

## Income Inequality – Empirical Study of 34 Provinces in Indonesia

**Mulyo Budi Setiawan\***

Universitas Stikubank

[mulyobudisetiawan@edu.unisbank.ac.id](mailto:mulyobudisetiawan@edu.unisbank.ac.id)

**Sri Nawatmi**

Universitas Stikubank

[nawatmi@edu.unisbank.ac.id](mailto:nawatmi@edu.unisbank.ac.id)

**Agung Nusantara**

Universitas Muhammadiyah Semarang

[agungnusantara@unimus.ac.id](mailto:agungnusantara@unimus.ac.id)

**Abstrak** This research aims to find out what variables determine income inequality in 34 provinces in Indonesia 2018 - 2021. The method used in this research is pooling data or panel data. There are 3 models available in panel data, namely the PLS (pooled Least Square) model, FEM (Fixed Effect Model) and REM (Random Effect Model). Before analyzing, the first step is to determine the best model from the 3 models. The Chow test results show that the best model between PLS and FEM is FEM. To determine which model should be chosen between FEM and REM, the Hausman test is used, and the better model is FEM. Therefore, in this study FEM was used to estimate income inequality in 34 provinces in Indonesia. The estimation results show that of the 3 independent variables used in the estimation, only the HDI variable (human development index) influences income inequality in 34 provinces in Indonesia with a negative sign. Other variables, GRDP per capita and open unemployment rate do not affect income inequality.

**Kata Kunci** *Income inequality, human development index, GRDP, open unemployment rate, panel data*

## INTRODUCTION

Economic development is a reflection and assessment of a country's economic success. Development is said to run smoothly if the government can maximize resources and manage them optimally. Economic development is an effort to increase per capita income by managing the potential economy into a real economy through various means, namely by investment, technological development, increasing knowledge and skills (Sihombing & Sihotang, 2021). Meanwhile, economic growth is the process of increasing the production capacity of an economy which is realized in the form of increasing national income (Yasin, 2020).

Indonesia's economic growth in 2022 will be 5.31%, higher than the previous year's economic growth of only 3.70% (BPS, 2023). Indonesia's economic growth in 2022 also shows the highest growth since 2013. If we look at the value of GDP (Gross Domestic Product), Indonesia is in 17th place in the world, with a value reaching US\$ 1.29 trillion in World Economic Outlook (2022). Even though it is in 17th place in the world, the GDP value does not reflect the welfare of the Indonesian people. If measured by GDP per

capita, it turns out that Indonesia is only in 116th place in the world and fifth in ASEAN. The highest per capita income in ASEAN is occupied by Brunei Darussalam, followed by Singapore, Malaysia then followed by Thailand, then Indonesia (IMF, 2022).

In carrying out development and pursuing economic growth, the government will definitely face the problem of inequality. There are provinces that are said to be advanced because they can manage their resources well and conversely there are provinces that do not manage their resources well so they lag behind other provinces. Thus, good economic development in a country is not always reflected in regional economic development. Differences in regional management in all aspects give rise to disparities between regions (Saputra, 2021). Income inequality is one form of inequality that can occur in the development process.

Income inequality is the difference in income generated by society, resulting in striking income differences in society (Todaro, 2003). High income inequality between residents will disrupt the course of a country's economic development. The problem of income inequality is a long-term problem, so to improve income distribution a comprehensive and long-term policy is needed.

Income inequality is a problem often faced by developing countries (Tambunan, 2009). High economic growth at the development stage can indeed be achieved but is accompanied by problems such as unemployment, poverty in rural areas, unequal income distribution and structural imbalance (Sjahrir, 1986). Therefore, inclusive growth is needed, namely growth that does not only rely on aspects of economic growth but also focuses on aspects of equity and effectiveness of development results. According to Ali and Zhuan in Klasen (Klasen, 2010), inclusive growth is growth that can improve equal opportunities and accessibility throughout society. Inclusive growth also reflects growth that can reduce the level of income inequality (Rauniyar & Kanbur, 2010). It is hoped that inclusive growth can overcome development problems with the principles of increasing growth (pro-growth), creating jobs (pro-jobs) and equalizing inequality and poverty (pro-poor).

Income inequality has negative impacts on sustainable growth (Ostry, Berg, & Sangarides, 2014); (Berg & Ostry, 2011). Higher inequality reduces growth due to the loss of low-income households' ability to stay healthy and accumulate physical and human capital (Galor & Moav, 2004); (Aghion, Caroli, & Garcia-Penalos, 1999).

The Gini ratio shows the level of income inequality that occurs in an area. Gini ratio data helps the government to analyze the level of economic capacity of society because it is an indicator of the degree of prosperity of a region (Syawie, 2013).

The World Economic Forum (2014) has placed inequality as a global risk that must be watched out for. In the report, the WEF has ranked severe income disparity as 4th out of 10 high priority global risks in 2014.

Based on data from BPS, in March 2021, Indonesia's level of income inequality as measured by the Gini ratio was 0.384. This value increased by 0.003 points when compared to the Gini ratio in September 2020 which was 0.381. This means that income distribution is better in 2020 compared to 2021.

In March 2022, of the 34 provinces in Indonesia, the highest Gini ratio was the Yogyakarta Special Region, namely 0.439. Meanwhile, the province with the lowest Gini ratio was recorded in Bangka Belitung, namely 0.236. When compared with the national Gini ratio of 0.384; There are six provinces with higher Gini ratios, namely Yogyakarta Special Region (0.439), DKI Jakarta (0.423), Gorontalo (0.418), West Java (0.417), Papua (0.406), and Southeast Sulawesi (0.387).

Based on this data, it shows that there is indeed a problem of inequality in Indonesia. Even though income inequality in most provinces in Indonesia is classified as moderate inequality, it is still a problem because inequality causes disruption to growth and development in the region. Which, in the end, can reduce the welfare of the region. Therefore, research on inequality is important to find out what factors cause income inequality so that policies can be made that can minimize the negative impacts of income inequality.

To reduce income inequality in various provinces in Indonesia, the government has implemented various policies, including improving the human development index, because improving the quality of human life will reduce income inequality. This is supported by research results from Todaro (Todaro, 2003) which states that improving health and education can overcome income inequality. Other research results also state something similar, namely that increasing the human development index can reduce income inequality ((Putri, 2014); (Subrata, 2018); (Farhan & Sugianto, 2022)). However, the results of this research contradict the results of research from Sulistyaningrum et al (Sulistyaningrum, Bhinadi, & Astuti, 2022) which stated that increasing HDI will increase income inequality.

Theoretically, increasing GRDP per capita in a region will reduce income inequality in that region. This is supported by research results from (Scully & Slottje, 1989); (Alamanda, 2021); (Schrawat & Giri, 2015). However, these results contradict the results of research by Kandek and Kajling (Kandek & Kajling, 2017) which states that GDP growth has a positive effect on income inequality.

Another factor that influences income inequality is unemployment. If the open unemployment rate continues to increase, income inequality will increase. This is supported by the research results of (Dabla-Noris, Kochar, Suphaphiphat, Ricka, & Tsounta, 2015); (Scully & Slottje, 1989); (Sulistyaningrum, Bhinadi, & Astuti, 2022). However, this contradicts the results of research by Farhan and Sugianto (Farhan & Sugianto, 2022) stated that the level of open unemployment has no effect on income inequality.

## **LITERATURE REVIEW**

### **Income Inequality**

According to Todaro and Smith (Todaro & Smith, 2011), income inequality is the uneven distribution of income earned by each individual or household in a region. Extreme income inequality leads to economic inefficiency, damages and reduces social stability and solidarity and is considered unfair. Income inequality is defined as the difference in economic prosperity between the rich and the poor, which is reflected in income differences (Baldwin, 1986).

In a report by the Asia Development Bank (2012), high and increasing inequality is a factor that inhibits economic growth. High inequality can lead to social conflicts, fragile community ties, labour strikes, high crime rates, and even a loss of trust in government policies as people become apathetic. This will adversely affect the development process.

The World Economic Forum (2014) has ranked inequality as a global risk to watch out for. In the report, the WEF has ranked severe income disparity as the fourth out of 10 high-priority global risks in 2014. Severe income disparity will lead to disruption of social and political stability, which in turn will disrupt good governance. Disruptions in good governance will lead to fiscal crises. These disruptions will cause pressure on the labour market, resulting in falling incomes and further exacerbating inequality.

---

## Human Development Index (HDI)

According to the UNDP (United Nations Development Programme), human development is a process to increase the choices that humans have, including the most important choices, namely a long and healthy life, knowledge and access to the resources needed to live properly. HDI itself is a measure of human development achievements based on a number of basic components of human quality of life. To build HDI, a three-dimensional approach is used, namely the long and healthy life dimension; the knowledge dimension and the decent life dimension (BPS, 2023).

Thus, because HDI is an indicator in building the quality of human life, if the HDI improves, the level of income inequality will decrease so that people's welfare will increase.

## Income Per Capita

GDP (Gross Domestic Product) is the value of goods and services in a country produced by factors of production owned by citizens of that country and foreign countries. Per capita income itself is the total national income divided by the total population. A high GDP in a country does not necessarily mean that the GDP per capita is also high because it must be divided by the population. An increase in income per capita in a region is expected to reduce income inequality in the region.

## Open Unemployment Rate

The open unemployment rate is the percentage of the number of unemployed people to the total labour force. Meanwhile, the labour force is the working-age population (15 years and over) who work or have a job but are temporarily unemployed and unemployed. According to BPS, unemployed people are people who are actively looking for work; people who are preparing a new business/job; people who are not looking for work because they think it is impossible to get a job; people who are not actively looking for work because they already have a job but have not started working. The open unemployment rate indicates the percentage of the labour force that is unemployed. The higher the open unemployment rate in a region, the higher the income inequality in that region.

## METHOD

### Data Types and Data Sources

This research uses quantitative analysis. The data used is secondary data. Data source from BPS (Badan Pusat Statistik) from several publications. The research objects were 34 provinces in Indonesia from 2018 – 2021.

### Operational Definition of Variables

The independent variables used in this research are HDI (Human Development Index), real GRDP per capita and open unemployment rate, while the dependent variable is the Gini Ratio. The operational definition of these variables are:

1. Income inequality: uses the Gini ratio, which is a parameter used to measure inequality in income distribution. The Gini ratio value is zero to one. A Gini ratio of 0 means there is perfect equality and a Gini ratio of 1 indicates perfect inequality.
2. HDI: human development index. HDI explains how residents can access development results in obtaining income, health, education and so on. HDI is formed by three basic dimensions, namely long life and healthy life; knowledge and decent living standards (index).

3. Real GRDP per capita: the average income of the population in a region or total income divided by the number of residents in a region using the 2010 constant (thousand rupiah).
4. Open unemployment rate is the percentage of the number of unemployed to the total workforce. The labor force is the population of working age (15 years and over) who work or have a job but are temporarily unemployed and unemployed. Unemployed are: residents who are actively looking for work; residents who are preparing for a new business/job; people who are not looking for work because they feel it is impossible to get a job and groups of people who are not actively looking for work because they already have a job but have not yet started working (%).

### Research Model

The model used in this research is a panel data model, namely a combination of time series data (2018 – 2021) and cross-section data (34 provinces in Indonesia). The basic model in this research is:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_{it}$$

For  $i = 1, 2, 3, \dots, 34$  and  $t = 1, 2, 3, 4$

Where:

$i$  : cross section data

$t$  : time series data

$Y$ : Income inequality (Gini ratio)

$X_1$ : Human Development Index (HDI)

$X_2$ : real GRDP per capita

$X_3$ : Open unemployment rate

$\beta_0$  : intercept parameter

$\beta_1 - \beta_4$ : Slope parameters

$\varepsilon$  : Disturbance error

### Hypothesis

1. HDI has a negative effect on income inequality
2. GRDP has a negative effect on income inequality
3. Open unemployment rate has a positive effect on income inequality

### Analysis Method

To analyze, panel data is used, namely a data set containing individual sample data that combines cross section data with time series data. Panel data is very useful because it allows researchers to explore economic effects that cannot be obtained using cross section data alone or time series data alone. There are 3 estimation approaches in panel data analysis (Gujarati, 2003):

1. Pooled least squares (PLS) approach

This approach combines all cross section and time series data, then estimates the model using the OLS (ordinary least square) method so it is called the least squares approach (pooled least squares). Thus, the PLS model estimation ignores the cross section and time series dimensions of panel data.

2. Fixed Effects Approach (Fixed Effect Model/FEM)

The FEM model is used if there are few cross-section units. However, if the cross section is large then the use of FEM reduces the degrees of freedom which in turn will

reduce the efficiency of the estimated parameters. The basic idea of FEM starts from equations:

$$Y_{it} = \alpha_i + \beta_1 X_{1it} + \beta_2 X_{2it} + \epsilon_{it} \dots\dots\dots (1)$$

The intercept value for each cross section unit can be written:

$$\alpha_i = \alpha + \mu_i \quad i = 1, 2, 3 \dots\dots N$$

where  $\mu_i$  is the unobservable individual effect. Equation (1) can also be written:

$$Y_{it} = \alpha_i + \beta_1 X_{1it} + \beta_2 X_{2it} + \mu_i + \epsilon_{it} \dots\dots\dots (2)$$

In FEM,  $\mu_i$  is assumed to be correlated with the regressor X or  $\mu_i$  is not random.

**3. Random Effects Approach (Random Effect Model/REM)**

The basic difference between FEM and REM is the assumption of unobservable individual effects ( $\mu_i$ ). If in FEM,  $\mu_i$  is assumed to be correlated with the regressor (X), then, in REM,  $\mu_i$  is assumed to be uncorrelated with regressor X or in other words,  $\mu_i$  is assumed to be random. This is the basic idea of REM.

The basic idea of REM starts from the following equation:

$$Y_{it} = \alpha_i + \beta_1 X_{1it} + \beta_2 X_{2it} + w_{it} \dots\dots\dots (3)$$

The error term is now  $w_{it}$  which consists of  $\mu_i$  and  $\epsilon_{it}$ .  $\mu_i$  is a cross section (random) error component, while  $\epsilon_{it}$  is a combined component so REM is often called an Error Component Model (ECM). Equation (3) can be modified:

$$Y_{it} = \alpha_i + \beta_1 X_{1it} + \beta_2 X_{2it} + \mu_i + \epsilon_{it} \dots\dots\dots (4)$$

The fundamental difference between equations (4) and (3) is the assumption of unobservable individual effects ( $\mu_i$ ). REM produces more efficient estimators (smaller standard error or higher t-stat) than FEM.

**Selection of Estimation Models in Panel Data**

**1. PLS vs FEM**

To determine which model is better between PLS and FEM, the Chow test is used, if the probability  $< \alpha = 0.05$  means using FEM and vice versa if the probability is  $>$  than  $\alpha = 0.05$  using PLS.

**2. FEM vs REM**

To determine FEM or REM, correlated random effects – Hausman test are used. If the results are significant, they are correlated, meaning it is better to use FEM and conversely, if they are not significant, they are uncorrelated, so REM is used.

**RESULT AND DICUSSIONS**

Indonesia, while the time-series data is annual data from 2018 - 2021. The data is processed using Eview version 12. Data sources come from various publications from BPS. The analysis begins by choosing the right model to understand income inequality that occurs in 34 provinces in Indonesia. After the estimation model is selected, classical assumptions are detected and then discussed.

**RESULT**

**Model Specification Test**

The aim of the model specification test is to determine the appropriate model for estimation. First, determine the appropriate model between the PLS (Pool Least Square) model and the FEM (Fixed Effect Model) using the Chow test. Second, carry out the Hausman test to determine a better model between the fixed effect model (FEM) and the random effect model (REM).

Table 1. Chow Test

Effect Test	Statistic	df	Prob.
Cross-section	113.361216	(33,9)	0.0000
Cross-section Chi-square	497.499831	33	0.0000

The results of the Chow test show that it is significant so that the correct model between PLS and FEM is FEM (Fixed Effect Model).

The second step determines the best model between FEM and REM using Correlated random effects – Hausman test (see table 2):

Table 2. Correlated Random Effect – Hausman Test

Test Summary	Chi-Sq Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	29.855198	3	0.0000

The results of the Correlated random effect–Hausman Test show that it is significant, so the correct model between the fixed effect model and the random effect model is the fixed effect model (FEM). Thus, it can be concluded that of the 3 models in panel data, the one that is suitable to be used as an estimation model in panel data is FEM.

**Classic Assumption Detection**

Classical assumption detection is carried out to detect whether there are deviations from classical assumptions. Classical assumptions are basic assumptions that must be met before estimating so that the BLUE (Best Linear Unbiased Estimator) estimation results or estimation results are reliable. Classic assumptions include normality, multicollinearity, heteroscedasticity and autocorrelation.

Series:	Standardized Residuals
Sample:	2018 - 2021
Observation:	136
Mean:	153e-19
Median:	-0.000347
Maximum:	0.015059
Minimum:	-0.015159
Std. Dev.:	0.005921
Skewness:	196310
Kurtosis:	2.891803
Jarque-Bera:	0.939859
Probability:	0.625046

Figure 1: Jarque-Bera Test

The Jarque – Bera test (figure 1) shows that it is not significant, the model used is normally distributed.

To detect that there is no multicollinearity, look at the correlation between independent variables. If the correlation is below 0.8 then multicollinearity does not occur. Based on table 3, it shows that the correlation between the independent variables is below 0.8, meaning that there is no multicollinearity.

Table 3. Multicollinearity

	X1	X2	X3
X1	1	0.5253268	0.3961247
X2	0.5253268	1	0.3662307
X3	0.3961247	0.3662307	1

To detect whether there is heteroscedasticity, the Glejser test is used, namely by regressing the independent variables on the absolute value of the residual (Gujarati, 2003). The regression results show that heteroscedasticity does not occur (table 4).

Table 4. Heteroscedasticity

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.131527	0.060560	2.171841	0.0323
X1	-0.001730	0.0008828	-1.961773	0.0526
X2	-1.05E-07	1.49E-07	-0.705296	0.4823
X3	8.51E-05	0.000436	0.194906	0.8459

The regression results show that the independent variable has prob. which exceeds 0.05 so it can be said to be free from heteroscedasticity.

To detect whether there is autocorrelation, the Durbin-Watson Test (DW test) is used. Based on the estimation results using the FEM model, the value of DW is 1.728194 with a value of  $d_l = 1.61$  and  $d_u = 1.74$  ( $d_l \leq d \leq d_u$ ) so the conclusion is no decision. However, actually one of the advantages of panel data analysis is eliminating the possibility of autocorrelation or heteroscedasticity because it combines cross-section and time-series data.

**Regression Analysis**

Based on the explanation above, it shows that the model used to estimate is the FEM (Fixed Effect Model), see table 5.

Table 5. Fixed Effect Model (FEM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.131592	0.119933	9.435205	0.0000
X1	-0.010738	0.001747	-6.147914	0.0000
X2	-4.49E-07	2.94E-07	-1.525937	0.1302
X3	0.000293	0.000864	0.338855	0.7354
Rsquare	0.974557			
Fstat	105.3330	(Prob.: 0.0000)		

Based on table 5, it shows that variable X1 (HDI/human development index) is significantly negative towards Y (gini ratio) with a coefficient value of  $-0.010738$ . This means that if the human development index increases by 1 index point, it will reduce income inequality by 0.010738 and conversely, if the HDI decreases by 1 index point, it will increase income inequality by 0.010738 in 34 provinces in Indonesia.

Variable X2 (real GRDP per capita) apparently does not affect income inequality that occurs in 34 provinces in Indonesia. Variable X3 (open unemployment rate) also does not affect income inequality.

The results of the F test show that it is significant, meaning that the variables HDI, real GRDP per capita and open unemployment rate together influence income inequality in 34 provinces in Indonesia.

The regression results show that the coefficient of determination or  $R^2$  is 97.46%, meaning that the model's ability to explain income inequality is very large, namely 97.46%, while the remaining 2.54% is explained by other variables outside the model.

## DISCUSSIONS

The relationship between HDI (Human Development Index) and income inequality is negative. These results are in accordance with the theory that as the human development index improves, income inequality in the 34 provinces in Indonesia will decrease and conversely, if the human development index gets worse, income inequality will increase. These results are in line with the findings of (Farhan & Sugianto, 2022); and (Subrata, 2018).

HDI is an indicator to measure success in building the quality of human life. Building HDI means building three basic dimensions, namely the dimension of long and healthy life, the dimension of knowledge and the dimension of a decent life. Thus, building the first dimension means increasing the human development index so that the average life expectancy of people in each province in Indonesia will be longer and they will experience a healthier life. In the second dimension, namely the knowledge dimension, it means that on average people have received a longer period of education or have taken a higher level of education. The longer people receive education, the more their knowledge and skills will increase so that the quality of human resources (HR) will improve. Improving the quality of human resources will make it easier for them to get the job they expect. The third dimension is related to livability. The more decent life the average person has, the more they can fulfill their living needs, especially basic needs. With HDI having 3 dimensions, increasing HDI will result in the average community (in 34 provinces in Indonesia) having a better quality of life. This will cause income inequality to decrease further. Reducing income inequality will increase people's welfare so that poverty will decrease.

The second independent variable is X2 (real GRDP per capita) apparently does not affect income inequality in 34 provinces in Indonesia. This means that whatever happens to real GRDP per capita, whether it increases or decreases, will not cause income inequality to change up or down. As is known, the Gini ratio is a measurement of the inequality of income distribution in a population, while GRDP per capita measures the level of production or average income per individual in the population. In some cases GRDP per capita may not provide an accurate picture of the extent to which income is distributed within the population. According to Samuelson and Nordhaus (Samuelson & Nordhaus, 2009), GRDP per capita is a measurement of the average economic welfare in a country or region, while the Gini ratio measures the inequality of income distribution among individuals in the population. So GRDP per capita does not always reflect the inequality of income distribution in a population. However, it is important to remember that the relationship between GRDP per capita and the Gini ratio can vary depending on the context and economic characteristics of a country.

The third variable is X3 (open unemployment rate). The results show that the open unemployment rate has no effect on income inequality. This possibility occurs because

the Gini ratio focuses more on the distribution of income among individuals who are employed or have income, while the open unemployment rate measures the number of individuals who do not have a job. Therefore, the open unemployment rate may not have a direct effect on the Gini ratio.

Even though there are two independent variables that have no effect on income inequality, their explanatory power is close to perfect ( $R^2 = 97,46$ ). This could happen because perhaps the HDI variable is a composite variable which has 3 dimensions, namely the dimension of long and healthy life, the dimension of knowledge and the dimension of a decent life. Where each dimension has a broad scope because it has many factors so that even though only the HDI variable is significant, it has very high explanatory power.

## CONCLUSIONS

Based on the research results, it shows that of the three independent variables used, only the HDI variable influences income inequality in 34 provinces in Indonesia and the relationship is negative. Other independent variables, namely real GRDP per capita and the open unemployment rate, are not significant. Even though there is only one independent variable that is significant, the model's ability to explain income inequality in 34 provinces in Indonesia is very high. This could possibly happen because the HDI variable is a quality of life index which is a composite variable that has three dimensions and has many influencing factors.

## REFERENCES

- Aghion, P., Caroli, E., & Garcia-Penalos, C. (1999). Inequality and Economic Growth Theories. *Journal of Economic Literature*, 37(4).
- Alamanda. (2021). The Effect of Economic Growth on Income Inequality: Panel Data Analysis from Fifty Countries. *Info Artha*, 5(1), 1-10.
- Baldwin, R. E. (1986). *Pembangunan dan Pertumbuhan Ekonomi*. Jakarta: PT Bina Aksara
- Berg, A., & Ostry, J. (2011). *Inequality and Unsustainable Growth Two Side The Same Coin?* IMF Staff Discussion Note.
- BPS. (2023). *Berita Resmi Statistik*. bps.go.id.
- Dabla-Noris, E., Kochar, K., Suphaphiphat, N., Ricka, F., & Tsounta, E. (2015). Cause and Consequences of Income Equality A Global Perspective. *IMF Staff Discussion Note*.
- Farhan, M., & Sugianto. (2022). Analisis Faktor-faktor Yang mempengaruhi Tingkat Ketimpangan Pendapatan di Pulau Jawa. *Sibatik Journal*, 1(4).
- Galor, O., & Moav. (2004). From Physical to Human Capital Accumulation: Iequality and The Process of Development. *Review of Economic Studies*, 71, 1001-1026.
- Gujarati, D. (2003). *Basic Econometric* (Fourth ed.). McGraw-Hill.
- IMF. (2022). *Regional Economics Outlook*.
- Kandek, B., & Kajling. (2017). *Income Inequality and Economic Growth*. Johnhopking International Universty Internatioanl International Business School.
- Klasen, S. (2010). *ADB Sustainable Development Working Paper: Measuring and Monitoring Inclusive Growth Multiple Definitions, Open Question and Some Constructive Proposals*. ADB.
- Moav, G. a. (2004). From Physical to Human Capital Accumulation: Inequality and The Process of Development. *Review of Economic Studies*, 71, 1001-1026.
- Ostry, J. D., Berg, A., & Sangarides, C. (2014). *Redistribution, Inequality and Growth*. IMF Staff Discussion Note.

- Putri, A. (2014). Analisis Faktor-faktor Yang Mempengaruhi Pertumbuhan EKonomi dan Ketimpangan Pendapatan di Indonesia. *Jurnal FEB Unibraw*.
- Rauniyar, G., & Kanbur, R. (2010). Inclusive Growth and Inclusive Development: A Review and Sythesis of Asian Development Bank. *Journal of The Asia Pasific Economy, 15*, 455-469.
- Samuelson, P. A., & Nordhaus, W. (2009). *Economics*. McGraw-Hill.
- Saputra, Y. H. (2021). *Analisis Faktor-faktor Yang Mempengaruhi Ketimpangan Distribusi Pendapatan di Provinsi Jawa Barat Periode 2015-2019*. Skripsi UMY.
- Schrawat, M., & Giri, A. (2015). Financial Development and Income Inequality in India: An Application of ARDL. *International Journal of Social Economics, 64*-81.
- Scully, G. W., & Slottje, D. (1989). The Paradox of Politics and Policy in Redistributing Income. *Public Choice, 60*(1), 55-70.
- Sihombing, M., & Sihotang, J. (2021). Analisis Pengaruh Ekspor Migas, Ekspor Non Migas dan Penanaman Modal Asing Terhadap Pertumbuhan Ekonomi Indonesia Tahun 2000-2019. *Journal of Economics and Business, 2*(2), 40-51.
- Silistyaningrum, B. I., Bhinadi, A., & Astuti, R. (2022). Pengaruh Pertumbuhan Ekonomi, Indeks Pembangunan Manusia dan Upah Minimum Provinsi Terhadap Ketimpangan. *Sinomika Journal, 1*(4), 891-902.
- Sjahrir. (1986). *Ekonomi Politik Kebutuhan Pokok*. Jakarta: LP3ES.
- Subrata, B. A. (2018). Analisis Faktor-Faktor Yang Mempengaruhi Ketimpangan Pendapatan Kabupaten/Kota di Jawa Timur. *Jurnal Ilmiah Mahasiswa Unbraw, 6*(1).
- Syawie. (2013). Penurunan Kesejahteraan Masyarakat. *Informasi, 18*(2).
- Tambunan, T. (2009). *Perekonomian Indonesia*. Jakarta: Ghalia.
- Todaro, & Smith. (2011). *Pembangunan Ekonomi*. Jakarta : Erlangga.
- Todaro, M. (2003). *Pembangunan Ekonomi di Dunia Ketiga*. Jakarta: Erlangga.
- Yasin, M. (2020). Analisis Pendapatan Asli Daerah dan Belanja Pembangunan Terhadap Pertumbuhan Ekonomi di Kabupaten/Kota Jawa Timur. *Costing: Journal of Economic, 3*(2), 465-472.