

ECONOMIC DEVELOPMENT DISPARITIES IN BALI

Pardita Dewa Putu Yudi*, Arjawa I Gde Wedana, Setena I Made
Faculty of Economics and Business, Warmadewa University, Indonesia
*E-mail: yudipardita@warmadewa.ac.id

ABSTRACT

The economic development disparities in Bali province are essentially caused by differences in natural resources, demographic factors, labor conditions, allocation of development funds, the concentration of regional economic activities, and mobility of goods and services. This study aims to analyze the patterns and structure of the economy, and the development of economic development disparities, and to test the “Inverted-U” Kuznets hypothesis about the relationship between GDPs per capita and regency/city disparities in Bali province in 2011-2020. The data collection method used was non-participant observation and the type of data used was quantitative data. The variables used include economic development inequality measured through the Williamson Index. Meanwhile, the pattern and structure of the economy in Bali province were measured through Klassen’s typology analysis. The population of this study is the GDP and per capita GDP growth data of regencies/cities in Bali province in 2011-2020, as well as the population of regencies/cities in Bali province based on the 2020 census results. The results of this study show that from 2011 to 2020, the pattern and structure of economic growth in Denpasar City were in quadrant I, which is a developed and rapidly growing area. Badung Regency is in quadrant II, which is a developed but pressured area. Gianyar, Bangli, Buleleng, and Tabanan regencies are in quadrant III, which is a rapidly developing but not developed area. Meanwhile, Jembrana, Klungkung, and Karangasem regencies are in quadrant IV, which is a relatively underdeveloped area. The relationship between GDPs per capita and income distribution in Bali province in 2011-2020 fulfills the “Inverted-U” Kuznets hypothesis. The distribution of income in Bali province is relatively equal with a Gini Ratio ranging from 0.31 to 0.37. However, interregional disparities still occur, as shown by different Williamson Index values but still in the low inequality category, which is less than 0.35. Development policies in other economic sectors such as agriculture and industry are expected to improve income distribution and reduce economic development disparities in Bali province.

KEY WORDS

Disparities, Klassen typology, Williamson index.

Development can be defined as a sustainable effort to achieve the welfare of society. Development must be evenly distributed across all fields so that there is no overlap, as development is a collaboration from every field, such as education, social culture, technology, infrastructure, and other fields that are pioneers and part of development (Darda et al., 2021). An indicator that can be used to measure the success of economic development in a region is the increase in economic growth, so the government always sets a growth rate target in its planning and development objectives. In addition to high growth, development must also be able to reduce poverty and income inequality. Every region essentially experiences different economic growth rates from one region to another (Raswita & Utama, 2013).

Indonesia has several provinces that have different regional characteristics and potential resources. Bali Province is one of the provinces in Indonesia that has abundant resources (Luthfiyah & Tallo, 2020). Bali is famous for its tourist destinations that attract many tourists from both domestic and foreign countries. Every year, the number of tourists continues to rise, resulting in a substantial increase in Bali's economy (Sari & Budhi, 2013). According to Ovicha Naibaho et al (2020), many experts use Gross Regional Domestic Product (GRDP) data to observe the difference in economic growth between one region and

another. GRDP is statistical data on the value added from every economic activity carried out by the community in a region. The higher the per capita GRDP value of a region, the higher its economic growth is considered.

Economic growth is not always accompanied by an equal distribution of income to all people in the region. This creates economic inequality (Gurgul & Lach, 2011). Economic growth is defined as the change in Gross Domestic Product (GDP) at the national level and Gross Regional Domestic Product (GRDP) at the regional level from year to year. Theoretically, it is said that the higher the income level of a society, the better it is level of welfare (Iswanto, 2015). Table 1 below shows the GRDP of regencies/cities in Bali province based on 2010 constant prices in 2011-2020 (in billion Rupiah).

Table 1 – GRDP of Regencies/Cities in Bali Province Based on 2010 Constant Prices in 2011-2020 (Billion Rupiah)

Regencies/Cities	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jembrana	5999,3	6365,86	6727,79	7134,97	7576,31	8027,93	8452,03	8924,38	9420,44	8952,76
Tabanan	9895,35	10500,46	11178,19	11908	12644,52	13420,55	14141,72	14949,32	15784,54	14815,8
Badung	22322,7	24027,65	25666,53	27458,06	29170,24	31157,37	33052,05	35275,42	37325,33	31159,95
Gianyar	11682,13	12508,66	13361,4	14269,42	15168,55	16125,28	17005,12	18027,09	19038	17442,25
Klungkung	3798,86	4036,36	4280,45	4536,35	4813,39	5115,61	5387,61	5682,94	5990,99	5610,54
Bangli	2916,14	3097,06	3281,16	3472,3	3686,1	3916,1	4124,22	4350,14	4587,63	4399,72
Karangasem	7116,36	7538,03	8002,15	8482,88	8991,75	9524,23	10006,13	10550,25	11130,84	10635,79
Buleleng	14497,37	15480,21	16587,19	17741,75	18818,62	19950,72	21023,6	22201,45	23430,22	22079,61
Denpasar	21763,41	23397,17	25026,21	26778,59	28422,7	30273,39	32105,35	34166,04	36152,92	32747,62
Bali	99991,63	106951,46	114103,58	121787,57	129126,56	137296,45	144933,31	154072,66	162694,32	147549,8

Source: Central Statistics Agency of Bali Province, 2021.

Based on Table 1, the GRDP of regencies/cities in Bali Province showed an increase in the period of 2011-2019. However, in 2020, there was a decrease in GRDP in regencies/cities in Bali Province due to the Covid-19 pandemic. The economic growth in Bali Province in 2020 was minus 9.31 percent, which experienced a significant decrease from 2019 which was 5.60 percent. According to Rahawarin (2019), high and continuously increasing economic growth does not automatically eliminate disparities in development. Growth does not appear in various regions at the same time because growth only occurs in several places called growth centers with different intensities. Therefore, development can often lead to disparities.

According to Kisiała and Suszyńska (2017), high economic growth rates have little benefit in solving poverty problems as there are still many people with incomes below their standard of living needs. In Figure 1, the average number of poor people in Bali Province in 2011-2020 was 177.66 thousand people. In that period, the number of poor people in Bali Province showed a fluctuating trend, even though economic growth increased from 2011-2019. This indicates that economic development must be viewed as a multidimensional process that includes various fundamental changes in social structures, community attitudes, and national institutions, while still pursuing economic growth acceleration, addressing development disparities, and poverty alleviation (Khalifa and el Hag, 2010). Below is Figure 1 showing the average number of poor people in Bali Province by regency/city in 2011-2020 (thousands of people).

Simon Kuznets suggested that in the early stages of economic development, income distribution would become increasingly unequal, but after reaching a certain level of development, income distribution would become more equal. This hypothesis is known as the "inverted U" hypothesis by Kuznets (Dhyatmika & Atmanti, 2013). According to Chotia & Rao (2015), the disparity is one of the problems that arise in development. Disparity not only creates social tension but can also hinder economic growth and development. Therefore, in each region, there are usually advanced and backward areas (Gaur, 2010). Disparities in economic development between regions based on previous research show uneven regional development, which can hinder future performance. Thus, it is essential to understand the economic characteristics of each region to increase economic productivity. This study aims to

analyze the pattern and structure of the economy, and the development of economic disparity, and test the “inverted U” hypothesis by Kuznets on the relationship between per capita GRDP and disparity in Bali Province in 2011-2020.

LITERATURE REVIEW

Concept of Inequality

The dynamics of spatial economic inequality have long been a concern for economists who have tried to identify trends and explain the mechanisms of economic convergence or polarization in a region. The issue of economic convergence or divergence discussed in empirical verification procedures was initiated by Barro and Sala Martin in 1991 and remains controversial and unresolved (Kisiała & Suszyńska, 2017). Supporters of the convergence hypothesis argue based on the neoclassical model of national (regional) growth that lower per capita GDP regions usually achieve higher economic growth rates and lead to a reduction in economic inequality. On the other hand, post-Keynesian concepts establish that economic growth is a spatial cumulative phenomenon, meaning that a country or region's income from the accumulation of capital and access to attractive resources attracts additional business activities, thereby reducing the likelihood of economic growth in lagging regions. Although the latter benefits from spillover effects, which are growth impulses caused by expanding economies, the benefits may be disrupted by the backwash effect (negative economic effects that impede growth, such as draining labor, and loss of capital, goods, and services to rich countries or regions). This process tends to lead to an increase in economic inequality, often referred to as economic divergence (Obradović et al., 2016).

According to Landesmann & Römisch (2006), the problem of development inequality between regions was initially raised by Douglas C. North in his analysis of neoclassical growth theory. The theory proposed a prediction about the relationship between a country's level of national economic development and the inequality of regional development. This hypothesis is now commonly known as the neoclassical hypothesis. According to the neoclassical hypothesis, at the beginning of a country's development process, regional development inequality tends to increase. This process will occur until the inequality reaches its peak. After that, if the development process continues, the inequality of regional development will gradually take the form of an inverted "U"-shape curve. Generally, regional inequality tends to increase during the development process (Gurgul & Lach, 2011), due to factors such as:

- Productive migration of working-age and skilled (educated) populations from less developed regions to more developed ones, where they can earn higher wages/salaries;
- Investment tends to be made in already developed regions because of market factors (economies of scale, external economies, and others), where the benefits are relatively large, and the risks of loss are generally low. In addition, there is also a flow of capital from poor regions to developed regions;
- Government policies tend to result in the concentration of social and economic infrastructure in already developed regions due to greater needs, which has encouraged faster industrial development in more advanced regions;
- Trade patterns and activities are dominated by industries in developed regions. Industries in wealthy regions have become sources of traded goods, and thus, industries developed in poor regions will have difficulty finding their market.

Economic Growth Theory

Economic development is a process in which the government and all components of the society manage existing resources and then form partnerships between local governments and the private sector to create new job opportunities and stimulate economic activity in the region (Maulana, 2019). In development implementation, high economic growth accompanied by equal distribution of development outcomes is the main goal. However higher economic growth results in disparities in development between regions (Andhiani et

al., 2018). Development disparities generally occur in terms of income, spatial, and sectoral aspects. The initial indication is that the rich get richer while the poor get poorer. Advanced regions continue to develop rapidly, leaving behind underdeveloped regions, and there are leading sectors that contribute significantly to development (Iqbal et al., 2019).

Spatial development within a country is not always equal. Some regions can achieve significant growth, while others experience slow growth. Regions that do not experience the same progress are due to a lack of resources, a tendency for investors to choose urban areas or areas with facilities such as transportation infrastructure, electricity networks, telecommunications networks, banking, insurance, and skilled labor, as well as the unequal redistribution of income distribution from the central government to regions (Karim et al., 2019). This growth capability then leads to disparities in both development and income between regions. Development disparities can also be seen vertically, namely differences in income distribution, as well as horizontally, namely differences between advanced and underdeveloped regions (Derek et al., 2019).

The measure of the success of development can be seen in improved economic growth, stable economic structure, adequate infrastructure, high welfare standards, and a small degree of development disparities between regions. Of course, all of these can be achieved if the necessary resources, including adequate financial resources, are available because development must be carried out collectively, and aggregate capital accumulation requires more funds. Every region always sets a high growth rate target in its planning and development goals (Iswanto, 2015). Economic growth is defined as the ability of an area or region's economy to produce goods or services to meet the needs within and outside the area or region, as well as increasing per capita income of a region so that disparities and gaps in society do not occur and welfare can be achieved (Ovicha Naibaho et al., 2020).

Economic growth shows how economic activities can provide additional income for a region's population in a certain period. Economic growth is usually seen on a quantitative scale and measured by using data on Gross Regional Domestic Product (GRDP) produced in a certain period. An economy is said to experience growth if the amount of production of goods and services increases. Economic growth shows an increase in economic activities in society that leads to an increase in the production of goods and services, resulting in a rise in national income. In macroeconomic studies, the definition of economic growth is a process of continuous changes in economic conditions that occur in a country to achieve a better state over a period. This definition explains that economic growth shows changes in economic conditions in a country that symbolize the success of development (Easterly, 2002).

METHODS OF RESEARCH

Research Location

The research location on economic development inequality is conducted in the province of Bali, as there is a clear physical difference in development between South Bali and North Bali. This diversity affects the ability to grow, resulting in some areas growing rapidly while others grow slowly. This growth ability then leads to inequality in both development and income between regions. Previous research on economic inequality has never been conducted during the Covid-19 pandemic, so it is expected that the results of this research can describe the pattern and structure of the economy as well as the value of inequality in the province of Bali. This research can also be used as a consideration for the government in formulating policies to promote equal development in the province of Bali.

Type and Data Sources

The data collection method used in this study is the non-participant observation method and the type of data used is quantitative data. The quantitative data in this study consists of the Gross Regional Domestic Product (GRDP) of regencies/cities in the province of Bali for the years 2011-2020 based on the 2010 constant price, the number of poor people in the province of Bali by regency/city for the years 2011-2020, the GRDP per capita of regencies/cities in the province of Bali for the years 2011-2020, the economic growth of

regencies/cities in the province of Bali for the years 2011-2020, and the population of regencies/cities in the province of Bali based on the 2020 census.

Identification of Research Variables

The variables used in this study are economic development inequality, measured through the Williamson Index using the GRDP per capita of regencies/cities in the province of Bali and the population of regencies/cities in the province of Bali. Meanwhile, the pattern and structure of the economy in Bali are measured through Klassen Typology analysis using the GRDP per capita of regencies/cities in the province of Bali and the economic growth of regencies/cities in the province of Bali. The population of this study is the economic growth of regencies/cities in the province of Bali for the years 2011-2020, the GRDP per capita of regencies/cities in the province of Bali for the years 2011-2020, and the population of regencies/cities in the province of Bali based on the 2020 census. The sample used is the entire population, so the sampling method used is a census method.

Data Analysis Technique

Klassen Typology analysis is used to obtain an overview of the pattern and structure of economic growth in each region. The criteria used consist of four classifications as follows:

1. Quadrant I, which is the advanced and fast-growing region (high income and high growth), is a region that has higher economic growth and per capita income compared to the province of Bali;
2. Quadrant II, which is an advanced but suppressed region (high income but low growth), is a region that has higher per capita income, but a lower growth rate compared to the province of Bali;
3. Quadrant III, which is the rapidly developing but not advanced region (high growth but low income), is a region that has a high growth rate, but lower per capita income compared to the province of Bali;
4. Quadrant IV, which is the relatively backward region (low growth and low income), is a region that has lower economic growth and per capita income compared to the province of Bali.

Table 2 – Klassen Typology Classification of Regions Approach

Growth Rate	GRDP Per Capita	ydi>yni	ydi<yni
	rdi>rni		Advanced and fast-growing regions
rdi<rni		Advanced regions but under pressure	Relatively underdeveloped regions

Explanation:

- rdi: Growth Rate of Regency I;
- rni: Growth Rate of Bali Province;
- ydi: Per Capita Income of Regency I;
- yni: Per Capita Income of Bali Province.

A representative model for measuring the level of development inequality between regions is the Williamson Index proposed by Jeffrey G. Williamson. Williamson proposed the Vw model (weighted index based on population) and the Vuw model (unweighted index) to measure the level of per capita income inequality in a region at a certain point in time.

$$V_w = \frac{\sqrt{\sum_{i=1}^n (Y_i - Y)^2 \left(\frac{f_i}{n}\right)}}{Y}$$

Where:

- Vw: Williamson Index;

- Yi: Gross Regional Domestic Product (GRDP) Per Capita of Regency/City I;
- Y: GRDP Per Capita of Bali Province;
- fi: Population of Regency/City I;
- n: Population of Bali Province.

The results of Williamson Index testing will show a value between zero to one. The larger the value of the Williamson Index, the greater the inequality between regions, and conversely, the smaller the value of the Williamson Index, the smaller the level of inequality between regions. The level of inequality can be determined based on the following criteria:

- Low level of inequality if the Williamson Index < 0.35;
- Medium level of inequality if the Williamson Index is between 0.35-0.50;
- High level of inequality if the Williamson Index > 0.50.

RESULT AND DISCUSSION

The Economic Pattern and Structure of Regencies/Cities in Bali Province

The economic structure of each regency/city in Bali Province varies. Generally, Badung Regency, Denpasar, and Gianyar Regency are the regencies/cities that have the highest economic growth and contribute the most to the economy of Bali Province. This is due to the tourism sector being the mainstay sector in those areas. Based on the results of this study, from 2011 to 2019, Denpasar City and Badung Regency were classified as advanced and fast-growing regions with indicators of economic growth rates larger than the economic growth rate of Bali Province and per capita income greater than the per capita income of Bali Province. The following is Table 3 showing the average Gross Regional Domestic Product (GRDP) per capita and economic growth of regencies/cities in Bali Province during 2011-2019.

Table 3 – Average Gross Regional Domestic Product (GRDP) Per Capita and Economic Growth of Regencies/Cities in Bali Province from 2011 to 2019

Regency/City	GRDP Per Capita (Thousand Rupiah)	Growth (Percent)
Jembrana	37027,74	5,81
Tabanan	38574,57	6,02
Badung	67967,28	6,69
Gianyar	40300,06	6,39
Klungkung	36462,60	5,89
Bangli	22110,72	5,86
Karangasem	29536,73	5,72
Buleleng	38585,20	6,21
Denpasar	43264,41	6,62
Bali	42060,19	6,32

Source: Data analysis results, 2023.

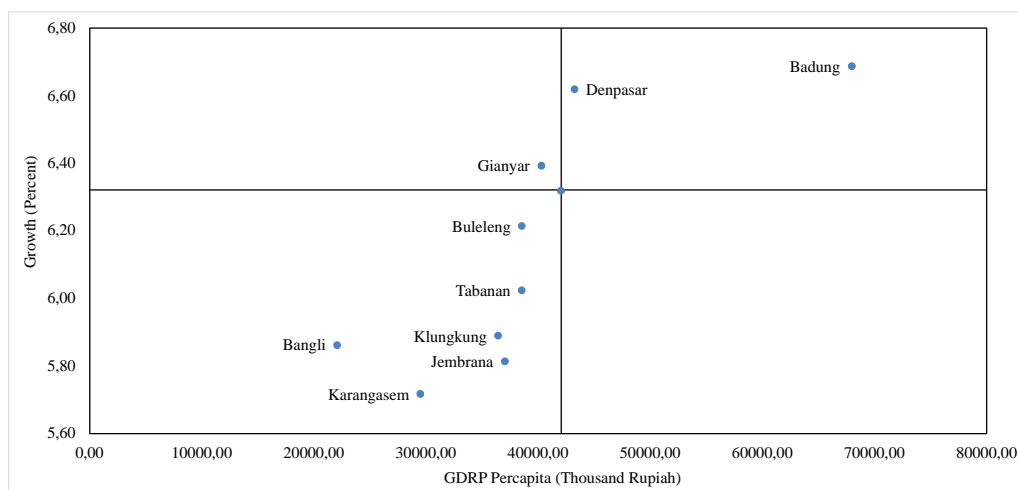


Figure 2 – Result of Klassen Typology Analysis on the Pattern and Structure of Economic Growth

in Regencies/Cities in Bali Province in 2011-2019 Source: Data analysis results, 2023

Based on the data of GRDP per capita and economic growth of regencies/cities in Bali Province in 2011-2019, it was possible to analyze the patterns and structures of economic growth in each region. The following is Figure 2, the result of Klassen Typology analysis on the pattern and structure of economic growth in regencies/cities in Bali Province in 2011-2019.

According to research by Satrya et al. (2019), Bali Province has relatively high and stable economic growth in the period of 2013-2017, with an average of 5.56% per year. The contribution of the tourism sector and agriculture in Bali Province's GDP reached 43.79% and 14.99%, respectively. However, it should be noted that the tourism sector provides a greater contribution to Bali's GDP. Based on research by Agus and Wijaya (2018), the tourism sector also has a positive impact on the industrial and trade sectors in Bali Province. In addition, research by Sujatmiko et al. (2020) shows that the development of the tourism sector in Bali can benefit the agricultural sector and improve the quality of life of farmers. In recent years, the industrial and trade sectors have also started to develop in Bali Province. According to research by Aryati et al. (2019), the industrial sector in Bali is mainly concentrated in the Denpasar, Badung, and Gianyar areas. Meanwhile, the trade sector in Bali plays an important role in marketing local products and supplying goods for the population's needs.

Based on Figure 2, in quadrant I (Denpasar and Badung), which is an advanced and fast-growing area (high income and high growth), there is higher economic growth and per capita income compared to Bali Province. The higher economic growth and per capita income of Denpasar City and Badung Regency compared to Bali Province can be explained by several factors, as follows:

- Denpasar City and Badung Regency are the main tourist areas in Bali Province, with numerous tourist attractions such as beaches, temples, and local culture that attract tourists. The presence of tourists significantly contributes to the economic growth and per capita income in these areas;
- Denpasar City and Badung Regency have good accessibility to Bali's international airport, located in Badung Regency. This attracts investors to open businesses and build properties in the area, increasing per capita income and economic growth;
- Denpasar City and Badung Regency have undergone significant improvements in infrastructure development, such as toll roads, highways, and other public facilities. This makes the area more accessible and attractive to tourists and investors, which in turn increases economic growth and per capita income;
- Denpasar City and Badung Regency have a more skilled and educated workforce compared to other areas in Bali Province. This makes the area more attractive to investors looking for high-quality labor, increasing job opportunities, and per capita income;
- The governments of Denpasar City and Badung Regency have implemented policies that support economic growth and the development of the tourism sector. Some of these policies include tax incentives, reduced licensing costs, and support for the development of the creative industry. This helps accelerate economic growth and per capita income in the area.

Quadrant II, which is an area of high income but low growth, is an area that has a higher per capita income, but a lower growth rate compared to Bali Province. Quadrant III (Gianyar), which is an area of high growth but low income, is an area that has a high growth rate, but a lower per capita income compared to Bali Province. According to the research by Pradnyana and Kresnadewi (2018), the economic growth in the Badung, Denpasar, and Gianyar regencies is driven by the rapidly growing tourism sector. The increase in the number of tourists and investments in the tourism sector is an important factor in the economic growth of these three regencies.

Badung, Denpasar, and Gianyar regencies are the regencies that have the largest contribution to Bali Province's economy. This is due to the tourism sector, which is the main sector in the region. According to the research by Agus, Yulianto, and Wijayanti (2019), the tourism sector in the Badung and Denpasar regencies contributes the most to the GRDP in

Bali Province, namely 39.78% and 23.56%, respectively. Meanwhile, in the Gianyar regency, the tourism sector contributes 17.75% to Bali Province's GRDP (Putra and Wijaya, 2019). Other studies also show the important role of other economic sectors in Bali Province, such as the industrial and trade sectors. For example, the research by Mahadewi, Yulianto, and Putra (2019) shows that the industrial sector provides the second-largest contribution after the tourism sector in the Badung regency, namely 17.73%. Meanwhile, the research by Anom, Jelantik, and Wulandari (2018) shows the potential for developing the trade sector in Bali Province through the concept of halal tourism.

Based on Figure 2, shows that Quadrant IV (Bangli, Buleleng, Karangasem, Klungkung, Jembrana, and Tabanan), which is a relatively underdeveloped area (low growth and low income), has a lower economic growth rate and per capita income compared to Bali Province. The research by Ariani, Arthawan, and Putu (2020) shows that the tourism sector has a positive impact on the economy in the Tabanan regency, although efforts still need to be made to develop tourism potential in the region. The Bangli, Buleleng, Karangasem, Klungkung, Jembrana, and Tabanan regencies are more dependent on the agriculture and fisheries sectors. According to the research by Wijaya, Wijana, and Suartika (2019), the agriculture sector in the Karangasem Regency still has the potential to be further developed, especially in the vegetable and fruit farming sector. In the Bangli regency, the agricultural sector, such as rice, vegetable, and fruit farming, also plays an important role in supporting the economy in the region (Sukada and Astika, 2019). The research by Wijayanti and Yuniarsih (2019) and Ida Bagus and Yuniarsih (2019) shows that the fisheries sector has a significant contribution to the economy in the Klungkung regency. Meanwhile, the research by Siswantini and Setyaningsih (2020) shows that agribusiness can be an alternative to developing the agricultural sector in Bali.

The Impact of the Covid-19 Pandemic on the Economic Patterns and Structures of Regencies/Cities in Bali Province

The Covid-19 pandemic has had a significant impact on the economic structure of Bali Province. Before the pandemic, Bali was one of the provinces with a highly advanced tourism sector. However, the Covid-19 pandemic resulted in a significant decline in the tourism sector in Bali. According to data from the Central Statistics Agency (BPS), Bali's economic growth in 2020 decreased by 9.31% compared to the previous year. The decline in the tourism sector had a broad impact on other sectors, such as hotels, restaurants, transportation, and various small and medium enterprises (SMEs). To mitigate the impact, the Bali government is trying to develop other sectors such as agriculture, fisheries, and the creative industry. However, these efforts have not fully succeeded in replacing the lost income from the tourism sector.

Table 4 – Average Gross Regional Domestic Product (GRDP) Per Capita and Economic Growth of Regencies/Cities in Bali Province from 2011 to 2020

Regency/City	GRDP Per Capita (Thousand Rupiah)	Growth (Percent)
Jembrana	38140,78	4,74
Tabanan	39701,81	4,81
Badung	68374,16	4,37
Gianyar	41288,97	4,92
Klungkung	37523,67	4,67
Bangli	22842,40	4,87
Karangasem	30514,54	4,70
Buleleng	39750,67	5,02
Denpasar	44087,48	5,02
Bali	42972,25	4,76

Source: Data analysis results, 2023.

The Bali provincial government has acted by implementing an economic stimulus program. This program aims to provide financial assistance to SMEs and companies affected by Covid-19. In addition, the Bali government also strengthens the domestic market by promoting local tourism and developing the local creative economy. Despite these efforts, the

tourism sector remains the most important sector for Bali's economy. Therefore, the Bali government continues to strive to restore the tourism sector through various efforts, such as providing incentives to tourists and strengthening health protocols in the tourism sector. Overall, Bali's post-Covid-19 economic structure is still highly dependent on the tourism sector. Efforts to develop other sectors are ongoing but have not been able to fully replace the income from the tourism sector. Therefore, the Bali government must continue to develop other economic sectors and strengthen the domestic market to reduce dependence on the tourism sector. See Table 4 for the Average Gross Regional Domestic Product (GRDP) per capita and Economic Growth of Regencies/Cities in Bali Province from 2011 to 2020.

Covid-19 has had a significant impact on the global economy, including in the province of Bali. The economic impact of the Covid-19 pandemic is particularly evident in the tourism industry, which is Bali's main source of income. International and domestic travel restrictions, as well as social restrictions and lockdowns, have significantly affected Bali's tourism. As a result, many hotels, restaurants, souvenir shops, and certain tour companies have been forced to suspend operations, cut jobs, or go bankrupt. In addition to the tourism sector, other sectors have also been affected by the Covid-19 pandemic. For example, many entrepreneurs in the culinary, transportation, and hospitality sectors are facing economic difficulties. In addition, social restrictions have reduced the demand for goods and services. Small and medium-sized companies in Bali, especially those that rely on tourism and sectors directly affected by the pandemic, are particularly vulnerable to the current economic conditions.

To mitigate the impact of the Covid-19 pandemic on economic growth in Bali, the local government has taken several steps. Some of these include providing financial and non-financial assistance to small and medium-sized companies, strengthening the health sector, and providing tax incentives to sectors affected by the pandemic. However, the impact of the Covid-19 pandemic on economic growth in Bali is expected to continue in the long term. The local government needs to take strategic steps to improve Bali's competitiveness in the global market and create better job opportunities. Along with this, the tourism sector in Bali also needs to find ways to adapt to the new conditions, such as developing the domestic market, strengthening infrastructure, and enhancing human resource capacity in the tourism industry.

Based on Table 4, the pattern and structure of economic growth in regencies/cities in the province of Bali after Covid-19 can be explained with Klassen Typology analysis. The following is Figure 3, the result of the Klassen Typology analysis on the pattern and structure of economic growth in regencies/cities in the province of Bali in 2011-2020.

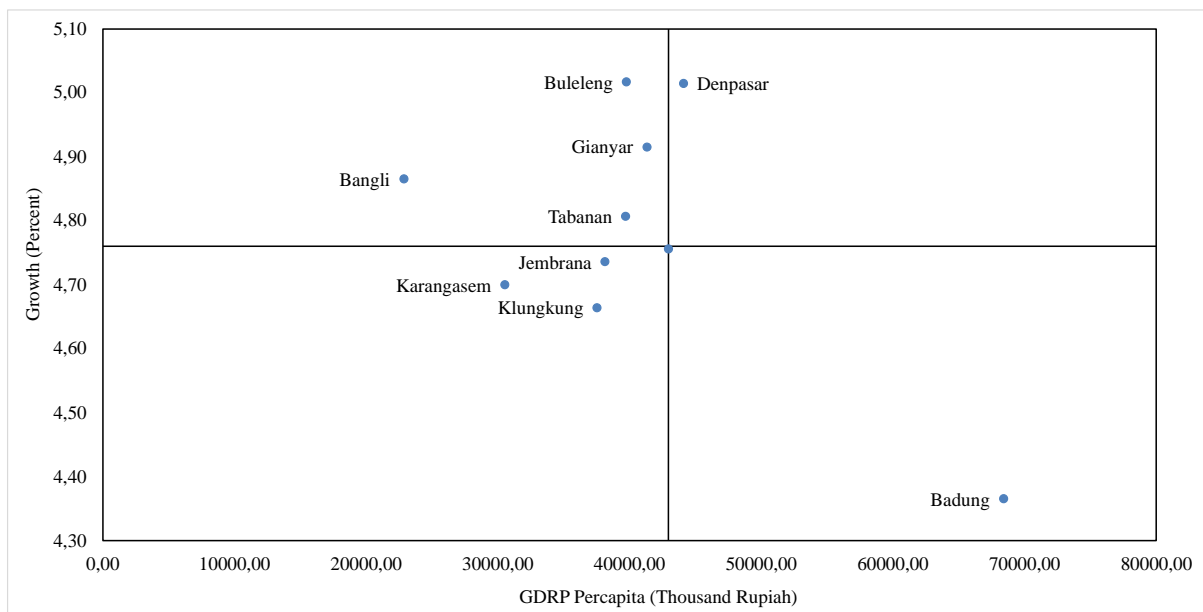


Figure 3 – Result of Klassen Typology Analysis on the Pattern and Structure of Economic Growth in Regencies/Cities in Bali Province in 2011-2020 Source: Data analysis results, 2023

Based on Figure 3, it can be explained that in quadrant I (Denpasar), which is an advanced and fast-growing area, the economic growth and per capita income is higher compared to Bali Province. The advanced and fast-growing areas are regions that have fast and stable economic growth, as well as adequate infrastructure and human resources. This usually occurs in urban or metropolitan areas that have good accessibility and support industrial growth. Research conducted by Agusman, et.al. (2020) shows that advanced and fast-growing regions in Indonesia have characteristics such as good availability of human resources, adequate infrastructure, increasing investment, and high accessibility. Another research conducted by Sari, et.al. (2020) also shows that the economic growth of advanced and fast-growing areas is influenced by investment, availability of infrastructure, and quality human resources.

Government policies that support investment and industrial sector development become important factors in driving regional economic growth. This is evidenced by the success of regions such as DKI Jakarta and West Java in increasing economic growth with these policies (Aminuddin, et.al., 2020). Other research conducted by Pohan (2019) shows that the development of technology and innovation also become important factors in increasing regional economic growth. Regions that can develop technology and innovation, such as regions in West Java and Banten, have faster economic growth compared to other regions. In addition, research conducted by Soedarmono, et.al. (2018) shows that the availability of natural resources and intellectual wealth become important factors in regional economic growth. Regions that have quality natural resources and intellectual wealth, such as North Sumatra and East Java, have the potential to grow into advanced and fast-growing regions. Overall, advanced, and fast-growing regions have several similar characteristics, namely good availability of human resources, adequate infrastructure, increasing investment, high accessibility, government policies that support investment and industrial sector development, development of technology and innovation, availability of natural resources, and intellectual wealth.

Quadrant II (Badung), which is an advanced but suppressed region, is an area that has a higher per capita income, but its growth rate is lower compared to the Bali Province. Since the outbreak of Covid-19, the tourism sector, which is the backbone of the economy in Badung Regency, has experienced a significant decline. As a result, revenue from this sector has plummeted drastically and has caused a significant impact on economic growth in Badung Regency. In addition, the lockdown policy imposed by the government to stop the spread of Covid-19 also affected local businesses. Many shops, restaurants, and entertainment venues in Badung Regency had to close temporarily, and some even had to close permanently. This has resulted in unemployment and reduced income for the community. Other sectors such as industry and trade were also affected. Many companies had to reduce production and even close their factories due to limited supplies of raw materials and difficulty in finding buyers. Not only that, but the Covid-19 pandemic also affected the agricultural industry in Badung Regency. Some farmers had to reduce their production due to difficulties in obtaining fertilizer and planting seeds. This also had an impact on the decline of per capita GDP and economic growth.

Advanced but suppressed regions refer to areas that have the potential for economic and social development but are still faced with several problems or challenges that hinder their progress. Generally, areas like this have stable economic growth, adequate infrastructure, and trained human resources. However, they still face various problems such as social inequality, poverty, and environmental issues. According to Sánchez (2016), in Latin American countries, there has been progressing in some aspects of development such as economic growth and access to education, but there are still many challenges that need to be addressed in terms of gender equality, health, and human rights. Another study by Chikhaoui and Kourouma (2017) found that although Guinea has the potential for industrial development, there are still problems in terms of infrastructure, bureaucracy, and a lack of skills and education needed to enhance competitiveness.

According to Faisal and Azam (2019), Pakistan has several indicators of development that have improved, such as access to clean water and sanitation, but there are still many problems in terms of poverty, social inequality, and the environment. South Korea, which is generally known as an advanced country, also faces problems of advanced but suppressed regions caused by international migration. Kim and Kim (2016) found that although international migration can contribute positively to economic development, such as productivity growth and foreign investment, there are still problems in terms of social inequality and immigrant rights. Meanwhile, Sharma and Garg (2019) found that high levels of unemployment and excessive migration have been barriers to achieving economic and social progress. Advanced but suppressed regions face complex and multifactorial problems. Some factors that can cause these areas to face challenges include social inequality, lack of education and skills, lack of access to infrastructure, and environmental problems.

In Figure 3, quadrant III (Gianyar, Bangli, Buleleng, Tabanan), which is a rapidly developing but not advancing area, is an area that has a high growth rate, but lower per capita income compared to the Bali Province. The category of rapidly developing but not advancing areas are often found in development discussions in various countries around the world. This is related to the fact that although these areas have experienced significant economic growth, there are still unresolved problems such as economic inequality and poverty. According to the study by Rijal and Chhetri (2020), areas categorized as rapidly developing but not advancing have characteristics such as high economic growth but significant social and economic inequality. This often happens because there is a significant gap between urban and rural areas. On one hand, urban areas usually experience rapid economic growth, but on the other hand, rural areas still experience significant underdevelopment. Rijal and Chhetri (2020) state that one of the factors causing areas to be rapidly developing but not advancing is the inability to address fundamental social problems such as poverty and economic inequality. In addition, the lack of investment in the education, health, and infrastructure sectors is also a factor that influences the underdevelopment of a region.

Another study conducted by Lassa and Lusli (2019) showed that West Papua Province in Indonesia has experienced significant economic growth in recent years but still lags in the education, health, and infrastructure sectors. Although the government has made various efforts to improve development in the region, greater efforts are still needed to address fundamental issues. Areas categorized as rapidly developing but not advancing often have characteristics such as high economic growth but significant social and economic inequality. Factors such as the inability to address fundamental social problems and the lack of investment in the education, health, and infrastructure sectors are also caused. Therefore, greater efforts are needed from the government and society to address these issues, so that the region can advance evenly and sustainably.

In quadrant IV (Jembrana, Klungkung, Karangasem), which are relatively underdeveloped areas, the level of economic growth and per capita income is lower compared to Bali province. These relatively underdeveloped areas are categorized as such because they still experience backwardness in various aspects, such as education, health, and the economy. Research conducted by Wibowo and Purwati (2020) shows that areas categorized as relatively underdeveloped have characteristics such as low levels of human development, a weak economy, and a lack of infrastructure. This often occurs because these areas receive less attention from the government and society compared to more developed regions. Research by Husnul Khotimah and Fitriyah (2020) shows that one of the factors causing an area to be relatively underdeveloped is a lack of access to education and health. In addition, problems such as poverty and socioeconomic inequality are also other causes.

Suhaimi and Ahyar (2019) show that in Indonesia, areas such as Papua and Maluku still experience underdevelopment in various aspects such as education, health, and the economy. This is related to a lack of attention and investment from the government and society. Other research conducted by Miriam van der Ree and Harry Wels (2019) shows that in Africa, areas such as Ethiopia and Rwanda also still experience significant underdevelopment in various aspects, such as health and economy. This is related to

problems such as poverty and conflicts in those areas. Meanwhile, Brun, Laporte, and de Quatrebarbes (2017) found that in Africa, relatively underdeveloped areas also have problems with access to infrastructure such as electricity and clean water. This affects economic growth and the welfare of the people in those areas. Areas categorized as relatively underdeveloped often have characteristics of backwardness in various aspects such as education, health, and economy. Factors such as a lack of attention and investment from the government and society, poverty and socio-economic inequality, and a lack of access to infrastructure are also the causes of underdevelopment in those areas. Therefore, greater efforts from the government and society are needed to improve development in these areas so that they can advance evenly and sustainably.

Disparities in Economic Development in Bali Province

Economic development disparities refer to imbalances in the growth and development of the economy between regions or areas within a country. This phenomenon is caused by various factors, including differences in natural resources, accessibility to markets and infrastructure, government policies, and social factors such as education and health. This imbalance can lead to economic and social inequality between the involved regions, which in turn can trigger conflicts and social instability. Previous research has shown significant economic development disparities in many countries worldwide.

A study by Janzen et al. (2021) evaluated economic disparities between urban and rural areas in Indonesia and found that the manufacturing and service sectors in large cities grow faster than in rural areas. This study indicates that better access to markets and infrastructure in large cities plays a significant role in economic inequality. Another study by Odedokun (2019) analyzed economic development disparities in Africa and found that differences in factors such as education level and availability of natural resources can affect economic inequality between countries in the region. This study also showed that government policies promoting economic growth and reducing regional imbalances can help address economic disparities.

In a global context, research by Milanovic (2016) found that economic disparities between developing and developed countries have increased in recent decades. This study shows that factors such as globalization and technological development have strengthened the role of more advanced economies and increased the gap between richer and poorer countries. Economic development disparities are a significant phenomenon in countries worldwide, and previous studies indicate that factors such as accessibility to markets and infrastructure, government policies, and social factors play a crucial role in economic imbalances. Coordinated and targeted efforts to address economic disparities can help create more even growth and reduce economic and social inequality.

Table 5 – Average Gini Ratio and Williamson Index Values for Regencies/Cities in Bali Province from 2011 to 2020

Regency/City	Gini Ratio	Williamson Index
Jembrana	0,35	0,03
Tabanan	0,35	0,02
Badung	0,33	0,21
Gianyar	0,32	0,01
Klungkung	0,37	0,03
Bangli	0,31	0,11
Karangasem	0,31	0,10
Buleleng	0,33	0,03
Denpasar	0,36	0,01

Source: Data analysis results, 2023.

Disparities in economic development can be measured using various indicators, one of which is the Gini Ratio and Williamson Index. The Gini Ratio is an indicator used to measure income or wealth inequality in a country or region. The Gini Index can be calculated by dividing the area above the Lorenz curve by the total area of the triangle formed by the 45-

degree line and the horizontal axis. The higher the Gini Ratio value, the greater the gap between the rich and the poor. The Williamson Index is used to measure disparities or inequalities between countries in terms of income. However, this index can also be applied to measure disparities or inequalities between regions within a country, such as regencies/cities in Bali Province. To measure disparities between regencies/cities in Bali Province, it is necessary to calculate the Williamson Index value for each region. Table 5 shows the average Gini Ratio and Williamson Index values for regencies/cities in Bali Province from 2011 to 2020.

Based on Table 5, the regencies/cities in Bali Province have relatively low Gini Ratios, ranging from 0.31 to 0.37. This indicates that the distribution of income among the population in these regions is relatively equal. However, inter-regional disparities still occur, as indicated by the different values of the Williamson Index, which are still in the low inequality category with a Williamson Index of less than 0.35. Economic disparities measured by Gini Ratio and Williamson Index can be useful indicators for understanding economic development disparities. Research by Aulia and Putri (2021) using data from 2019 showed that the Williamson Index can be a more accurate indicator in measuring economic development disparities between Indonesia and other ASEAN countries compared to other indicators such as the Human Development Index (HDI) and Gini Ratio. Meanwhile, other research by Trisnawati et al. (2020) using data from 2018 showed that income inequality in Indonesia tends to increase based on the Gini Ratio.

Indicators for measuring economic development disparities are tools for assessing the level of inequality in economic growth and development between regions or areas in a country. Other indicators that can be used include productivity, per capita income, and Employment Index. A study by Cheong et al. (2021) showed that productivity is an important indicator in measuring economic disparities. This study showed that higher productivity in large cities compared to rural and small towns can trigger economic disparities between these regions. Therefore, efforts to increase productivity in regions with slower economic growth need to be a priority in addressing economic disparities.

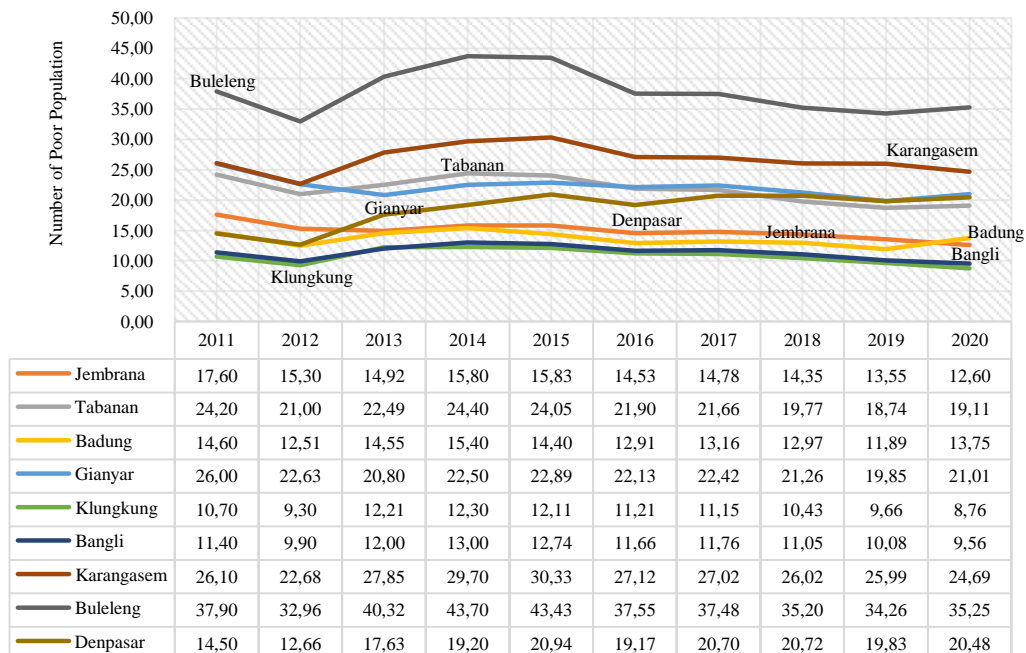


Figure 4 – Number of Poor Population in Bali Province by Regency/City in the Years 2011-2020 (Thousand People). Source: Data analysis results, 2023

The income per capita index is often used as an important indicator in measuring economic disparities. A study by Hosen, et.al. (2021) shows that differences in per capita

income between urban and rural areas in Bangladesh can be a major factor in economic imbalance. This research indicates that factors such as government policies in increasing investment and accessibility to markets and infrastructure can help reduce the disparity in per capita income between these regions. The employment index is also an important indicator in measuring economic disparities. A study by Zanariah, et.al. (2020) shows that the employment inequality between urban and rural areas in Malaysia can affect economic growth and social welfare. This research indicates that factors such as government policies in increasing skills and workforce quality in rural areas can help address employment imbalances and accelerate equitable economic growth.

Indicators for measuring economic development disparities are crucial in identifying economic and social inequalities between regions within a country. Indicators such as productivity, per capita income, and employment index can assist governments in identifying economic imbalance issues and designing targeted policies to address these disparities. The use of a single indicator is not sufficient to comprehensively measure economic development disparities, and other indicators such as the Human Development Index, unemployment rate, and poverty should also be considered. Poverty is a condition in which an individual or group of people lack access to basic needs such as food, clothing, shelter, health, and education. Poverty can also be interpreted as a lack of resources necessary for a decent standard of living. See Figure 4 for the number of poor people in Bali Province by regency/city from 2011-2020.

Poor people in Bali Province still face various welfare issues such as access to sufficient food, decent housing, and adequate sanitation. In addition, poverty also affects the emotional and psychological well-being of poor communities, as they often experience stress and pressure due to difficult financial conditions. Poor communities without access to adequate education and health care, as well as limited opportunities in the economic sector, tend to lag in economic development. Poverty can also affect the productivity and quality of human resources, thus slowing down the economic development of an area. Other factors such as inadequate infrastructure, unsustainable natural resource management, and uneven development policies can also contribute to economic development disparities in Bali Province.

To address poverty and economic development disparities in Bali Province, the government needs to take several strategic steps. Some of them are increasing access to adequate education and health care, increasing the participation of poor communities in the economic sector, as well as increasing investment in sustainable infrastructure and natural resource management. In addition, the government needs to implement fair and equitable development policies for all segments of society, so that economic development disparities in Bali Province can be significantly reduced. Areas with high levels of poverty indicate income distribution inequalities within the region. Research conducted by Suryaningsih and Suryanto (2019) in Indonesia showed that poverty is one of the indicators used to measure income disparities between regions in Indonesia. This study used secondary data from the Central Statistics Agency and showed significant disparities between average incomes in wealthy and poor regions in Indonesia.

Poverty can also be used as an indicator for measuring social inequality in a country. Countries with high levels of poverty indicate significant social inequalities between rich and poor communities. Social inequality can have an impact on political stability, economic instability, and other social problems. Research conducted by Parikh and Mishra (2019) in India showed that poverty is one of the factors that affect social inequality in India. This study used secondary data from the World Bank and showed significant social inequalities between rich and poor communities in India.

The Relationship between Per Capita GDP and Economic Development Disparities in Bali Province

Per capita GDP and economic development disparities are two concepts that are interrelated in understanding economic growth in a region. Per capita GDP is used as an important indicator in measuring the level of prosperity in a region, while economic

development disparities measure the level of inequality between more advanced and less developed areas in terms of economic growth. Per capita GDP and economic development disparities in Bali Province are two important issues in the economic development of the region. Bali is one of the provinces in Indonesia that has a rapidly developing tourism sector. Economic growth in Bali in the past decade has been quite rapid, but economic growth has not been evenly distributed throughout Bali, so economic development disparities remain an issue that needs to be addressed.

From the period of 2011 to 2020, the per capita GDP in Bali significantly increased. In 2011, the per capita GDP in Bali was Rp 26.43 million, while in 2020, the per capita GDP in Bali increased to Rp 51.18 million. The increase in per capita GDP indicates that economic growth in Bali has been quite rapid during this period. Although there has been a significant increase in per capita GDP, economic development disparities in Bali are still relatively high. Data from the Central Bureau of Statistics shows that in 2020, there were significant differences in per capita GDP among the regencies and cities in Bali. The highest per capita GDP was found in Badung Regency at Rp 72.03 million, while the lowest per capita GDP was found in Bangli Regency at Rp 29.42 million. In addition, there are also differences in poverty levels between more advanced and less developed areas in Bali. The causes of economic development disparities in Bali can be attributed to several factors as follows:

- The gap between the tourism and agricultural sectors in Bali. The tourism sector in Bali is the main source of income for the province, while the agricultural sector is still relatively underdeveloped. This results in an unequal distribution of income among the people of Bali;
- The gap between urban and rural areas. Urban areas such as Denpasar and Badung have higher rates of economic growth compared to rural areas. This is due to investment in the tourism sector being more concentrated in urban areas, as well as better access to economic resources and infrastructure;
- Unequal access to education and skills. Disparities in access to education and skills can cause gaps in job opportunities and income. People with better education and skills will have greater opportunities to get higher-paying jobs, while those who are less skilled or less educated will have difficulty competing in the job market.

The “inverted-U” Kuznets hypothesis states that in the long run, income inequality in a region will first increase during economic growth, and then decrease after a certain turning point known as the inflection point. In the context of per capita GDP and economic development disparities, this hypothesis implies that when per capita GDP in a region is still low, there will be high-income inequality among its population. However, when per capita GDP reaches a certain point, income inequality will begin to decrease as economic development increases. Below is Figure 5 showing the relationship between per capita GDP and income inequality in Bali Province from 2011-2020.

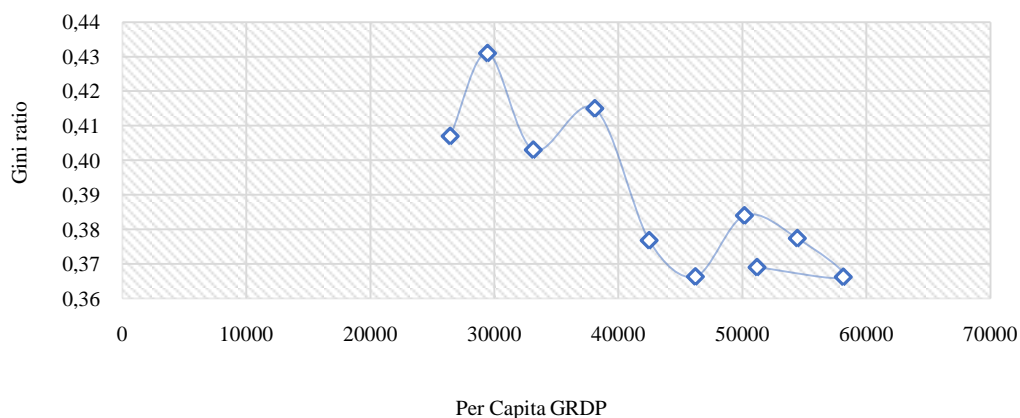


Figure 5 – Relationship between Per Capita GRDP and Income Inequality in Bali Province in 2011-2020 (Source: Data analysis results, 2023)

Based on Figure 5, the relationship between per capita gross regional domestic product (GRDP) and income inequality in Bali province from 2011-2020 conforms to Kuznets's "inverted U" hypothesis. Kuznets "inverted U" hypothesis is a theory that states that income inequality in a region tends to increase during economic growth, but after reaching a certain point, income inequality will decrease along with increasing per capita income. This hypothesis was first proposed by Simon Kuznets, an American economist, in 1955. Kuznets observed historical data on income inequality and economic growth in the United States for almost a century and found that although income inequality increased during the early period of economic growth, it then decreased after reaching a certain point.

This hypothesis has been debated by economists in recent years, as some studies have shown results that contradict the theory. Some studies have observed the relationship between economic growth and income inequality in various countries and found that the "inverted U" curve does not always apply. One study that supports Kuznets's "inverted U" hypothesis is a study conducted by Milanovic (2016) on global income inequality. Milanovic found that global income inequality has increased over the past few decades, but as per capita income in developing countries increases, global income inequality is likely to decrease. Another study that supports this hypothesis was conducted by Ravallion and Chen (2015), who studied data on income inequality and economic growth in China. This study showed that although income inequality increased during the rapid economic growth period in China, it then decreased as China's economy continued to develop.

Research on income inequality in other Asian countries also shows the application of the "inverted-U" curve, as in Indonesia, Thailand, and the Philippines (Permani & Pilapil, 2019). Rahman (2014) found that Kuznets' "inverted U" hypothesis applies in Bangladesh, where when per capita GRDP is still low, economic development disparities are increasing. However, after per capita GRDP reaches a certain point, economic development disparities begin to decrease. In addition, some studies also show that Kuznets' "inverted-U" hypothesis can be explained through certain factors such as education, technology, and the ability of governments to regulate the economy. Galor and Zeira (1993) found that investment in education can play an important role in reducing income inequality in a country.

Several studies also show results that contradict Kuznets's "inverted U" hypothesis. A study conducted by Sala-i-Martin (2002) found that the relationship between economic growth and income inequality does not exhibit an inverted U-curve on a global scale. This research indicates that income inequality tends to increase with economic growth worldwide. Another study that examined the relationship between per capita GDP and Kuznets inverted U hypothesis is the study conducted by Li et al. (2017) in Guangdong Province, China. This study shows that the inverted U hypothesis of Kuznets does not fully apply in Guangdong Province due to other factors such as urbanization and technological progress that affect the disparity of economic development. Despite the differing results in research on the relationship between per capita GDP and economic development disparities with Kuznets's inverted U hypothesis, this concept remains an important tool in understanding the relationship between economic growth and income inequality in a country. For policymakers, knowledge of Kuznets's "inverted U" hypothesis can help determine the appropriate economic development strategy to reduce income inequality in a country.

CONCLUSION

Based on the results of the study on the economic development disparities in Bali Province using the Klassen Typology analysis method and the Williamson Index, several conclusions can be drawn as follows:

- The pattern and structure of economic growth in Denpasar City and Badung Regency during the period of 2011-2019 were in quadrant I, which is a region that is advanced and growing rapidly (high income and high growth). Meanwhile, from 2011 to 2020, the pattern and structure of economic growth in Denpasar City remained in Quadrant I, but Badung Regency was in Quadrant II, which is an advanced but depressed region (high income but low growth);

- The pattern and structure of economic growth in Gianyar Regency during the period of 2011-2019 were in quadrant III, which is a region that is growing rapidly but not advanced (high growth but low income). Meanwhile, from 2011 to 2020, the pattern and structure of economic growth in Gianyar Regency remained in quadrant III;
- The pattern and structure of economic growth in Bangli, Buleleng, Karangasem, Klungkung, Jembrana, and Tabanan Regencies during the period of 2011-2019 were in quadrant IV, which is a relatively underdeveloped region (low growth and low income). Meanwhile, from 2011 to 2020, the pattern and structure of economic growth in Bangli, Buleleng, and Tabanan Regencies were in Quadrant III, but Jembrana, Klungkung, and Karangasem Regencies remained in Quadrant IV;
- Regencies/cities in Bali Province have a relatively low Gini Ratio, ranging from 0.31 to 0.37. This indicates that the distribution of income among the population in the region is relatively even. However, regional disparities still exist, as shown by the different values of the Williamson Index, which are still in the category of low-level disparities with a Williamson Index value of less than 0.35;
- The relationship between per capita GRDP and income inequality in Bali Province during the period of 2011-2020 supports the "inverted-U" hypothesis of Kuznets, which states that income inequality in an area tends to increase during economic growth, but after reaching a certain point, income inequality will decrease as per capita income increases.

Based on the results of this research, the following recommendations can be provided to researchers, the public, and the government:

- Development of other economic sectors in Bali besides the tourism sector. This will reduce dependence on the tourism sector and increase economic diversification in Bali. In addition, the development of other economic sectors such as agriculture and industry can also improve income distribution and reduce economic disparities;
- Development of infrastructure and accessibility to underdeveloped areas in Bali. This can improve access to markets and other economic resources, as well as increase the mobility of residents and investment in underdeveloped areas;
- Investment in education and skills training in underdeveloped areas. This will help increase access to education and skills, as well as improve job opportunities and income in those areas;
- The government should coordinate and collaborate more effectively with relevant stakeholders such as the community, private sector, and international parties while considering aspects such as environmental sustainability and social justice in developing Bali's economy. In terms of environmental sustainability, Bali is a well-known tourism destination with its natural beauty, so efforts should be made to preserve the environment to maintain sustainable tourism. These efforts can be done through sustainable natural resource management, the use of environmentally friendly technology, and the promotion of sustainable tourism. In terms of social justice, efforts should be made to improve the welfare of Balinese people evenly. The government should pay attention to Balinese people's access to health and education services, as well as the availability of decent job opportunities. In addition, efforts should be made to increase community participation in economic decision-making related to their interests;
- Further research on economic development disparities is expected to use more indicators such as education, and unemployment, and expand the geographic area studied. Additionally, researchers should involve more stakeholders such as the government, private sector, and the community in the research to provide different and comprehensive perspectives on economic development disparities.

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