in Bengkulu Province based on per capita GRDP indicators and to analyze economic disparities between regencies and cities within Bengkulu Province.

MATERIALS AND METHODS

The quantitative descriptive method was employed in this study. Quantitative descriptive methodology measures a group of individuals,

objects, conditions, thought systems, or event classes in the present (Rachman et al., 2023). The research was conducted from February to April 2023 in Bengkulu Province, utilizing secondary data from the Central Bureau of Statistics (BPS). Klassen typology analysis was applied to identify patterns of regional economic growth in coastal areas of Bengkulu. The results of this formula analysis are used to map and analyze district/city areas in Bengkulu based on the concept of quality economic growth, namely one that considers income distribution in each rural and urban area (Hidayadi & Niam, 2022; Sondakh, 2023) .

Table 2. Classification of Regions According to the Klassen Typology

GRDP Per Capita (y) / Growth Rate (r)	$y_i < y$	$y_i > y$
$r_i > r$	(Quadrant III) Developing Region	(Quadrant I) Rapidly Advancing and Rapidly Growing Region
$r_i < r$	(Quadrant IV) Relatively Underdeveloped Region	(Quadrant II) Advanced but Pressured Region

Description:
y = Per capita income in Bengkulu Province.
r = GRDP growth rate in Bengkulu Province.
yi = Coastal per capita income in Bengkulu.
ri = Coastal GRDP growth rate in Bengkulu.

Measuring the level of development disparity among coastal regions in Bengkulu Province using the Williamson Index, as cited in (Arniati, 2022).

$$IW = \frac{\sqrt{\Sigma_i (Yi - Y)^2 fi/n}}{Y}$$

Description:
Iw = Williamson Index
Yi = Per capita GDP of the coastal region
Y = Per capita GDP
fi = Population of the coastal region
n = Total population

The value of the Williamson Index reflects regional disparities. The higher the index, the greater the disparity in the region. The Williamson Index ranges from 0 to 1. An index value approaching 0 indicates that economic development among the coastal areas of Bengkulu Province is becoming more evenly distributed, and conversely, a higher value indicates a more significant disparity.

RESULTS AND DISCUSSION

Classification of Regencies/City Based on the Klassen Typology Analysis

There are two main indicators in the regional approach of the Klassen Typology: economic growth, represented by the vertical axis, and the Gross Regional Domestic Product (GRDP) per capita of regencies/cities (Yuendini et al., 2019). Based on these indicators, four classifications of regional observations emerge: (1) advanced and rapidly growing regions (Quadrant I), (2) advanced but under pressure regions (Quadrant II), (3) rapidly developing regions (Quadrant III), and (4) relatively underdeveloped regions (Quadrant IV). The calculation results of the Klassen Typology analysis show that the mapping of rural and urban coastal areas is described in Table 3.

Table 3. presents the average economic growth rate and per capita GRDP in the regencies/cities of Bengkulu Province from 2018 to 2022. The highest average economic growth rate was recorded in Bengkulu City at 3.96 per cent, followed by North Bengkulu at 3.92 per cent, and Seluma Regency with the lowest growth rate

of 2.96 per cent. The Klassen Typology analysis compares the growth rate and per capita GRDP of each regency and city in Bengkulu Province with the province's growth rate and per capita GRDP.

Table 3. Average GRDP Per Capita, Economic Growth, and Klassen Typology of Districts/Cities in the Coastal Region of Bengkulu Province for the Years 2018-2022

No	District/City	Economic Growth Rate (Percent)	Average GRDP Per Capita (Million)	Klassen Typology
1	South Bengkulu	3.38	22.236	II
2	North Bengkulu	3.92	17.528	III
3	Kaur	3.39	18.179	IV
4	Seluma	2.96	14.144	IV
5	Mukomuko	3.55	17.512	III
6	Central Bengkulu	3.04	24.895	II
7	Bengkulu City	3.96	41.036	I
	Average	3.46	22.219	

Source: BPS Bengkulu Province, 2023

The results of the Klassen Typology analysis on economic growth patterns and structures in Bengkulu Province for the years 2018-2022 are as follows:

1. Quadrant I represents regions with economic growth above the average of other coastal regencies/cities in Bengkulu Province and with per capita GRDP above the average of other coastal regencies/cities in the province. Bengkulu City falls into this category. This region is considered advanced and shows growth, supported by the community's various derivative products from fisheries, such as pempek, fish meatballs, and pendap. This aligns with research by (Sajriawati & Amir, 2021), who processed shrimp paste, and (Gumelar et al., 2022), who processed fish meatballs, which improved community income and per capita GRDP.

2. Quadrant II represents regions with economic growth below the average of other coastal regencies/cities in Bengkulu Province but with per capita GRDP above the average of other coastal regencies/cities in the province. Central Bengkulu and South Bengkulu fall into this category. These regions are considered advanced but under pressure, meaning they have higher per capita income, yet their economic growth rate is lower than other areas. This is in line with (Noviar, 2021), who found that human resources are a key determinant of economic growth, even in Banten, where the industrial sector and economy contribute significantly to the provincial GRDP.

3. Quadrant III includes regions with economic growth above the average of other coastal regencies/cities in Bengkulu Province but with per capita GRDP below the average of other coastal regencies/cities. Muko-Muko and North Bengkulu are categorized in this quadrant. These areas are experiencing rapid development. This is supported by research by (Trisusilo et al., 2022), which highlighted that Muko-Muko Regency's key fishery product, dried fish, has the potential to increase the income of the local coastal community. Similarly, North Bengkulu has advantageous fishery resources, as found by (Anggraeni et al., 2023), where the main source of income for the community comes from marine fishing, contributing the highest income at IDR 13,810,000 per month, or approximately 87.81% of total household income.

4. Quadrant IV represents regions with economic growth below the average of other coastal regencies/cities in Bengkulu Province and with per capita GRDP below the average of other coastal regencies/cities. Kaur and Seluma regencies fall into this quadrant. These regions are considered relatively (Bado & Zulkifli, 2021).

Measuring Development Inequality with the Williamson Index

In the past five years, there has been a tendency toward increased inequality among regencies and cities in Bengkulu Province, although not significantly. The Williamson Index analysis can measure the level of economic development inequality between regencies and cities in Bengkulu Province. An index value close to 0 indicates low inequality or more even development, while a value close to 1 indicates high inequality or widening disparities. The results of the Williamson Index calculation from 2018 to 2022 can be seen in Table 4.

Table 4. Williamson Index for Bengkulu Province 2018-2022

Year	2018	2019	2020	2021	2022	Average
Williamson Index	0.375	0.370	0.389	0.395	0.397	0.385

Source: Processed Data (2023)

The Williamson Index output reveals a significant and widening disparity among regencies and cities in Bengkulu Province during 2018-2022. The highest Williamson Index values were observed in 2021 (0.395) and 2022 (0.397), while the lowest value occurred in 2019 (0.370).

Table 4. demonstrates that the development disparities among coastal regions in Bengkulu Province have widened. This phenomenon is attributed to the differing characteristics of each area, which have led to uneven development across the coastal regions (Putra, 2023).

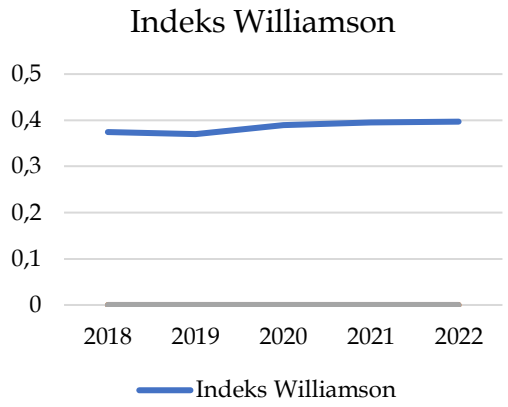

Figure 1. Williamson Index

The line graph illustrates the average development disparity among coastal regencies and cities in Bengkulu Province from 2001 to 2010. Overall, what stands out from the figure is an upward trend in the percentage of inequality based on the William Index. The average point during this period is 0.385. Meanwhile, the percentage of development disparities in 2019 saw a considerable decrease over the period in question. An absorbing point is that although the figure experienced the same falling pattern in the first year, the disparities in Bengkulu Province increased slightly at the end of the period reaching 0.397.

Several aspects can be utilized to illustrate economic activities, one of which is development inequality. Differences in natural resources and geographical conditions across regions generally cause this disparity. Such disparities lead to varied development processes between areas, ultimately impacting the level of welfare in each region (Maulana, 2019).

Interregional disparities can be analyzed using the Williamson Index, which measures the extent of development inequality. The Williamson Index is calculated based on GRDP per capita and population, with values ranging from zero to one ($0 < W < 1$). A smaller Williamson Index value indicates lower inequality, and vice versa.

This index calculation provides insights for the government to formulate strategies and policies to reduce inequality and poverty in underdeveloped regions. Research by (Mudatsir et al., 2023) highlights the importance of government strategies in alleviating poverty by increasing employment opportunities and community income. Meanwhile, (Untari, 2023) suggests that reducing inequality can be achieved through job diversification, particularly by fostering growth and development in fisheries, including fish processing and marketing. Various natural resource processing efforts can enhance

the resilience of coastal communities against poverty.

CONCLUSION

The results of the analysis using the Klassen Typology are that Bengkulu City is included in the rapidly developing and fast-growing area (Quadrant I), and Muko-Muko and North Bengkulu Regencies are included in the category of developed but depressed areas (Quadrant II). Then, the lagging areas are the Kaur and Seluma Regencies (Quadrant III). The level of inequality in districts/cities in the coastal region of Bengkulu Province is relatively high, with an average value of 0.385

SUGGESTION

These findings are expected to serve as a reference for the government in formulating appropriate policy strategies to reduce disparities and enhance economic growth in Bengkulu Province. Strategies such as job diversification and increased employment opportunities in the fisheries and processing industries can help address the disparities and poverty in coastal areas.

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