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Inequlity of Economic Development Between Districts in Bali Province

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Abstract	
Keywords: Development; Economic; Inequity; Williamson Index.	Economic development is an effort to improve people's welfare, but must be accompanied by growth and distribution of income. The objective of this research are (1) to analyze the level of inequality in economic development between districts/city in Bali Province with and without Badung Regency, (2) di draw the trend lines of economic development between districts/cities in Bali. Source of data is Bali Province Central Statistics Agency. Methof of data analysis uses the Williamson Index. The results of the research showed that (1) The inequality of economic development between districts/city in Bali in 2000-2016 was low but close to moderate, indicated by the Williamson Index average of 0.35. Inequality of economic development between districts/city in Bali for the period 2000-2004 is classified as moderate, indicated by the Williamson Index of 0.38. Badung district has a contribution to increase inequality in economic development between districts/city in Bali as indicated by an increase in the average Williamson Index between districts/city in Bali (without Badung District) of 0.18 (low), while The Williamson index between districts/city in Bali Province (with Badung District) is 0.35 (low to medium).(2) The trendline of inequality in economic development between districts/cities in Bal Province tends to decrease.

INTRODUCTION

Development is a process of change for the better than before. While economic development is essentially aimed at improving people's welfare, economic development must be accompanied by growth and distribution of income. According to Sukirno (2006) and Todaro & Smith (2015) that conomic development is defined as a series of efforts to develop economic activities, so that more infrastructure is available, more and more companies are developing, people's education levels are getting higher and technology is increasing. The implication of this development is that it is hoped that job opportunities will increase, the level of community income will increase, and the prosperity of the community will be higher.

However, in reality, in the economic development of a region, the results of high economic growth which are the main indicators of development are not disserted by the existence of equal distribution of people's income, resulting in development gaps between regions and between community groups. According to Kuncoro (2004) inequality is caused by differences in the content of natural resources and differences in demographic conditions found in each region. As a result of this difference the ability of a region in the development process also becomes different, so that there are developed regions and underdeveloped regions. According to Sjafrizal (2008) development inequality can also be seen vertically, namely the difference in income distribution and horizontally, namely the difference between developed and underdeveloped regions. Economic inequality is often used as an indicator of differences in average income per capita, between income level groups, between employment groups, and or between regions. Meanwhile, according to Widiarto (2001) the average per capita income of a region can be simplified into Gross Regional Domestic Product divided by the total population. Another way that can be used is to base it on personal income which is approached with a consumption approach. Meanwhile, according to Arsyad (1999) that in developing countries, economic growth is not able to reduce poverty and provide productive employment opportunities.

In looking at the inequality of economic development between regions as well as between districts/city in Bali Province, it can be seen from the differences in income and expenditure (*APBD*) between district/city, where the *APBD* mostly comes from Regional Original Income. The more striking the difference in the *APBD* between districts, the more unequal economic growth tends to be between districts, and in the end, the distribution of income between districts will be more unequal. Judging from the value of GRDP per capita of each district/city in the province of Bali for the last five years (2012-2016) (BPS Bali, 2016) there appears to be a significant difference in values. Badung District has a very high per capita GRDP value, higher than other districts, even reaching three times the lowest per capita GRDP value, namely Bangli District in 2016.

Based on financial statistical data for district/city governments throughout the Province of Bali in 2017, Jembrana and Bangli Districts have a degree of fiscal decentralization in the very low group with an average degree of fiscal decentralization from 2012 to 2016 below 10%. Furthermore, the District of Tabanan, Karangasem, Buleleng and Klungkung are noted to have a low degree of fiscal decentralization (10%-20%). Meanwhile, Gianyar District is classified as having a moderate degree of fiscal decentralization (28.36%), and Denpasar City is included in the group with a good degree of fiscal decentralization (41.02%). Badung District can only achieve a very good degree of fiscal decentralization with achievements 77.99%.

If it is seen from the *APBD* realization data and the average degree of fiscal decentralization of each region, there is a significant difference in the value of each region, especially Badung District compared to other Districts/city. This triggers a gap between regions seen from the management of each region's funds with the aim of economic development. Based on this, it can be said that there is an imbalance in economic growth between regions in the Province of Bali. To clarify the inequality that occurs, it is necessary to conduct a research on "inequalities in economic development between districts in the province of Bali". The results of the research are expected to be used as recommendations for district and provincial governments in making development policies in order to reduce inequality between districts/cities in Bali Province.

Based on the previous description, the purpose of this study are: (1) to analyze the level of inequality in economic development between districts/cities in Bali Province with and without Badung Regency, and (2) to drawing trend lines of economic development between districts/cities (9 districts/cities) in Bali Province. The novelty this research is inequality of economic development between districts/cities in Bali Province in 2000-2016 was low but close to moderate, as indicated by the Williamson Index average of 0.35.

RESEARCH METHODS
Research Location

This research was conducted in the province of Bali which includes nine districts/city that were selected purposively. According to Neuman (2015), Durbarry (2018) and Veal (2018), the choice of research location is purposive, it must be based on several considerations. So the selection of Bali as the research location was based on considerations, namely: (1) From the *APBD* realization data and the average degree of fiscal decentralization of each region, there are significant differences in the value of each region, especially Badung District compared to other districts/city, so it is interesting to conducted research on inequality of economic development; (2) There has never been a research on the analysis of economic development inequality between districts/city in the Province of Bali.

Data Types and Sources
Data Type

Types of data according to their nature are divided into quantitative data and qualitative data. The types of quantitative data are data on GRDP, GRDP per capita, *PAD*, investment, population, Human Development Index (HID), economic growth,

Gini ratio, and the area of Bali Province. While the qualitative data in this study are supportive and related to the problem under study, namely the opinions of experts, other relevant research, and information on the general description of the Province of Bali from BPS.

Data source

The data source of this research is a secondary source, namely the Central Bureau of Statistics of the Province of Bali (BPS Bali, 2017; BPS Bali, 2018; BPS Bali, 2019), which obtained secondary data from 2000 to 2016 which has been published by the BPS for the Province of Bali or the BPS for districts/city throughout the Province of Bali, the Investment Coordinating Board and other sources such as journals, books and websites.

Method of collecting data

The data collection method in this research is a documentation study, namely studying data documents and data archives available in the publications of the Bali Provincial *BPS*, and literature study, which is a technique for obtaining information through notes, literature, and other data relevant to this research.

Types, Measurements and Operational Definitions of Variables
Variable types and measurements
In this study the types and measurements of variables are presented in table 1.

Table 1. Types and Measurement of Economic Development Inequality Variables in Bali Province

No.	Variable	Measurement
1	Economic Inequality	Ratio
2	Economic growth	Ratio
3	Region Original Income (*PAD*)	Ratio
4	Total population	Ratio

Variable Operational Definition

To provide a common understanding of the variables in the study of the Inequality Level of Economic Development in Bali Province, it is necessary to have an operational definition of variables regarding the definition of variables used in research, including:

1) Economic growth is the rate of increase in the value of GRDP on the basis of constant prices every year that occurs in the Province of Bali.

2) Gross Regional Domestic Product (GRDP) is the gross added value of a number of productions produced by all economic sectors of a region within a certain period without regard to ownership of production factors expressed in rupiah. GRDP data used in this study is GRDP data at Current Prices (*Atas Dasar Harga Berlaku. ADHB*).

3) Regional Original Revenue (*Pendapatan Asli Daerah, PAD*) is regional revenue sourced from regional taxes, regional retribution proceeds, separated regional wealth management results, and other legitimate regional original income, which aims to provide flexibility to regions in exploring funding in

implementation of regional autonomy as a manifestation of the principle of decentralization.
4)   The total population is the number of people in an area (people). The population in this study is the population of districts/cities in Bali Province and the total population of Bali Province.

Data Analysis Method
Williamson Inequality Index

Analysis of inequality between districts in Bali Province used the Williamson Inequality Index. The measure of inequality between regions was first discovered by Jeffrey G. Williamson, who later named this measure the Williamson Index as a tribute to him because he first used this technique to measure development inequality. The Williamson index uses per capita GRDP as a baseline because what is being compared is the level of development between regions. In the formulation of this index, it can be seen in the formula below.

$$\text{WI} = \frac{\sqrt{\sum_{i=1}^{n}(yi - \bar{y})^2(\frac{fi}{n})}}{\bar{y}}, \ \ 0 < Vw < 1$$

Information:
WI   = Williamson Index.
yi   = Regional per capita income i
ȳ   = Average income per capita of all regions
fi   = Total population of area i
n   = Total population of the whole area

The measurement results of the Williamson Index value are indicated by the number 0 to 1 or 0 < WI < 1. If the Williamson index is getting closer to 0, then the inequality in economic development is getting smaller. If the Wilson index is closer to 1, the inequality in economic development will widen (Sjafrizal, 2008; Gluschenko, 2015).

The inequality criteria can be seen as follows:
• If, WI ≤ 0.35   → the level of inequality is low
• If, 0.35 < WI ≤ 0.50   → the level of inequality is moderate.
• If, WI > 0.50   → the level of inequality is high

RESULTS AND DISCUSSION
Inequality in Economic Development Between Districts/Cities in Bali Province, with and without Badung Regency

Inequality in regional economic development is a common aspect in the economic activities of a region. This inequality is basically caused by differences in the content of natural resources and differences in demographic conditions found in each region, if in Bali the area is a district. As a result of these differences, the ability of a region or district to encourage the process of economic development is also different.

Concentration of economic activity in a particular area directly has an impact on income inequality between regions or districts, which tends to create conditions in which areas that become centers of concentration of economic activity will be

better able to provide higher incomes to their people, so that people are relatively more prosperous, while regions which is not a center of economic activity is only able to provide low income which results in the relatively low prosperity of the people.

The results of calculating the level of inequality in economic development between districts/cities in Bali Province (with Badung District) with the Williamson Index (WI) analysis in the period 2000 to 2016 showed an average WI value of 0.35, which means inequality is included in the low category, but this value is very thin towards the category of moderate inequality. The highest IW values occurred in 2000, 2001, and 2002 with a value of 0.38 in the medium inequality category, while the lowest WI values occurred in 2015 and 2016 of 0.31 in the low inequality category as presented in Table 2 column 1. Inequality between districts in Bali Province (including Badung District) can be grouped into two, namely the level of moderate inequality and the level of low inequality. The level of inequality was moderate in 2000-2004, and the rest from 2005 to 2016 were included in the low level of inequality.

However, the results of the calculation of the level of inequality in economic development between district/city in the province of Bali (without Badung District) as presented in Table 2 column 2 produce a Williamson Index of 0.8. This means that the level of inequality in economic development between districts/cities in Bali Province is low without Badung District.

If compared the inequality of economic development between districts/cities in Bali Province between "with Badung District" and "without Badung District" as presented in Table 2 columns 1 and 2, it appears that Badung District provides the largest contribution to the increase in inequality economic development between districts/cities in Bali Province, namely WI of 0.18 (without Badung District) tobe 0.35 (with Badung District). The increasing inequality in economic development between districts/cities in Bali Province (with Badung Regency) is caused by the high revenue of the Badung District *APBD* in 2016 reaching 4.33 trillion rupiah and spending 4.16 trillion rupiah and the achievement of fiscal decentralization reaching 77.99% (very good) and also influenced by the higher value of GRDP and GRDP per capita of Badung District, which indicates the magnitude of the power in carrying out economic development.

Table 2. Inequality of Economic Development between Districts/Cities in Bali Province with and without Badung District in 2000-2016

Inequality of Economic Development between Districts/Cities in Bali Province (with Badung District)			Inequality of Economic Development between Districts/Cities in Bali Province (without Badung Regency)		
Year	Williamson Index	Inequality Level	Year	Williamson Index	Inequality Level
2000	0.38	Moderate	2000	0,21	Low
2001	0.38	Moderate	2001	0,20	Low
2002	0.38	Moderate	2002	0,19	Low
2003	0.36	Moderate	2003	0,18	Low
2004	0.36	Moderate	2004	0,19	Low
2005	0.35	Low	2005	0,18	Low
2006	0.33	Low	2006	0,17	Low
2007	0.33	Low	2007	0,17	Low
2008	0.33	Low	2008	0,16	Low
2009	0.35	Low	2009	0,16	Low
2010	0.35	Low	2010	0,16	Low
2011	0.34	Low	2011	0,15	Low
2012	0.35	Low	2012	0,15	Low
2013	0.35	Low	2013	0,16	Low
2014	0.32	Low	2014	0,17	Low
2015	0.31	Low	2015	0,17	Low
2016	0.31	Low	2016	0,16	Low
Average	**0.35**	**Low**	**Average**	**0,18**	**Low**

Source: Results of data analysis (2000-2016)

The level of ineuality in economic development in all regencies/cities in Bali Province is relatively low, as indicated by the Gini coefficient ratio of 0.3663 in 2016. This means that there is an even distribution of economic development in all regencies/cities in Bali Province.

In contrast to the Williamson Index which shows inequality between regions, while the Gini ratio shows inequality in an area or more precisely the distribution of people's income in an area. However, the Williamson Index and the Gini ratio both indicate the level of inequality that occurs in the Province of Bali is included in the low category.

Economic development in Bali Province is not only dominated by Badung District, but also balanced by other districts/cities, so that there is no striking economic development gap between one district and another. This seems to be due to the implementation of Regional Autonomy (*Otonomi Daerah, Otda*) in 2001, where local governments (districts or provinces) have fiscal authority through transfers of funds from the central government to local governments in the form of the General Allocation Fund (*Dana Alokasi Umum, DAU*) at the beginning of the year and the Special Allocation Fund (*Dana Alokasi Khusus, DAK*) in the middle of the year which

encourages regions to take advantage of the potential of their regions to improve the regional economy.

The result of this research different with other result of the research because use the different method. This research use the Williamson Index Method to analysis the inequality of the economic development, but other research use the multiple linear regression. Like, Syahputra et. al, 2019) in his research Analysis of Economic Development Inequality in North Sumatra Province using multiple linear regression found that Investment has a negative and not significant effect on inequality in economic development in North Sumatra Province. The workforce has a positive and significant influence on inequality in economics development in North Sumatra Province. The allocation of regional development assistance funds has a negative and significant impact on economy development inequality in North Sumatra Provinces. Investment, labor force, government expenditure together (simlutan) have a significant effect on inequality in economic development in North Sumatra Province. However Layasari et al. (2021) to analysis the Influence of Economic Potential on Inequality of Economic Zones between Regencies / Cities in South Sumatra Province use the Williamson Index find that sectoral economic development will also increase inequality. Economic development in the early stages of a region is generally characterized by the production of the dominant primary sector in the economy, so that at the beginning of development, an increase in economic growth is also followed by an increase in inequality.

Nida (2011) from the results of a study entitled "The Williamson Index (measure of inequality) of West Java Province in 2002: found that West Java Province in 2002 had a Williamson inequality of 0.64 (close to 1), then based on the provisions of Williamson inequality, in In 2002 in the province of West Java, there was a high distributional inequality, namely the occurrence of uneven economic growth between regions.Factors causing inequality: (1) Migration of productive/skilled/educated population to areas that have developed, because there they can get higher wages/salaries; (2) Investments tend to apply in areas that have developed due to market factors, etc., where the profit is relatively larger, as well as the risk of loss is relatively smaller in general; (3) Government policies tend to result in the concentration of social and economic capital in areas that have developed due to greater demand.

Identifying Trend lines of Eeconomic Development Between Districts/City in Bali

Judging from the trendline of the Williamson Index, the years 2000 to 2003 showed the highest number, then there was a downward trend as shown in Figure 1, at which time there was a convergence process as stated by the Neo-Classical hypothesis (Todaro & Smith, 2015) that at the beginning of a country's development process, inequality in development occurred. between regions tends to increase, if the development process continues, then the development inequality between regions will gradually decrease. It is estimated that this decrease in inequality is mainly due to the implementation of regional autonomy which began in 2001 which encouraged local governments to increase economic growth in their respective regions so that regional inequality as a whole tends to decrease.

Bali, which is known as a world tourist destination, has great tourism potential, so tourism development plays an important role in the Balinese and national economy. Antara & Sumarniasih (2017) said that the contribution of Bali tourism to the National Tourism is such important, because 36% of the total foreign tourists visiting Indonesia in 2015 came directly to Bali. This shows that the Bali tourism destinations are a potential major source of foreign exchange of Indonesia government. Hence, the Indonesian government is currently very hope that tourism becomes source of foreign exchange complementary foreign exchange from exports of agricultural commodities and oil and gas.

The rapid development of tourism in Bali has not only played a role in the Balinese economy, but has also led to a transformation of the economic structure in several districts in Bali from the primary sector (agriculture in the broadest sense) to the tertiary sector (services related to tourism). For example, in Karangasem District, the tourism sector (tertiary) which is represented by the transportation and warehousing business field as well as the provision of accommodation & food and drink contributed to the Gross Regional Domestic Product (GRDP) of Karangasem by 25.41% in 2013 increasing to 28.57% in 2016, or for three years it increased by 3.16%. The opposite happened in the Agriculture, Forestry, & Fisheries sector (primary sector) which contributed to the GRDP of Karangasem District by 27.72% in 2013 decreased to 26.21% in 2016, or for three years it decreased by 1.51%. The transformation of the economic structure does not only occur in Karangasem District, it also occurs in Badung District whose economy is dominated by tourism. (Antara & Sumarniasih, 2018) found that the economy of Badung District during the last five years (2011-2015) underwent the transformation of economic structure from agricultural economy (primary) to service economy (tertiary), followed by shift of labor absorption from agricultural sector to service sector, especially tourism services.
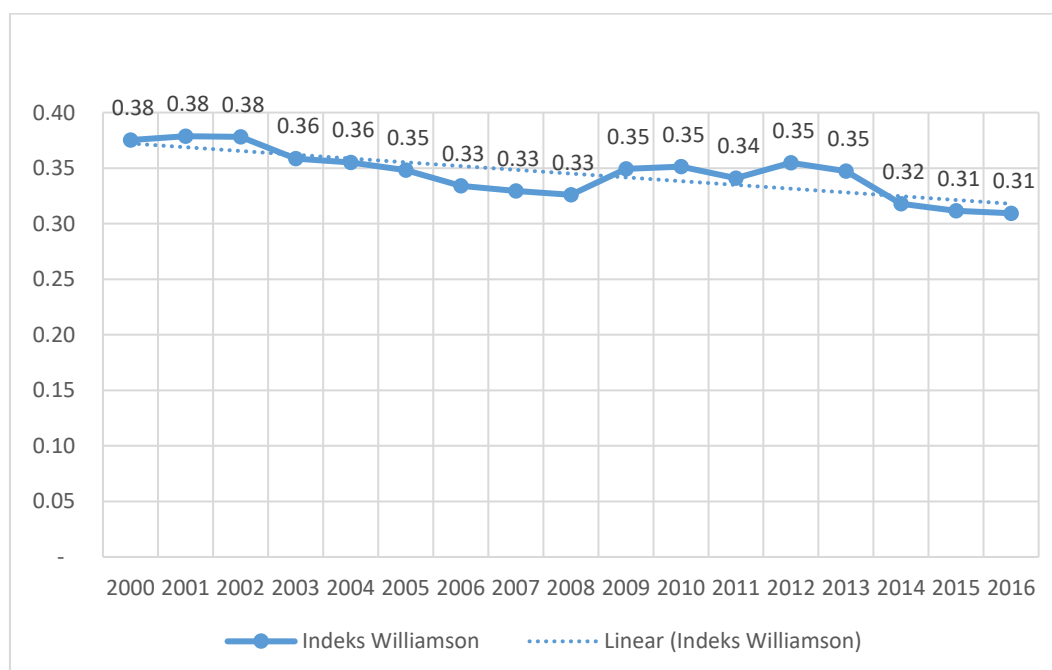
Figure 1. Trendline of Economic Inequality (Williamson Index) Between Districts in Bali Province

CONCLUSIONS

Inequality of economic development between districts/cities in Bali Province in 2000-2016 was low but close to moderate, as indicated by the Williamson Index average of 0.35. However, the disparity in economic development between districts/cities in the province of Bali for the period 2000-2004 is classified as moderate, as indicated by the Williamson Index of 0.38. Badung District has contributed to increasing inequality in economic development between district/cities in Bali Province, as indicated by an increase in the average value of the Williamson Index between districts/cities in Bali Province (without Badung Regency) of 0.18 (low), while the Williamson Index between districts/cities in Bali Province (with Badung Regency) is 0.35 (low to medium).

The trendline of inequality in economic development between districts/cities (9 districts/cities) in Bal Province tends to decrease. This is in line with the Neo-Classical hypothesis. It is estimated that this decrease in inequality is mainly due to the implementation of regional autonomy which began in 2001 which encouraged local governments to increase economic growth in their respective regions so that regional inequality as a whole tends to decrease.

RECOMMENDATION

Local governments in the Province of Bali, especially in addition to Badung District, must develop regional potential to increase Regional Original Income (*PAD*), so that regional expenditures and expenditures (*RAPBD*) are increasing. The Provincial Government of Bali should direct investment outside Badung District, so as to encourage increased economic growth of districts/cities in Bali Province outside Badung District. For further research, it is expected to be able to perform analysis with a larger range of data and different and more variables, so that it is possible to get different results and more accurate data. In addition, the area coverage can also be expanded not only by using district data but also by analyzing between sub-districts or even between provinces.

KNOWLEGMENT

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