Regional Disparity and Social-Economic Convergence in New Autonomous Regions in Banten Province

Fitri Amalia[1], Arief Fitrijanto[2]

[1,2]*Economic Development Program, Faculty of Economic and Business, Syarif Hidayatullah State Islamic University, Jakarta, Indonesia*

Abstract

As a new province after separating from West Java province, Banten province has experienced various economic growth among its regions, which can reveal disparity in development. Some regions have abundant resources, productive human resources, and access to good economic activities, while others do not. This condition causes inequality between regions. Regional convergence analysis measures not only economic variables but also social measures, such as the Human Development Index (HDI), poverty, and unemployment. This study aims to analyze sigma and absolute beta convergence, in addition to measuring the speed of the new autonomous region (Daerah Otonom Baru/DOB) economic growth convergence in Banten. The study method for regional disparity uses coefficient of variation and klassen typology. The klassen typology approach was used to identify sectors. The results of this study show that disparities occur in regions/cities within the province. The GDRP per capita, HDI, poverty, and unemployment in each region from years 2015-2019 were analyzed using the analytical methods σ-convergence and β-convergence. Regional convergence also occurs, but it is not clear enough to show the possible rate distribution convergence in the future. Socioeconomic factors, including unemployment and poverty, have become factors that impact the rate convergence in the province. Meanwhile, the human resource quality factor does not significantly impact. The new autonomous region (DOB) strategy uses a developing regional strategy, while the parent region has a lagging status. The implication of this research is that each region needs to develop sectors according to its characteristics.

Keywords: convergence; new autonomous regions; regional disparity

1.   Introduction

One of the critical issues in implementing decentralization is forming new autonomous regions. Regional expansion is one of the most striking aspects of the decentralization process (Khitam, 2014; Nordholt, 2007). The basic assumption of regional expansion is to shorten the span of government control in serving the community, open up equity, and open up opportunities for the flow of resources to build new autonomous regions that were previously isolated or far from the center of growth.

Each region demands high economic growth even though, in reality, the conditions of each region are different. This difference causes the progress of development between regions to become unidentical. Regions with abundant resources, close access to economic activities and government, and productive human resources have a greater chance of achieving more advanced economic development. On the other hand, remote areas with low natural resources and low-quality human resources will likely experience slow economic growth. Thus, within a province, there will be inequality in development. Some

---

[1] Corresponding Author: Economic Development Program, Faculty of Economic and Business, Syarif Hidayatullah State Islamic University, Jakarta, Indonesia
Email: fitri.amalia@uinjkt.ac.id

areas grow and develop more rapidly, while others grow more slowly. This condition is an illustration of regional imbalance and disparity. This situation is found in Banten Province.

The dynamics of income between regions have been analyzed using GRDP data, which shows the region's potential production process. The weakness of the measurement so far is that it cannot present the community's ability to achieve prosperity. Regional convergence analysis is measured by economic measures such as GRDP, investment, and fiscal needs to highlight social measures such as HDI, poverty, and unemployment rates.

Seeing the problems of socio-economic dynamics in the spatial conditions of regencies and cities in Banten Province, it can be described that there is an imbalance between regions in the aspect of people's actual income. This research is considered essential to see the convergence process in each region after the expansion or emergence of New Autonomous Regions. This study offers an evaluation tool for new autonomous regions with a regional integration approach in economic and social aspects. Banten province is considered an interesting research case study evaluating its status as the youngest province on the island of Java and the division of districts and cities not long after the province was officially divided from West Java. This research takes Regional Disparity and Socio-Economic Convergence in New Autonomous Regions in Banten Province.

Regional disparities occurred due to differences in characteristics, such as differences in natural resources, geographical conditions, the concentration of economic activity in an area (agglomeration), and the lack of smooth mobility of goods and services (Chen, 2010). On the other hand, disparities are caused by differences in human capital (Shindo, 2010). These differences can encourage economic growth in each region varied. The disparity is a divergence or inequality of characters, processes, identifications, phenomena, and rational comparisons cognitively, psychologically, economically, socially, politically, and so on (Kutscherauer, 2010).

A government policy that emphasizes economic growth by building growth centers also causes disparities among regions. It is because it allows the emergence of extreme disparities between regions. In addition, due to the trickle-down effect that does not occur effectively, and in fact, there is a backwash effect that results in over-exploitation of resources. A region with rapid economic development requires more capital than other regions, especially areas with less development. These less developed regions struggle to speed their economic activity due to their shortage of capital economies. It is called the backwash effect through the theory proposed by (Myrdal, 1974).

Economic development inequality between regions is high at the beginning of the development process (developing countries), resulting in a divergence condition (high inequality). However, inequality among regions will automatically decrease when economic growth proceeds, known as convergence (low inequality). Divergence occurs because, at the beginning of the development process, the availability of infrastructure and socio-economic superstructure are minimum, especially for remote areas, so economic growth is prolonged.

The convergence is a condition that shows the similarity of economic activity between rich and developing countries. The definition of convergence is that the economic conditions of developing countries can be equal or catch up with advanced economies (Andreano et al., 2013; Barro, 2016; Dana, 2018; Mankiw, 2020). Convergence conditions can be interpreted as conditions during inter-regional meetings that impact low disparities (Dekiawan, 2014; Maryaningsih et al., 2014; Schmitt & Starke, 2011).

The assumption built by the convergent concept is that the level of welfare or prosperity experienced by developed and developing regions will meet at one point. Developed regions will experience that income levels do not increase because increased investment does not increase income. All production costs have been assembled from investment as the cause of this condition so that state or regional savings cannot be used as an additional investment. On the other hand, in developing regions, additional investment continues to increase income and increase the rate of economic growth.

Firdaus (2010) classifies the theory of regional economic development models based on his view of convergence. The model that supports this convergence concept is the neo-classical model, while the model that does not support the convergence is the Circular Cumulative Causation model. The endogenous growth model assumes that the availability of production factors causes both convergence and divergence. In contrast, convergence and divergence occur due to history and future expectations in the new economic geography model.

Convergence measurement is carried out in two complementary analysis. On the one hand, an analysis of sigma convergence evaluates whether the income dispersion decreases over time. On the other, an analysis of beta convergence evaluates whether initially poor economies growth faster than initially rich region (Aginta et al., 2020). Beta convergence is necessary but not sufficient for sigma convergence Sigma convergence is defined as an approach to directly seeing income distribution between regions (Dana, 2018; Dekiawan, 2014; Maryaningsih et al., 2014). The disparity of real per capita income between regions, which has decreased over time, indicates the existence of sigma convergence. The presence of convergent sigma can be determined by the spread of economic growth, measured as the coefficient of variation or standard deviation of the logarithm.

Azwar (2013) and Darzal (2016) used the location variables for the concentration of economic activity, the Human Development Index, labor productivity, allocation of public investment and accessibility, government expenditure variables, labor force participation rates, transportation facilities, and infrastructure. Baransano et al., (2016) used the variables of population, funding allocation, and the Human Development Index. Wang (2016) government spending, infrastructure level, urbanization, and

education. Resosudarmo & Vidyattama (2006) used the variables of capital savings, trade openness, and the contribution of the oil and gas sector. Purawan (2010) uses variables measuring labor productivity, physical capital accumulation, human capital, population growth, financial development, Foreign Direct Investment (FDI), inequality, trade openness, and the contribution of oil and gas (oil and gas).

In this study, the indicator of inequality is still the same, but the explanatory variable uses a new variable that is different from previous studies, namely the variables of poverty and unemployment as socio-economic variables. With an analysis focusing on changes in the new autonomous region using the Klassen typology diagram, it will be possible to determine how the strategy for the new autonomous region will be developed.

So far, the analysis of regional convergence has only looked at the economic side using GRDP, investment and fiscal indicators. However, it is also necessary to look at and consider from the social side such as HDI, poverty and labor force participation rates. The emergence of socio-economic dynamics problems in the spatial conditions of urban districts in Banten Province, makes this research important to see the convergence process that occurs in each of these areas. Banten Province is considered to be an interesting research case study because of its status as the youngest province on the island of Java and the expansion of city districts not long after the province was officially divided from West Java. The purpose of this study is to find out how regional disparities are in Banten Province, whether there is sigma beta convergence in the New Autonomous Region, what socio-economic factors affect the level of convergence of the New Autonomous Region and how the strategy for accelerating socio-economic convergence in Banten Province is.

2.   Research Method

This study uses secondary data from 8 cities and districts: South Tangerang City, Tangerang City, Cilegon City, Serang City, Lebak Regency, Serang Regency, Pandeglang Regency, and Tangerang Regency from the Statistics Central Bureau of Indonesia (BPS) of Banten Province. The 2015 – 2019 time period taken as a sample of the research object can describe and explain the goals set.

Secondary data used includes gross regional domestic income (GRDP) and GRDP per capita of districts/cities in Banten province based on constant prices (ADHK-2010), Regional Original Income (PAD), Human Development Index (IPM), labor, and poverty. The analytical tools used are sigma convergence, beta convergence, and klassen typology.

a. Sigma Convergence

Sigma convergence is used to measure the disparity between regions in a specific area. Sigma convergence can be measured by calculating a province's district/city income per capita dispersion from its average value.

Convergent Sigma measurement is defined as an approach to directly seeing income distribution between regions (Dana, 2018; Dekiawan, 2014; Maryaningsih et al., 2014). Determination of the existence of convergent sigma can be calculated through the spread of economic growth, which is measured as the coefficient of variation or standard deviation of the logarithm. The coefficient of variation (standard deviation divided by the mean), as a measure of dispersion, of GDP percapita in PPS among countries and regions (σ-convergence) (Alcidi et al., 2018). The measurement uses coefficient variance by calculating the dispersion of the district/city income per capita in the Banten Province from 2015 to 2019, based on the standard deviation of the per capita GRDP log (see Equation 1).

$$CV_t = \frac{\sqrt{\frac{\sum(Y_i - \bar{Y})^2}{n}}}{\bar{Y}} \tag{1}$$

Description:
CV : coefficient of variation in a particular year
Y_i : GRDP per capita in city/district i in year t
$\bar{Y}$: Average (mean) GRDP per capita of districts/cities in year t
n   : Number of cities/districts

If the CV value decreases over time, it indicates the occurrence of sigma convergence. However, if the opposite occurs, it does not mean the event of sigma convergence. So, if there is no sigma convergence in a region, it can be concluded that the region is not indicated by regional convergence, or regional disparities occur.

Beta convergence is carried out to determine the magnitude of the regional convergence speed. Beta convergence cannot be carried out if there is no indication of convergence based on the sigma convergence calculation. Sigma convergence and beta convergence are a unit, so to detect the occurrence of convergence in an area, it is necessary to indicate sigma convergence and beta convergence. The concept of convergent beta is intended to measure the speed of lagging regions in catching up with rich regions (Gömleksiz et al., 2017; Maryaningsih et al., 2014; Supriyanti et al., 2019). Beta convergence was calculated using panel data regression analysis (see Equation 2) with the Solow growth model (Solow, 1956).

$$Ln\ Y = \alpha\ ln(Inv) + \beta\ ln(Tk) \tag{2}$$

Inferential analysis was performed with panel data regression to analyze absolute and conditional beta convergence in the Banten Province. The model used in this study is shown at Equation 3 and Equation 4.

$$n\left(\frac{y_{i,t}}{y_{i,t-1}}\right) = \beta_0 + \beta_1\ ln(y_{i,t-1}) + \varepsilon_{i,t} \tag{3}$$

Description:
$y_{(i,t)}$: GRDP per capita of province i in year-t
$y_{(i,t-1)}$: ith province's per capita GRDP in year (t-1)
β_0: constant/intercept
β_1: slope for GRDP per capita of province-i in year-(t-1) or coefficient of convergence
εit: component error

$$ln\left(\frac{y_{i,t}}{y_{i,t-1}}\right) = \beta_0 + \beta_1\ ln(y_{i,t-1}) + \beta_2\ ln(ipm_{i,t}) + \beta_3\ ln(ue_{i,t}) + \beta_4\ ln(Pover_{i,t}) + \varepsilon_{i,t} \tag{4}$$

Description:
$ipm_{i,t}$: HDI of the i-th district/city in year-t
$ue_{i,t}$: i-th district/city unemployment in year-t
$pover_{i,t}$: poverty of the i-th district/city in year-t
ε_{it}: component error

Klassen Typology Analysis is used to analyze the region's economic structure by mapping the existing regions and economic sectors into four categories/regional typologies. This analysis of the economic structure can describe the pattern and structure of economic growth in each region. Syafrizal (2012) reveals that Klassen's typology divides the region into two leading indicators: economic growth and per capita income of each region.
Regional grouping using Klassen Typology produces four characteristics described as follows:
• Fast-growing and fast-growing regions are indicated by ri which is more significant than rn and Yi which is greater than Yn;
• The developed but depressed region is indicated by ri which is smaller than rn but Yi which is more significant than Yn;
• Fast-growing areas are indicated by ri being greater than rn but Yi being smaller than Yn.
• The relatively lagging region is indicated by ri which is smaller than rn and Yi which is smaller than Yn.
In the form of a quadrant diagram, the typology of the area can be described in Table 1.

Table 1: Klassen Typology Matrix

Regional contribution	Growth rate	
	$r_i >= r_n$	$r_i < r_n$
Yi >= Yn	**Quadrant I** (Region is developing and overgrowing)	**Quadrant I** (Advanced but depressed region)
Yi < Yn	**Quadrant II** (Developing region)	**Quadrant III** (less development region)

Source: Syafrizal, 2012

3.   Result and Discussion
3.1.   Regional Disparities in Banten Province
The average value of GRDP per capita increases every year. However, this increase was not followed by an even distribution of income between regions (see Figure 1). Inequality was highest in 2015 and lowest in 2017. The coefficient of variation curve on the per capita GRDP indicator shows that there has been a reasonably large income distribution inequality between regencies/cities in Banten Province. The consistent value of the coefficient of variation above 95% indicates that between districts/cities in Banten Province, there is a vast income distribution inequality. Referring to the Williamson Index, which also uses the coefficient of variation as the basis of calculation by adding the proportion of the population as a weighting, the index value is at a value of > 50%, indicating a reasonably large inequality. It means that the inequality of income distribution between regions in Banten Province has reached a level that needs to be watched out for.
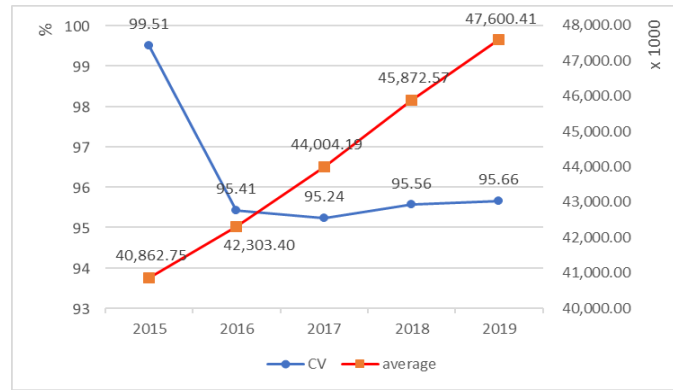
Figure 1 Coefficient of Variation and Average of GRDP Per Capita

The decrease in the coefficient of variation from 2015 to 2017 indicates the occurrence of sigma convergence. However, in 2018 and 2019, there was a slight increase in the value of the coefficient of variation. By assuming that each district/city in Banten Province has passed a period of medium-term development (5 years), there should have been regional consolidation in the autonomous region to move closer to the condition of the growth center region, namely the province.

In Figure 2, the curve of the coefficient of variation of the HDI indicator shows a small value in 2015 (8.39%). This value illustrates the disparity in the quality of human resources as proxied by the HDI, which is relatively low in Banten Province. The value of the coefficient of variation in the following years continues to move with a negative trend. This condition shows symptoms of a sigma convergence process in human resource development in the Banten region. In line with the decreasing inequality in human resources (HR) quality, there is a positive trend in the average HDI value each year.
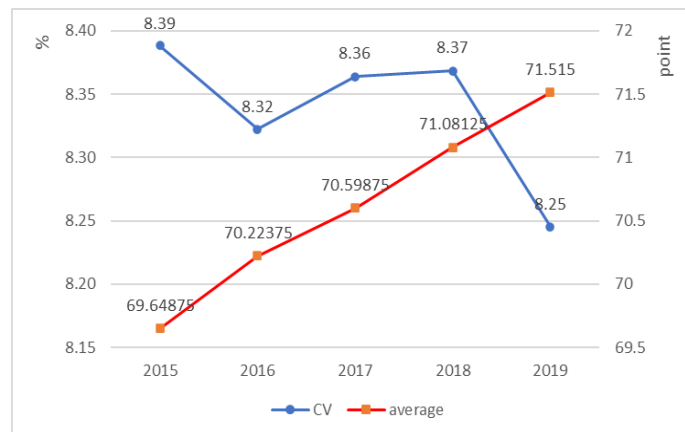

Figure 2 Coefficient of Variation and Average on HDI

In 2015 Banten's average HDI was in the "medium" category (60≤IPM<70). In the following year, there has been an improvement in the high category (70≤IPM<80). This condition continued with a positive trend, and significant improvements were seen at the end of the study period (2019). The average HDI in Banten province continued to rise to close to 72. It means human quality development in districts/cities in Banten Province is getting worse.
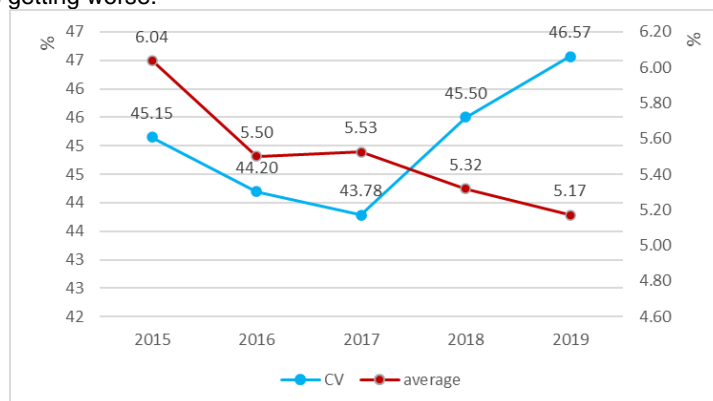

Figure 3 Coefficient of Variation and Average on The Poverty Rate

As shown in Figure 3, the poverty rate indicator illustrates a consistent downward trend in the average poverty rate in Banten Province. The improvement was quite visible at the end of the study period (2019), where the average poverty rate in Banten Province decreased to 5.17%. The coefficient of variation shows a decreasing value until 2017 and then increasing until 2019. This condition indicates the existence of regional poverty inequality that has not been consistent in its improvement. Poverty inequality in Banten Province is still in the range of 40%-50%. This value describes inequality that is close to the value that is in the high category.
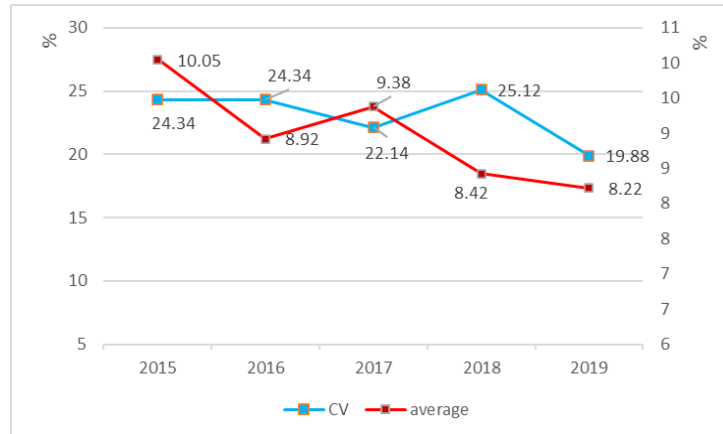

Figure 4 Coefficient of Variation and Average on Unemployment

As shown in Figure 4, the unemployment rate indicator illustrates a consistent downward trend in the average value of the unemployment rate in Banten Province. The improvement was quite visible at the end of the study period (2019), where the average poverty rate in Banten Province decreased to a value of 8.22%.

The coefficient of variation shows a fluctuating value from 2015 to 2019. This condition indicates a condition of regional unemployment inequality that has not been consistent in its improvement. It means that improvements do not follow the improvement in the unemployment rate in one district/city in other districts/cities. Unemployment inequality in Banten Province is still around 19%-25%. Although the value of the unemployment gap is not large enough, if it is not managed correctly, it will have implications for other fields.

3.2. Regional Convergence in Banten Province

The result of data processing is that the coefficient of GRDP per capita of 8 districts/cities in Banten Province is -.004 at the significance level of 10% (see Table 2). This value explains that an increase in GRDP per capita in each district/city in the previous year by 1 percent will impact a decrease in GRDP per capita by .004%. A negative value in the coefficient indicates a convergence of per capita income in districts/cities in the Banten Province.

Table 2: Estimation Results of Absolute Convergence

Variable	Coefficient	P-value
Constant	.083	.001
Yt-1	-.004	.069
R Square		.106
Fstatistik		3.548 *

R^2 value = 0.106 explains 10.6% variation in the rate of GRDP per capita in each district/city in Banten Province is influenced by GRDP per capita in the previous year or at the beginning of the period. This result supports the results of prior research (Lall & Yilmaz, 2001), where the beta convergence value indicates that regions or regions with poor economies tend to grow faster than regions or regions with prosperous economies (catching up).

The calculation of the annual convergence rate and the half-life of convergence obtained a value of 0.4% per year and will reach a condition of half of the convergence point for 173.63 years. These results indicate that if conditions remain as the period used in the modeling (2015-2019), then districts/cities in Banten province will achieve per capita income convergence at a rate of 0.4% a year and will be achieved in half over 173.63 years. This very long period of achievement is unrealistic to achieve convergent conditions, considering that the Banten area cannot be in a cateris paribus condition for such a long time.

In the estimation of the conditional convergence model (Table 3), it assumes that other variables besides the initial income per capita affect the convergence of per capita income. The coefficient of income per capita of the previous year, which is the initial income, is used to measure the convergence speed.

Table 3. Conditional Convergence Estimation Results

Variabel	Coefficient	P-value
Constant	.701	.000
$Ln(Y_{t-1})$	.002	.503
Ln(IPM)	-.145	.000
Ln(Poverty)	-.009	.029
Ln(Un Employment)	-.021	.008
R Square		.562
Fstatistik		8.676*

In the model estimation results, initial income has a positive but significant sign at = 1%, meaning regions with low per capita incomes cannot catch up with higher per capita incomes. This result is different from the result of the absolute convergence model. These results indicate that the convergence of per capita income in the Banten Province does not occur in conditions where other social factors are included in the model. These results are more realistic than the results obtained in the absolute convergence model.

The quality of human resources variable with the HDI proxy negatively affects the convergence of regional income. This finding is slightly different from the results of previous studies, such as Garcia & Soelistianingsih (1997); Shioji (2001); and Wibisono (2001), which state that human development starts in the fields of education, health, social not only has a direct impact on the economic growth of a country. The region also has an indirect impact, namely maintaining a sustainable level of economic growth. However, when viewed further, the difference is more on the behavior of the HDI itself, which at the research locus shows a slow movement (Figure 2) so that the increase in value does not significantly affect regional convergence.

3.3. The Influence of Socio-Economic Factors on the Convergence Level of DOB

The regression results show that the income per capita of the previous year has a positive effect on the growth rate of per capita income. Although not significantly influential, the regression coefficient of .002 indicates that an increase in income per capita in the previous year by 1% ceteris paribus will increase the rate of per capita income growth by 0.002% per year. This result is quite realistic in describing the level of economic growth in the previous year affecting the rate of economic growth. These results indicate no convergence of income distribution in the Banten Province.

The quality of human capital (HDI) harms the per capita income growth rate. The regression coefficient of -0.145 indicates that increasing the quality of human resources by 1% ceteris paribus will reduce the growth rate of per capita income by 0.15% per year. These results indicate that human resource development has not encouraged improvements in regional income.

The poverty rate harms the growth rate of per capita income. The regression coefficient of -.009 indicates that increasing the quality of human resources by 1% ceteris paribus will reduce the per capita income growth rate by 0.009% per year. This result is quite realistic in illustrating that poverty will more or less affect the rate of economic growth.

The unemployment rate harms the rate of growth of income per capita. The regression coefficient of -.021 indicates that an increase in unemployment of 1% ceteris paribus will reduce the growth rate of per capita income by 0.021% per year. This result is quite realistic in illustrating that the unemployment rate will more or less affect economic growth.

The findings above are new findings that the variables of unemployment and poverty, based on the model, show their influence on the rate of regional income convergence, respectively.

3.4. Strategy for accelerating Socio-Economic Convergence in Banten Province

The results of the Klassen Typology analysis in regencies/cities in Banten Province produce a typology of regencies/cities as presented in Table 4.

Table 4 Classification Typology of Banten Province

Quadrant I (Regions developed and overgrowing)	**Quadrant II** (Region advanced but depressed) Cilegon City, Tangerang City
Quadrant IV (Development area) Serang City, South Tangerang City, Tangerang Regency	**Quadrant III** (Lagging region) Pandeglang Regency, Lebak Regency, Serang Regency

In general, throughout the research period, districts/cities in Banten Province were in three categories/regional quadrants. Two towns are in developed but depressed areas (Cilegon City, Tangerang City). Three regions consisting of two cities and one district are in the developing region category (Serang City, South Tangerang City, Tangerang Regency). Three districts are in the underdeveloped category (Pandeglang Regency, Lebak Regency, Serang Regency).

Serang City and South Tangerang City are ideal as new autonomous regions. However, they have not yet developed areas and can develop in the future. Meanwhile, except for the Tangerang district, the regencies all fall into underdeveloped areas. This condition indicates a disparity in development speed in rural and urban areas as regional characteristics that represent districts and cities.

Three regions included in the underdeveloped regions are included in the old regions. This condition illustrates that the ancient region does not always produce an economically well-developed region. The new autonomous region (DOB) strategy uses a developing regional strategy. The new autonomous regions are developing regions, while the old regions are backward.

4. Conclusion

There are disparities in districts/cities in the province of Banten. The disparity is caused because the old autonomous regions were unable to keep up with the pace of development of other regions. In contrast, the DOB shows the opposite situation. There is a tendency for convergence to occur in the Banten Province, but it is not significant enough to indicate that there will be a convergence of income distribution. Socio-economic factors can be influencing factors in the convergence of the income distribution. With the current development pattern and planning, it is difficult for the autonomous region in Banten Province to reduce development disparities or achieve a condition of regional convergence. Socio-economic factors in unemployment and poverty influence income convergence in Banten Province, while the quality of human resources does not significantly affect it. It is necessary to develop sectors in each region following regional characteristics that will complement each other in Banten Province.

References

Aginta, H., Gunawan, A. B., & Mendez, C. (2020). Regional income disparities and convergence clubs in Indonesia: New district-level evidence. *Journal of the Asia Pacific Economy*, *28*(1), 101–132. doi:10.1080/13547860.2020.1868107.

Alcidi, C., Ferrer, J. N., Salvo, M. D., Musmeci, R., & Pilati, M. (2018). *Income convergence in the EU: A tale of two speeds*. January.

Andreano, M. S., Laureti, L., & Postiglione, P. (2013). Economic growth in MENA countries: Is there convergence of per-capita GDPs? *Journal of Policy Modeling*, *35*(4), 669–683.

Azwar, E. (2013). Economic growth disparity among the regions in Aceh, Indonesia. *Aceh International Journal of Social Sciences*, *2*(1), 21 – 31.

Baransano, M. A. et al. (2016). Analysis of factors affecting regional development disparity in the Province of West Papua. *Journal of Economics and Development Studies*, *4*(2), 115–128.

Barro, R. J. (2016). Economic growth and convergence. *Applied Especially to China*, (21872).

Chen, A. (2010). Reducing China's regional disparities: Is there a growth cost? *China Economic Review*, *21*(1), 2–13.

Dana, B. S. (2018). *Penerimaan dan belanja pemerintah daerah di Indonesia : Analisis sigma konvergen dan beta konvergen*. Simposius Nasional Keuangan Negara.

Darzal, D. (2016). Analisis disparitas pendapatan dan faktor-faktor yang mempengaruhinya di Provinsi Jambi. *Jurnal Perspektif Pembiayaan Dan Pembangunan Daerah*, *4*(2).

Dekiawan, H. (2014). Konvergensi penerimaan dan pengeluaran pemerintah provinsi di Indonesia: Pendekatan data panel dinamis spasial. *Buletin Ekonomi Moneter Dan Perbankan*, *17*(1), 99–128. doi:10.21098/bemp.v17i1.52.

Firdaus, M. (2010). Disparity of investment inflows among regions in Indonesia. *Economic Journal of Emerging Markets*, *2*(3), 237–250.

Garcia, J. G., & Soelistianingsih, L. (1997). Why do differences in provincial incomes persist in Indonesia. In *Indonesia Discussion Paper Series*.

Gömleksiz, M., Şahbaz, A., & Mercan, B. (2017). Regional economic convergence in Turkey: Does the government really matter for? *Economies*, *5*(3). doi:10.3390/economies5030027.

Khitam, M. C. (2014). Pelayanan publik di daerah otonom baru. *Ekbis*, *XI*(2), 553–567.

Kutscherauer, A. (2010). *Regional disparities in regional development of the Czech Republic*.

Lall, S. V, & Yilmaz, S. (2001). Regional economic convergence: Do policy instruments make a difference? *The Annals of Regional Science*, *35*(1), 153–166.

Mankiw, G. (2020). *Principles of Microeconomics* (9th ed.). Cengage Learning.

Maryaningsih, N., Hermansyah, O., & Savitri, M. (2014). Pengaruh infrastruktur terhadap pertumbuhan ekonomi Indonesia. *Buletin Ekonomi Moneter Dan Perbankan*, *17*(1), 62–98. doi:10.21098/bemp.v17i1.44.

Myrdal, G. (1974). What Is Development. *Journal of Economic Issues*, *8*(4), 729–736.

Nordholt, H. S. (2007). *Renegotiating Boundaries Local politics in post-Soeharto Indonesia*. KITLV Press.

Purawan, A. A. (2010). *Convergence among Indonesian regions: Pre Vs. post decentralization*. Seoul.

Resosudarmo, B. P., & Vidyattama, Y. (2006). Regional income disparity in Indonesia: A panel data analysis. *ASEAN Economic Bulletin*, *23*(1), 31–44.

Schmitt, C., & Starke, P. (2011). Explaining convergence of oecd welfare states: A conditional approach. *Journal of European Social Policy*, *21*(2), 120–135. doi:10.1177/0958928710395049

Shindo, Y. (2010). The effect of education subsidies on regional economic growth and disparities in China. *Economic Modelling*, *27*(5), 1061–1068.

Shioji, E. (2001). Public capital and economic growth: A convergence approach. *Journal of Economic Growth*, *6*, 205–227.

Solow, R. M. (1956). A Contribution to the Theory of Economic Growth. *The Quarterly Journal of Economics*, *70*(1), 65–94.

Supriyanti, E., Santoso, S. H., & Subagiarta, I. W. (2019). Analysis of regional development disparities in Situbondo Regency. *Sigma Convergent Approach*, *6*(12), 12035–12043.

Syafrizal, S. (2012). *Ekonomi wilayah dan perkotaan*. Jakarta: Rajagrafindo Persada.

Wang, F. (2016). Analysis on the regional disparity in China and the influential factors. *American International Journal of Humanities and Social Science*, *2*(4), 94–104.

Wibisono, Y. (2001). Determinan pertumbuhan ekonomi regional: Studi empiris antar propinsi di Indonesia. *Jurnal Ekonomi Dan Pembangunan Indonesia*, *1*(2), 52–83.