

ANALYSIS OF THE CHARACTERISTICS AND DEVELOPMENT DISPARITIES AMONG DISTRICTS/CITIES IN EAST NUSA TENGGARA PROVINCE

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Artikel Info	Abstrak
<p><i>Article history:</i> Received 09 December 2019 Revised 26 February 2020 Accepted 27 February 2020 Available online 28 February 2020</p>	<p><i>This study aims to review the regional characteristics and the development disparities among districts/cities in East Nusa Tenggara Province. This quantitative descriptive study used the Klassen typology and Williamson index using PDRB time-series data per capita and economic growth rate during 2013-2018. The analysis of Klassen typology shows that Kupang City, East Flores Regency, Sikka Regency, and Ende Regency include the developing and fast-growing regions. Kupang Regency, Timur Tengah Selatan Regency, East Sumba Regency include in the developing, but depressed regions. Belu Regency, Alor, Lembata, Manggarai, Ngada, West Manggarai, Rote Ndao, East Manggarai, Southwest Sumba, Malacca, Nagekeo, Central Sumba, and Sabu Raijua District including in the potential and fast-growing areas, while West Sumba Regency and Regency North Middle East are categorized in the underdeveloped regions. The calculation of the Williamson Index of districts/cities in East Nusa Tenggara Province is approximately 0.0 - 0.11 in every district. This shows that the revenue of East Nusa Tenggara Province is evenly distributed in every district, except Kota Kupang which of value is nearly 1, which is 0.63%. This reflected that the revenue of Kupang City is not evenly distributed compared to other districts in Nusa Tenggara Timur Province.</i></p>
<p>Keyword: <i>Characteristics, Disparities, Klassen Typology, Williamson Index</i></p> <p>JEL Classification; R11; 011; O20</p>	

INTRODUCTION

Regional economic development in East Nusa Tenggara Province needs to be developed based on the potential and characteristics of the regions to produce additional value and provide significant economic contributions, create the positive business climate, build regional images and identities based on resources that become the competitive advantage of the regions and provide positive economic and social impacts. The development of economy in East Nusa Tenggara Province based on local potential and characteristics are needed to deal with the challenges and problems of the development in this millennial era, to increase Gross Regional Domestic Revenue and the economic growth of each district that is relatively constant or tends to be low after the economic crisis, the high level of poverty and unemployment, and the quite low industrial competitiveness. The overview of real economic conditions in East Nusa Tenggara Province can be seen in Table 1.

Table 1. The Development of Gross Regional Domestic Revenue of the Districts/Cities in East Nusa Tenggara Province based on constant price during 2013-2018 (in Million Rupiahs)

DISTRICTS/ CITIES	Year					
	2013	2014	2015	2016	2017	2018*
West Sumba	1.078	1.129	1.183	1.243	1.305	1.358
East Sumba	2.970	3.118	3.275	3.441	3.617	3.769
Kupang	3.595	3.778	3.969	4.161	4.374	4.624
South Central Timor	3.606	3.764	3.929	4.117	4.337	4.495
North Central Timor	2.180	2.280	2.387	2.503	2.630	2.733
Belu	2.135	2.255	2.375	2.512	2.658	2.778
Alor	1.503	1.575	1.652	1.728	1.812	1.885
Lembata	871	915	961	1.007	1.057	1.101
East Flores	2.659	2.787	2.916	3.055	3.213	3.339
Sikka	2.497	2.611	2.726	2.860	3.010	3.123
Ende	3.077	3.231	3.395	3.568	3.747	3.907
Ngada	1.725	1.809	1.894	1.992	2.090	2.176
Manggarai	2.244	2.359	2.477	2.603	2.736	2.852
Rote Ndao	1.423	1.492	1.568	1.648	1.738	1.810
Manggarai Barat	1.689	1.758	1.836	1.923	2.022	2.095
Central Sumba	567	591	619	649	681	707
Southwest Sumba	1.743	1.812	1.896	1.991	2.101	2.117
Nagekeo	1.046	1.094	1.144	1.196	1.255	1.303
East Manggarai	1.503	1.582	1.662	1.748	1.839	1.917
Sabu Raijua	584	614	645	678	712	743
Malaka	1.387	1.467	1.529	1.605	1.687	1.757
Kupang City	11.373	12.148	12.953	13.826	14.770	15.556
PDRB in Province	51.455	54.169	56.991	60.054	63.391	66.145

Source: Statistics of Indonesia

*) the researcher projection

It is shown in Table 1. above that the Gross Regional Domestic Product of East Nusa Tenggara Province during 2013-2018 has significantly increased, in which starting from 2013 the Gross Regional Domestic Product was IDR51,455, then raised to IDR54,169 in 2014 and IDR56,991 in 2015, to IDR60,054 in 2016, IDR63,391 in 2017 and IDR 66,145 in 2018 and the average increase during 2013-2018 is approximately IDR58,701.

To determine the direction of its economic development and to meet Presidential Instruction Number 6 the Year of 2009, East Nusa Tenggara

Government has formalized the Action Plan for the economic sector through its Medium-term Development Plan. Unfortunately, this action plan has not shown optimum results. Therefore, the Analysis of Characteristics and Development Disparities among Districts / Cities in East Nusa Tenggara Province during the period of 2013-2018 is worth investigating so that the program and the policy of the government can be adjusted to the regional characteristics. According to the Central Statistics Agency (2018), the economic growth of East Nusa Tenggara Province has a significant increase compared to the data of poor population rates which also undergoes an increase in the period of 2011-2016. Meanwhile, the Gross Regional Domestic Product data fluctuates.

Research on development disparities between districts/cities in Indonesia has been carried out among many by Nur Azmi et al, 2008, Abid Muhtarom, 2017, Tatan Sukwikan, 2018, Margin, 2011, Dhyatmika, 2013 the results show that there are differences in economic growth between districts/cities in various regions of Indonesia such as West Java, East Java, and Banten. The difference in economic growth is due to differences in resources/ human resources and differences in investment levels both from the government and private sectors. According to Kumala Sulistyو and Nur Aini, 2017 the rate of economic growth and development inequality has increased, indicating that the inverse U relationship is based on Kuznes's theory in answered.

The difference between the present study and the previous ones is at the location of the research. The interesting thing in this study is to review how far is the disparity happening in East Nusa Tenggara Province and to study the classification and the characteristics of the regions in East Nusa Tenggara Province during 2013-2018. This is beneficial to inform the policymakers in doing intervention of development program activities in the future based on the classification/characteristics of each region so that the program activities can be targeted based on the needs in East Nusa Tenggara Province.

RESEARCH METHODS

Type of Research is a quantitative descriptive study to calculate the obtained data to answer the research questions in line with the aims of this study. Operational definitions of the variables are the definitions given to a variable by giving an operation required to measure that variable (Nazir, 1988) to avoid misinterpretation of the variables, and thus the researchers provide the definitions of each object so it can be understood by the readers. The object variables and its operational definitions are as follows.

1. Regional characteristics are the systematic classification of the regions to identify the differences of regional characteristics to obtain a general overview of a region and its level of difference of regional classification.
2. Revenue disparities are the differences in revenue between one region and the other region in a similar area. The unit used to measure the level of revenue disparities is Williamson Index using Produk Domestik Regional Bruto data based on constant price.

3. Economic growth is a changing process of the economic condition of a country happening sustainably toward a better situation at a particular time. It can also be defined as a process of the rise in the capacity of economic production in the forms of the increase of national revenue.
4. The income per capita is an estimation of individual income annually gained from Produk Domestik Regional Bruto divided by population rate per year or in other words income per capita is the quotient of regional revenue with the population rate per annum.
5. Population, according to Badan Pusat Statistik, is defined as every person residing in the geographic areas of the Republic of Indonesia for 6 (six) months or more, or those residing less than six months, but intending to permanently reside (per person).
6. Regional disparities are the condition in which there is a difference in the level of development and revenue between one region and other regions. Regional disparities can be identified using an analysis tool namely Williamson Index that can be measured using Produk Domestik Regional Bruto data based on constant price.

Data are collected through the documentation of data relevant to the object of the study obtained from Badan Pusat Statistics Central Bureau of Statistics and other related literature. Used in this study is secondary data in the form of time series obtained from Badan Pusat Statistik of Kabupaten Ende. The data analyzed in this study is the Gross Regional Domestic Product per capita without oil and gas at a constant price in the year pf 2013-2018. The analysis tools used are Williamson Index and Klassen Typology.

This quantitative descriptive analysis used Klassen Typology. This typological analysis is to find out the overview of the patterns and structures of regional economic growth. This technique used two main indicators to classify the regions: economic growth and income per capita. Through this analysis, four characteristics are identified in four quadrants, namely 1) Quadrant I is the regions with high growth and high income; 2) Quadrant II is the regions with high income but low growth; 3). Quadrant III is the regions with high growth but low income; and 4). Quadrant IV is quite underdeveloped regions with low growth and low income (Kuncoro, 2004:121).

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Table 2. Matriks Tipologi Kassen

Average Income Percapita \ Average rate of economic growth	$Y_i < Y$	$Y_i > Y$
$r_i > r$	<i>High Growth but low income</i>	<i>High growth and High income</i>
$r_i < r$	<i>Low growth and low income</i>	<i>High income but low growth</i>

To see the disparities of development among districts/cities in East Nusa Tenggara, the researchers used the analysis of regional inequality, that is the Williamson Index formulated by Syafrizal (2012) as follows:

$$V_w = \frac{\sum_{i=1}^n (y_i - y)^2 (\frac{f_i}{n})}{y} \quad 0 < V_w < 1$$

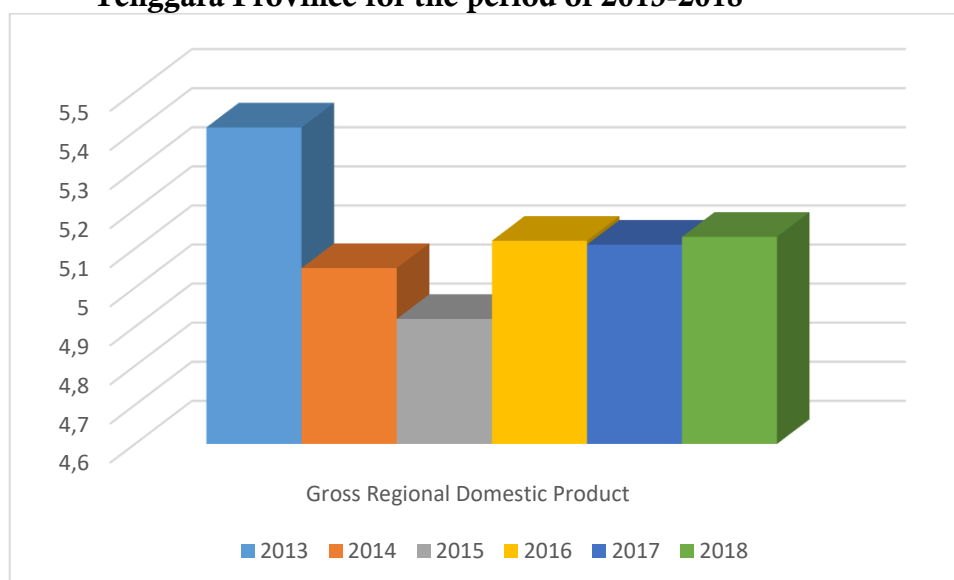
Where: V_w = Williamson Index; Y_i = Produk Domestik Regional Bruto per capita in region i ; Y = average Produk Domestik Regional Bruto of the whole regions; f_i = population rate in region i ; n = total population in the whole regions

RESULTS AND DISCUSSION

The Economic Structure And Produk Domestik Regional Bruto Development Of Nusa Tenggara Timur Province

An economic condition is claimed to develop whenever the income per capita shows or tends to show an increase (Arsyad, 1999). Produk Domestik Regional Bruto aims to measure the output of goods and services produced by a region in a particular period of time. The economic sectors triggering Produk Domestik Regional Bruto of Nusa Tenggara Timur refer to the statistical data in 2018 as follows. The real Produk Domestik Regional Bruto of Nusa Tenggara Timur Province during 2013-2018 can be seen in the following chart.

Chart 1. Gross Regional Domestic Product of Economy Sectors in East Nusa Tenggara Province for the period of 2013-2018



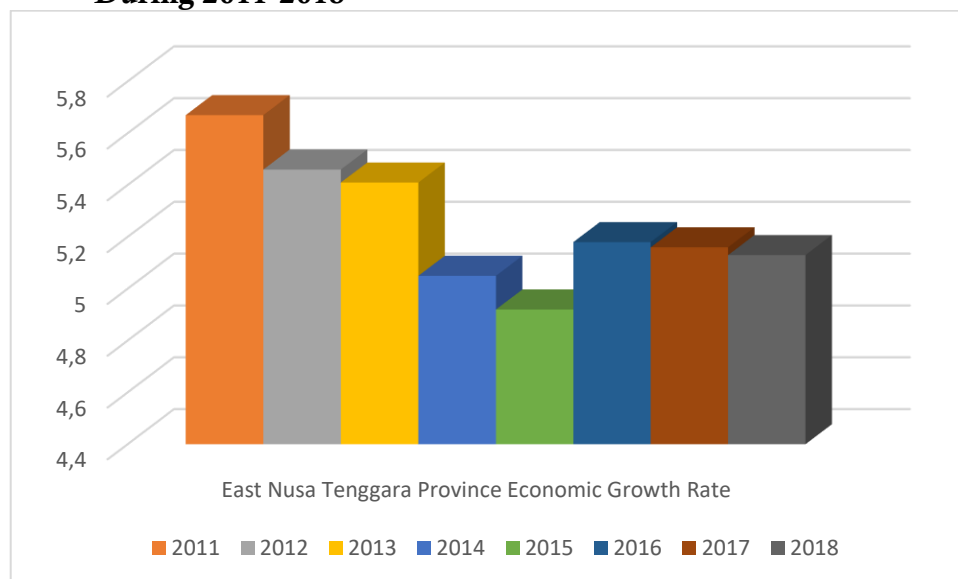
Source: Statistics of Indonesia

It is shown in the chart that the development of Gross Regional Domestic Product in East Nusa Tenggara Province during 2013-2018 fluctuates in which starting from 5.43% in 2013, increasing to 5.05% in 2014, declining significantly to 4.92 % in 2016, rising to 5.12% in 2016, dropping to 5.11% and increasing slightly to 5.13% in 2018.

The Rate Of Economic Growth in East Nusa Tenggara Province

The benchmark of economic activities in a region is the rate of economic growth. Economic growth is a changing process of sustainable economic conditions of a region towards improved economic conditions during a particular period of time in which it is marked by the increase of production capacity of the economy as seen in the increase of revenue. The conditions of economic growth in East Nusa Tenggara during 2011-2018 can be seen in the following chart.

Chart 2. The Rate Of Economic Growth In East Nusa Tenggara Province During 2011-2018



Source: Statistics of Indonesia

As shown in the above chart, the economic growth in East Nusa Tenggara during 2011-2018 fluctuated, in which the rate was 5.67% in 2011 and underwent significant decline during 2012 to 2015: the rate was 5.46% or -0, 21% in 2012; -0.05% in 2013; -0.36% in 2014; -0.13% in 2015, and reached the lowest rate of economic growth of 4.92%. The rate in 2015 was the lowest during 2011-2018. In 2016, the rate increased 0.26% or to 5.18% and in 2017 the rate became minus again at 5.16% or underwent the decline of 0.02%, and in 2018 the economic growth became slow down to the rate of 5.30% or underwent minus growth at the rate of -0.03%.

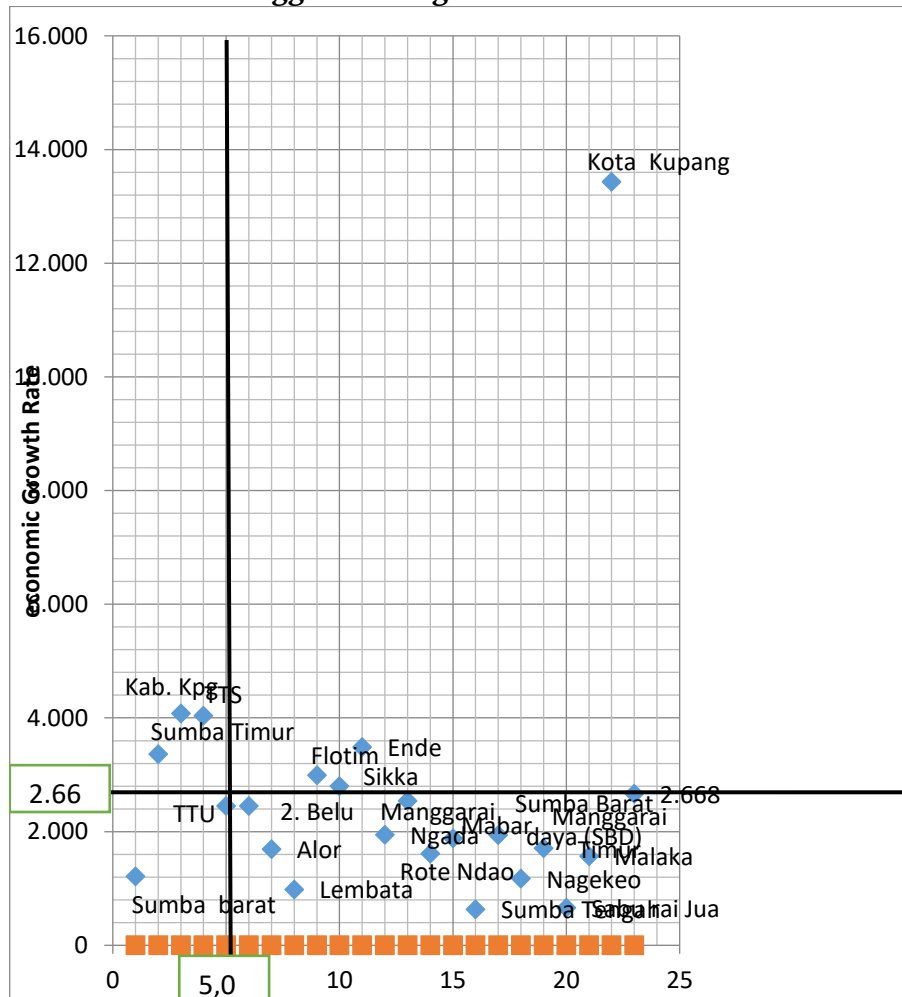
Analysis of Regional Classification and Characteristics of East Nusa Tenggara Province during the period of 2013-2018

Regional classification is the endeavor to classify and groups the regions systematically to meet certain aims. Regional classification aims to find out the differences and types of regional classification in order to obtain an overview of the regional characteristics and to find out the differences of the level in regional classification based on particular methods. The classification of districts/ cities in East Nusa Tenggara during the period of 2013-2018 seen from the structure and the economic growth shows diverse characteristics for each region. To find out the regional characteristics, this study used *Klassen Typology* as an analytical tool to classify each region based on the main indicators, namely the rate of economic growth and the gross regional domestic product per capita. According to Okun and Richardson, regional classification based on the wealth and ability to develop can be categorized into the following four quadrants: 1). The developing and fast-growing regions (High growth and High Income) are the regions with high and developing income per capita; 2). The developing, but depressed regions (High growth but low income), 3). The potential and fast-

growing regions (high income but low growth); 4). The relatively underdeveloped regions (low growth and low income).

The result of the analysis using Klassen Typology for each district/ city in East Nusa Tenggara during the period of 2013-2018 is illustrated in the following chart.

Chart 3. Regional Classification/ Characteristics of the districts/cities in East Nusa Tenggara during 2013-2018



Source: Statistics Of Indonesia

Based on the chart, it is revealed that the classifications/characteristics of the regions/districts/cities in East Nusa Tenggara are as follows.

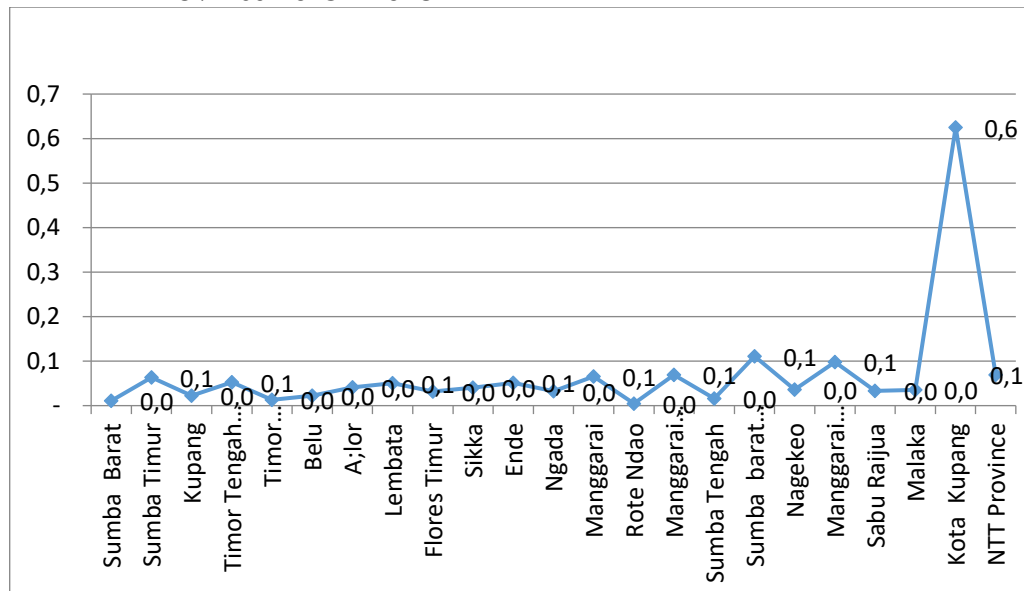
- a. Quadrant I: Developing and fast-growing regions (High Growth and High Income). The districts/cities categorized in this quadrant are Kupang City, East Flores Regency, Sikka Regency, and Ende Regency as the Gross Regional Domestic Product per capita and the economic growth of these regions is high during the period of 2013-2018.
- b. Quadrant II: the developing, but depressed regions (High income but Low growth). The regions are 1). Kupang Regency, 2). Regency of the Middle East South and 3). East Sumba Regency.

- c. Quadrant III: the potential and fast-growing regions (High growth and Low income). The districts in this category are 1). Belu Regency, 2). Alor Regency, 3). Lembata Regency, 4). Manggarai Regency, 5). Ngada Regency, 6). West Manggarai Regency, 7). Rote Ndao Regency, 8). East Manggarai Regency, 9). Southwest Sumba Regency, 10). Malacca Regency, 11). Nagekeo Regency, 12) Central Sumba Regency, and 13). Sabu Raijua Regency. They are categorized as depressed regions because the income per capita is low but their rate of economic growth is high.
- d. Quadrant IV: the relatively underdeveloped regions (Low Growth and Low income). The districts included in this category are 1). West Sumba Regency and North Middle East Regency.

Analysis of Development Disparities among Districts/Cities in East Nusa Tenggara during the period of 2013-2018

Chart 4. is the calculation of the Williamson Index of the districts/cities in East Nusa Tenggara, in which the index is around 0.00 to 0.11 nearly similar in every region. This indicated that the revenue is evenly distributed in every region in East Nusa Tenggara Province, except in Kupang City which of the index nearly 1 or around 0.63%. This shows that there is an unequal distribution of revenue in Kupang City compared to other regions in East Nusa Tenggara during the period of 2013-2018. This is due to the fact that Kupang City is the capital of East Nusa Tenggara Province and it certainly becomes the center of trade, industry and other infrastructure that is much more improved compared to other districts.

Chart 4. Williamson Index of District / Cities in East Nusa Tenggara Province 2013 - 2018



To see the Gross Regional Domestic Product per capita among districts/cities in East Nusa Tenggara during the period of 2013-2018, the

researchers used the Williamson Index. This index calculation can be seen in the following table.

Table 3. The Calculation of Williamson Index of districts/cities in East Nusa Tenggara During 2013-2018

Districts/ Cities	Year						IW Average
	2013	2014	2015	2016	2017	2018	
West Sumba	0,01	0,01	0,01	0,01	0,01	0,01	0,01
East Sumba	0,06	0,06	0,06	0,06	0,07	0,07	0,06
Kupang	0,03	0,03	0,03	0,02	0,01	0,02	0,02
South Central Timor	0,06	0,05	0,06	0,05	0,05	0,04	0,05
North Central Timor	0,02	0,01	0,01	0,01	0,01	0,01	0,01
Belu	0,02	0,02	0,02	0,02	0,02	0,03	0,02
Alor	0,05	0,04	0,04	0,04	0,04	0,04	0,04
Lembata	0,05	0,05	0,05	0,05	0,05	0,05	0,05
East Flores	0,02	0,03	0,03	0,03	0,03	0,04	0,03
Sikka	0,05	0,04	0,04	0,04	0,04	0,03	0,04
Ende	0,04	0,05	0,04	0,05	0,06	0,07	0,05
Ngada	0,03	0,03	0,03	0,03	0,03	0,04	0,03
Manggarai	0,07	0,07	0,06	0,07	0,07	0,06	0,07
Rote Ndao	0,01	0,00	0,01	0,00	0,00	0,00	0,00
Manggarai Barat	0,06	0,07	0,06	0,07	0,07	0,07	0,07
Central Sumba	0,02	0,02	0,02	0,02	0,02	0,01	0,02
Southwest Sumba	0,11	0,11	0,11	0,11	0,11	0,12	0,11
Nagekeo	0,04	0,04	0,04	0,04	0,04	0,03	0,04
East Manggarai	0,10	0,10	0,10	0,10	0,10	0,10	0,10
Sabu Raijua	0,00	0,04	0,04	0,04	0,04	0,04	0,03
Malaka	0,04	0,04	0,03	0,04	0,04	0,03	0,04
Kupang City	0,58	0,62	0,60	0,63	0,65	0,68	0,63
Average	0,0648	0,0688	0,0673	0,0703	0,0717	0,0728	0,0693

CONCLUSION

The analysis of Klassen's typology of regional characteristics of districts/cities in East Nusa Tenggara Province during the period of 2013-2018 is as follows. The developing and fast-growing regions in East Nusa Tenggara are Kupang City, East Flores Regency, Sikka Regency, and Ende Regency. The developing, but depressed regions are 1) Kupang Regency, 2). Regency of the Middle East South and 3). East Sumba Regency. The potential and fast-growing regions are 1) Belu Regency, 2). Alor Regency, 3). Lembata Regency, 4). Manggarai Regency, 5). Ngada Regency, 6). West Manggarai Regency, 7).

Rote Ndao Regency, 8). East Manggarai Regency, 9). Southwest Sumba Regency, 10). Malacca Regency, 11). Nagekeo Regency, 12) Central Sumba Regency, and 13). Sabu Raijua Regency. The underdeveloped regions are 1). West Sumba Regency and 2) North Central Middle District.

The results of the Williamson Index calculation for the districts/cities in East Nusa Tenggara is approximately 0.0-0.11 in almost every district. This shows that the distribution of revenue in East Nusa Tenggara is equal for each district, except Kupang City which of the index is nearly 1 or around 0.63%. This reflected that the revenue distribution in Kupang City is not even compared to other districts/cities in East Nusa Tenggara. This is because the city of Kupang is the capital of East Nusa Tenggara which certainly becomes the center of trade, industry, other infrastructure that is much more improved compared to other districts.

REFERENCES

- Barker, T., Ekins, P., & Foxon, T. (2007). The macro-economic rebound effect and the UK economy. *Energy Policy*.
<https://doi.org/10.1016/j.enpol.2007.04.009>
- Daryanto, A. (2003). The disparity of Urban-Rural Areas in Indonesia. Agrimedia.
- Noor, D. J. (2011). Research Methodology: Undergraduate Thesis, master's Thesis, Dissertation, and Scientific Papers. In *Metodologi Penelitian: Skripsi, Tesis, Disertasi, & Karya Ilmiah*.
- Dhyatmika, K. W. (2013). The Analysis of Development Inequality in Banten Province After the Division from West Java.
[Http://Eprints.Undip.Ac.Id/38984/](http://Eprints.Undip.Ac.Id/38984/).
- Ekonomi, K., Berkembang, N., & Brata, A. G. (2002). Developmental Economy Journal, Human Development and Regional Economy Achievement in Indonesia. *JEP*.
- Franita, R. (2016). The Analysis of Unemployment in Indonesia. *Jurnal Ilmu Sosial*.
- Krinantya, N. (2014). Factors Affecting Inequality among the Regions in East Java Province and Yogyakarta Special Region.
[Http://Eprints.Undip.Ac.Id/43107/](http://Eprints.Undip.Ac.Id/43107/).
- Kumala, M., Soelistyo, A., & Nuraini, I. (2017). The Analysis of Tourism Sector Potency as a Superior Sector in East Java. *Ilmu Ekonomi*.
- Mankiw. (2013). Mankiw Principles of Economics. In *Journal of Chemical Information and Modeling*.
<https://doi.org/10.1017/CBO9781107415324.004>
- Mopangga, H. (2011). The Analysis of Development and Economy Growth Inequality in Gorontalo Province. *Trikonomika*.
- Muhammad, D. S. H. (2018). Model of national Income Calculation in the Perspectives of Islamic Economy. *Jurnal CMES*.
<https://doi.org/10.20961/cmcs.11.2.26996>
- NUSA TENGGARA TIMUR in Numbers 2013 - 2018, Statistics Bureau.

- Nuraini, I. (2017). The Quality of Economic Development in the Regencies in East Java. *Jurnal Ekonomi Pembangunan*.
- Pangkiro, H. A. K., Rotinsulu, D. C., Patrick, D., Jurusan, W., Pembangunan, E., Ekonomi, F., & Bisnis, D. (2016). The Analysis of Economic Development and Poverty on the Inequality in North Sulawesi Province. The Analysis of Growth Economic and Poverty on the Level of Inequality in North Sulawesi. *Jurnal Berkala Ilmiah Efisiensi*.
- Pelling, M., Özerdem, A., & Barakat, S. (2002). The macro-economic impact of disasters. *Progress in Development Studies*.
<https://doi.org/10.1191/1464993402ps042ra>
- Syahrum., S. (2014). Quantitative Research Methodology. *Komunikasi Penelitian Kuantitatif Program Studi Jurnalistik & Humas*.