

Causal Relationship Between Economic Growth, Unemployment, Poverty and The Impact to Human Development Index (HDI) 2010 - 2016

¹Nur Aida, ²Nur Siti Khumairoh

Abstract---*The aim of this research is for knowing the correlation between economic growth and unemployment to poverty and the other hand for knowing the correlation between economic growth, (Asfia, 2016), unemployment and poverty to Human Development Index (HDI) as an intervening variable. This research is quantitative research, and the data used is secondary data from BPS for 2010-2016. Analyse tools used in this research is multiplier linear regression, correlation and path analysis. Independent variable is economic growth, unemployment; dependent variable is poverty and human development index. Correlation economic growth and unemployment to poverty quietly strong which is $R = 0,974$ and R^2 are 0,948 meanwhile Correlation between economic growth, unemployment, and poverty to human development index (HDI) quietly strong which is $R = 0,965$ and $R^2 = 0,931$. The poverty variable is not a mediating variable between economic growth and HDI because the direct effect of economic growth on HDI is greater than the indirect effect of economic growth on HDI through poverty and this is supported by the Sobel test where the Sobel Test value is 0.66704791 below the 1.96 threshold. The poverty variable is not a mediating variable between unemployment and HDI because the direct effect of unemployment on HDI is greater than the indirect effect of unemployment on HDI through poverty and this is supported by the Sobel test where the Sobel Test value is 1.03759856 below the 1.96 threshold.*

Keywords---*Economic Growth, Unemployment, Poverty, HDI, Multiple Linier Regression, Path Analysis*

I. INTRODUCTION

Intrinsically development is a sustainable process for achieving a better life whether materially or spiritually. Development is should be looked into a multidimensional process which covers anything of changing the social structure, society attitude, even national institution, besides pursuing acceleration of economic growth, income deliberateness and overcoming poorness (Todaro & Smith, 2009).

Indonesia is one of the countries which has quite good of economic growth significantly from 1999 until 2009 and this is still growing up but unfortunately, there was decreasing of economic growth globally and it gave impact to Indonesia. Therefore from 2012 until now Indonesia have less than 5% (Ilmiah, 2013) of economic growth, lowest than the years before, but this amount is still quite good if we compare it with another country. The

^{1, 2}*Sekolah Tinggi Ilmu Ekonomi Gempol Pasuruan, Jalan Raya Timur Pasar No.09, Gempol – Pasuruan, Indonesia
nur.aidaph@gmail.com, nrsitti@gmail.com*

Government has a commit to push the economic growth by making some rules even government make a higher target and always convince and optimistic that economic growth will be at a higher level than years before.

Why Indonesia governments always focus on having high economic growth? It has to do because they have a responsibility to do it. As higher as economic growth as higher as the wealthy of the people and they can put outside from the poor people to the middle-class people and more. Although economic growth is not only to be the responsibility of the governments because society has a responsibility as well and they should be involved to take participated inside.

Every country always tries to give or opportunity to the people on having a job or gives the people an opportunity job and this is a very important issue. Unemployment will give an impact on social effect and this is very dangerous, and the government always tries to reduce the amount of unemployment by pushing economic growth and from 2010 until 2016 Indonesia already get success to reduce this unemployment.

Unemployment always be a part of the economic problem; unemployment makes productivity and income will be decreased and give impact to poverty and another social problem.

The objective of development must be how to make Indonesia be better on the economic, make people to be prosperous, minimization poor people for the short term and long term.

It is appreciated for government result, but development should be enjoyed and give impact to all of the people, development should decrease poverty people effectively as our amendment said that country has to give wealthy to all the people. Governments already make some rules and policies to do that, but we still know that poverty is real and until now we are still in problem to overcome it. By economic growth we can see how development is already done well because economic growth is an indicator of development, is it successful or not. Poverty is our big problem and it is always connected with difficulty, insufficient and need factor in any life aspect (Harlik, Amir, & Hardiani, 2013).

Poor people are accounted for two criteria such as consumption expenditure per capita per month which is approximately about 2100 calorie perkacita per day and commodity minimum needed to exclude food. Data from BPS that amount to poverty already decline from 9,87 % in 2010 to 8,34 % in 2016 (Misi, 2017) means that development objective gives a good outcome.

Based on Badan Pusat Statistik (BPS) (2010) the way to the account for poorness line is people who get income less than Rp. 7.057 per person per day. This determination Rp. 7.057 per person per day coming from the calculation of poorness line which is included food and nonfood needed (Gita Ratnasari, 2017).

Declining the amount of poor people is good news but it is still not enough because there is more important aspect. That aspect is about how to make this poor person get an education and healthy better because it will make them be more productive and the impact makes their income to be better as well. So once more, development is not only declining the number of poor people, but it is more important to make them more powered.

Human development index (HDI) is one of the important size measurements because of seeing the development result, economic growth only is not sufficient. HDI developed by Amartya Sen in his book *Development as Freedom* (Sen, n.d.) . Regarding Sen, Freedom is a society that feel prosperity as an impact of successfulness development.

This HDI measurement gives credibility information more because this HDI gives information more detail so HDI can give effective measurement and benefit than the only measurement of income per capita.

There are four elements of human development: productivity, equity, sustainability, enables (Susanti, 2013).

From this mention above so the researcher interesting to take this aspect with the title.

The causal relationship between economic growth on poverty and the impact to HDI

1.1 Problem Formulation

- a. Is there any correlation between economic growth and unemployment to poverty?
- b. Is there any correlation between economic growth unemployment and poverty to human development index (HDI) as intervening variable?

1.2 Objective

- a. For knowing the correlation between economic growth and unemployment to poverty
- b. For knowing correlation between economic growth unemployment and poverty to human development index (HDI) as intervening variable

II. LITERATURE REVIEW

2.1 Economic Growth

The country is said growing if the amount of goods and services increasingly or there is increasing in GNP. Economic growth means growing income per capita and it means growing of riel salary and standard of their life.

So the definition of economic growth is the condition of GNP which represents of growing output per capita and life standard of the society (Asfia, 2016).

Measuring the GNP is based on the riel GNP or Price constant GNP (Asfia, 2016). By using this measurement means that inflation influencer is dismissed.

What is GNP? GNP (Gross National Product) is the market value of all the product and services produced in one year by labor and property supplied by the citizen of a country.

Economic growth has the important thing effect such as (Asfia, 2016):

1 Wealthy level

Wealthy of the society can be increased at least by increasing national output per capita and for making society wealthier it needs growing of economic higher than growing the amount people.

2 Employment opportunity

Economic growth can be seen from growing of riel GNP. By growing of GNP means that growing of using production factors and it means growing of employment opportunity for the people, as we know that people are a part of production factors. Means that national output increase will give impact to push employment opportunity to be increased also and it will make the people get a job or it will increase of using labor resources

3 Income Distribution

Economic growth will be expected to spread income distribution better than there is no good economic growth. The subject of this spread of economic growth can be:

- a. Give more employment opportunities, increasing economic growth, implementation monetary and fiscal policy which can be push buying impact.
- b. Increasing productivity
- c. Enhance employment opportunity.

(Samuelson, Paul, and Nordhaus, 2001), economic growth means GNP growth and this economic growth caused by:

- a. growth of manpower
- b. growth of capital
- c. growth of innovation and technology

2.2 Unemployment

Unemployment is someone who wants to have a job and try to get a job but still does not get yet.

Three categorized of unemployment (Djohanputro Bramantyo, 2008):

- a. Frictional unemployment: is someone who still jobless because they want to get another job. And this frictional unemployment occurs based on their own choices, that's why this unemployment called voluntary unemployment
- b. Structural unemployment: is someone who wants to get a job but still does not get yet because their capability is not suitable for the job opportunity. For example, the opportunity job is a doctor, but available labor is nurses.
- c. Cyclical unemployment: is someone who still jobless but they still do not get yet because of economic recession or economic getting down.

2.3 Poverty

Poverty is representing a situation that is related to requirement, insufficient, difficulties. Poverty can be formulated as a disability to someone for fulfilling their consumption of basic needs and for increasing basic consumption needs and their quality of life (Rintuh, C. M, 2003).

Poverty itself has many impacts and aspects such as lower-income, illiteracy, degree of low health and obsolesce environment (Bank., 2004). World Bank says that poverty is about lack of income and asset for fulfilling basic need such as food, clothes, housing, and health level and education. Poverty has a relationship with work field limitation and usually, they are categorized as people who do not have a job (jobless) and education and healthy level are not adequate.

There are two measurements of poverty which are absolute poverty and relative poverty. Absolute poverty is a disability of someone to overcome determined poorness line, meanwhile, relative poverty is regarding in differences of income from one group to another group (Harlik et al., 2013)

2.4 Human Development Index (HDI)

The human Development index is a development indicator as guidance to measure the performance of a country in getting the goal of development, including making comparison with other countries (Bhakti, Istiqomah, & Suprpto, 2012). Human Development index has two measurements. Traditional paradigm, economic development means economic growth so GNP to be the development indicator (Bhakti et al., 2012).

The New paradigm, development as a multi-dimensional process which is not only about economic growth but also about a generalization of income distribution included overcoming poorness. So HDI is not only economic growth but also social indicators such as HDI and Physical Quality of Life Index (PQLI) (Bhakti et al., 2012).

HDI is one of the strategic indicators for knowing development performance in the region (Susanti, 2013). From HDI it can be measured that the development already gets or not and HDI has a big dimension because it gives information quality of the people based on life expectation, intellectuality and competent life standard (Susanti, 2013).

HDI is one of a composite index which is counted as mean modestly from three indexes as figuring basic ability to get extending optional such as: life expectation Index, Education index and competent life standard (Susanti, 2013).

III. RESEARCH METHOD

This research is quantitative because this research involves some quantitative data. The data used in this research is secondary data which is from the years 2010 until 2016. Kinds of data are economic growth, unemployment poverty and human development index (HDI) from 2010 until 2016. The data source comes from BPS (Biro Pusat Statistik).

Analysis tools used in this research a method of multiplier linear regression and correlation and path analysis.

Multiple linier regression is used because an independent variable is more than one variable. On multiple linear regression analysis, they are correlation analysis and regression analysis. Correlation analysis is for knowing a strong relationship between the independent and dependent variables, which is represented by r notation. The value of r is 0 – 1 and as higher as the value of r as stronger as the correlation between independent and dependent variables. If the value of r is negative mean that correlation between independent and dependent have a different direction and if the value of r is positive means that the correlation between independent and dependent have the same direction. Meanwhile, regression is for making prediction, how far the impact of independent variable to the dependent variable if any differences of an independent variable (Sugiyono, 2013).

Path analysis is developing regression analysis and this path analysis is for figuring out or evaluating the causal relationships between an independent and dependent variables and no reciprocal relationship (Sugiyono, 2013).

3.1 Research variable

This research uses independent and dependent variable and this is:

- a. Independent variable is economic growth and unemployment
- b. Dependent variable is poverty and human development index (HDI)

3.2 Research Framework

The objective of the research framework is aimed to give a view of the research. From the figure, it will be known that this research uses two dependent variables, poverty (Y) and human development index (Z), and two independent variables, economic growth (X1) and unemployment (X2). The research framework will be shown in figure 1

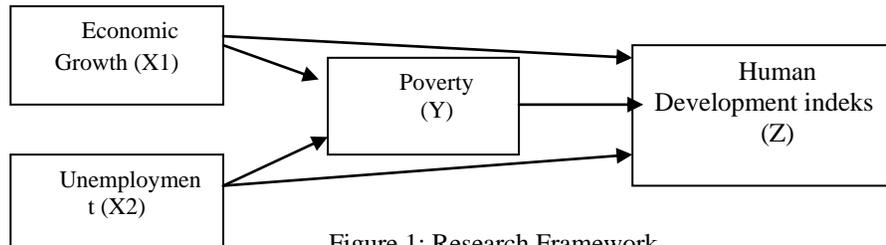


Figure 1: Research Framework

IV. ANALYSIS TOOLS

4.1 Correlation (r) and Determinant Coefficient (R²)

Correlation is intended to determine the level of relationship between the independent variable and the dependent variable. The correlation coefficient is given an r notation and the r value ranges from 0-1. The coefficient of determination (R²) is derived from the correlation coefficient value r squared.

According to (Imam Ghozali, 2016). The coefficient of determination (R²) is used to measure how much the contribution of independent variables to the dependent variable. If the coefficient of determination is greater (close to one) shows the better ability of X to explain Y, where $0 < R^2 < 1$.

4.2 Hypothesis test

F Test, i.e. testing is carried out to determine the effect of the independent variable simultaneously or simultaneously on the dependent variable.

T test is a measurement to determine whether individually there is an influence between the independent variables with the dependent variable.

Sobel test used to find out whether intervening variables significantly carries the influence of an independent variable to a dependent variable; i.e., whether the indirect effect of the independent variable on the dependent variable through the mediator variable is significant.

V. RESEARCH CONSTRUCT HYPOTHESIS

This research tries to get the answer to the question by using some hypotheses below:

- a. It is estimated that there is influence between growth and unemployment to poverty
- b. It is estimated that there is an influence between economic growth, unemployment, and poverty to human development index as an intervening variable.

VI. RESULT

Research use data resources from BPS as shown on table 1

Table 1: Economic growth, unemployment, poverty and HDI (%)

No	years	Economic Growth	Unemployment	Poverty	Human Development Index
1	2010	6,81	8,3	9,87	66,53
2	2011	6,44	8,1	9,23	67,09
3	2012	6,19	7,3	8,78	67,70
4	2013	5,56	7,4	8,60	68,31
5	2014	5,02	7,2	8,39	68,90
6	2015	4,79	7,6	8,52	69,55
7	2016	5,02	7,0	8,34	70,18

Resources: Biro Pusat Statistik

6.1 Correlation Between Growth, Unemployment to Poverty

Table 2: Model Summary, Anova and Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Beta	Beta		
(Constant)	2.0741	-	-	-	-
	0.917	0.128			
Economic Growth (X1)	2.862	0.339	0.118	2.862	0.046
Unemployment (X2)	3.243	0.637	0.197	3.243	0.032
Correlation (r) =	F = 36.721		$\alpha =$		
0,974	0.05 (5%)				
R square = 0.948	F Sig. = 0.003				

Dependent variable: Poverty (Y)

The relationship between growth, unemployment to poverty quietly strong because the value of correlation (R) is 0,974 and R² is 0,948 and it means that poverty can be explained 94,8% by growth and unemployment and the rest 5,2% can be explained by other variable exclude poverty which is not to be a part of the variable.

6.2 F test

From the F Test obtained SPSS output with a calculated F value of 36.721 is greater than the F table 6.94 so that economic growth and unemployment together have a significant affect on HDI. this is consistent with the results of research (Ekonomi et al., 1895)in which economic growth and unemployment simultaneously affect poverty.

6.3 T- test

From the t test obtained SPSS output with sig values. Economic growth of 0.046 is smaller than the level of significance of 0.05 so that partially economic growth has a significant effect on poverty. This is consistent with the results of research (Ekonomi et al., 1895)in which economic growth simultaneously influences poverty

From the t test obtained SPSS output with sig values. Unemployment of 0.032 is smaller than the level of significance of 0.05 so that partially unemployment has a significant effect on poverty and this is not in accordance with the results of the study (Probosiwi, 2016)where unemployment is not related to poverty but in accordance with the results of research (Ekonomi et al., 1895)in which unemployment simultaneously affects poverty and also in accordance with the results of research (A.ALIF NAFILAH, 2016)in which unemployment simultaneously affects poverty

6.4 Correlation Between Growth, Unemployment, Poverty to HDI

Table 3: Model Summary, Anova and Coefficients

Model	Unstandar rdized Coefficients		Standard ized Coefficient s	t	S ig.
	B	B eta	Beta		
(Constant)	78.147	-	-	16.389	0.000
Economic Growth (X1)	-2.494	-1.641	0.658	-0.99	0.088
Unemployment (X2)	-0.962	-1.146	1.191	-0.417	0.407
Poverty (Y)	0.927		1.591		0.388

0.583	0.601		
Correlation (r) =		F = 13.532	$\alpha =$
0.965	Rsquare =	0,05 (5%)	
0.931		F Sig. = 0.03	

Dependent variable: HDI (Z)

The relationship between growth, unemployment, poverty to HDI quietly strong because value of correlation (R) is 0,965 and R^2 is 0,931 and it means HDI can be explained 93,1% by growth, employment and poverty, and the rest 6,9 % can be explained by other variable exclude variable which is not to be a part of the variable.

6.5 F-test

From the F Test it is obtained that SPSS output with a calculated F value of 13.532 is greater than F table 6.94 so that economic growth, unemployment and poverty together have a significant effect on HDI

6.6 T-test

From the t test obtained SPSS output with sig values. Economic growth of 0.088 is greater than the significant level of 0.05 so that partially economic growth does not significantly influence HDI. This is in accordance with the results of research from (Dewi, Yusuf, & Iyan, 2016) which found no effect of economic growth on HDI.

From the t test obtained SPSS output with sig values. Unemployment by 0.407 is greater than the significant level of 0.05 so partial unemployment does not have a significant effect on HDI. And this is consistent with the results of research from (Saragih, 2018) which economic growth and unemployment have no significant effect on HDI.

From the t test obtained SPSS output with sig values. poverty by 0.601 is greater than the significant level of 0.05 so that partially poverty does not significantly influence HDI. This is not in accordance with the results of research (Kemiskinan, Ekonomi, Modal, & Mirza, 2015) where there is an influence of poverty on HDI.

Analyze data of growth, unemployment, poverty to human development index (HDI) as an intervening variable showed as figure 2 below:

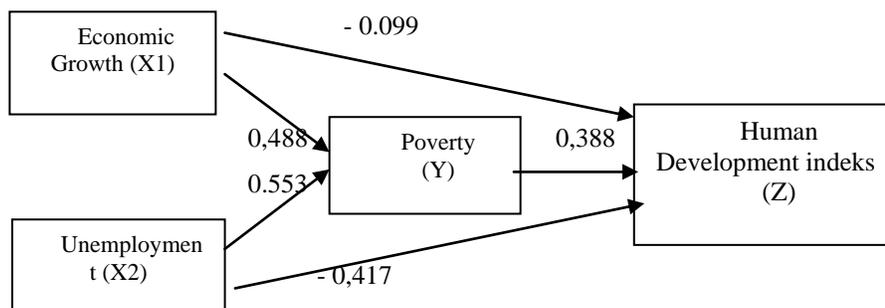


Figure 2: Research Framework

From the figure 2 above it can be seen that direct influence economic growth (X1) passing to poverty (Y) is 0,99 meanwhile for knowing indirect influence economic growth (X1) passing pverty (Y) to HDI (Z) is by multiply between beta economic growth (x1) with beta poverty (Y) = $0,488 \times 0,388 = 0,189$. So total influence is $0,99 + 0,189 = 1,179$.

So the poverty variable is not a mediating variable between economic growth and HDI because the direct effect of economic growth on HDI is greater (0,99) than the indirect effect of economic growth on HDI(0,189) through poverty and this is supported by the Sobel test where the Sobel Test value is 0.66704791 below the 1.96 threshold.

From the figure above it can be seen that direct influence unemployment (X2) passing to Poverty (Y) is 0,417 meanwhile for knowing indirect influence unemployment (X2) passing poverty (Y) to HDI (Z) is by multiply between beta unemployment (x2) with beta poverty (Y) = $0,553 \times 0,388 = 0,215$. So total influence is $0,417 + 0,215 = 0,632$.

So the poverty variable is not a mediating variable between unemployment and HDI because the direct effect of unemployment on HDI is greater (0,417) than the indirect effect of unemployment on HDI (0,215)through poverty and this is supported by the sobel test where the sobel test value is 1.03759856 below the 1.96 threshold.

VII. CONCLUSION

- a. Correlation economic growth and unemployment to poverty quietly strong which is $R = 0,974$ and R^2 is 0,948.
- b. F test showed that between growth and unemployment correlate simultaneously to poverty because calculated of F is 36,721 higher than value F table 6,94
- c. t-test showed that economic growth and unemployment have a partial impact significantly on poverty because sig value economic growth and unemployment is greater than the significant level of 0.05
- d. Correlation between economic growth, unemployment and poverty to human development index (HDI) quietly strong which is $R = 0,965$ and $R^2 = 0,931$
- e. F test shown that between economic growth, unemployment and poverty have correlation simultaneously to human development index because calculated of F is 13,532 higher than value F table 6,94
- f. t-test shown that economic growth, poverty and unemployment do not have partial impact significantly to human development index because sig value economic growth, unemployment and human development index is greater than the significant level of 0.05.
- g. The poverty variable is not a mediating variable between economic growth and HDI because the direct effect of economic growth on HDI is greater than the indirect effect of economic growth on HDI through poverty and this is supported by the Sobel test where the Sobel Test value is 0.66704791 below the 1.96 threshold.
- h. The poverty variable is not a mediating variable between unemployment and HDI because the direct effect of unemployment on HDI is greater than the indirect effect of unemployment on HDI through poverty and this is supported by the Sobel test where the Sobel Test value is 1.03759856 below the 1.96 threshold.

REFERENCES

- [1] A.ALIF NAFILAH. (2016). *Pengaruh Pertumbuhan Ekonomi , Index Terhadap Kemiskinan Di Kabupaten Jeneponto , Provinsi Sulawesi Selatan Tahun 2005-2014*.
- [2] Asfia, M. (2016). *Ekonomi Makro* (4th Editio). Refika Aditama.

- [3] Bank., W. (2004). *Mewujudkan Pelayanan Umum bagi Masyarakat Miskin*. The World Bank, Jakarta.
- [4] Bhakti, N. A., Istiqomah, & Suprpto. (2012). Analisis Faktor-Faktor yang mempengaruhi Indeks Pembangunan Manusia di Jawa Barat. *Ekuitas : Jurnal Ekonomi Dan Keuangan*, 18(4), 452–469.
- [5] Dewi, N., Yusuf, Y., & Iyan, R. (2016). Pengaruh Kemiskinan Dan Pertumbuhan Ekonomi Terhadap Indeks Pembangunan Manusia Di Provinsi Riau. *Jurnal Online Mahasiswa Fakultas Ekonomi Universitas Riau*, 4(1), 870–882.
- [6] Djohanputro Bramantyo. (2008). *Prinsip-Prinsip Ekonomi Makro*.
- [7] Ekonomi, P. P., Dan, P., Terhadap, P., Di, K., Bangli, K., Wayan, N., & Suadnyani, R. (1895). *Jurusan Ekonomi Pembangunan Fakultas Ekonomi dan Bisnis Universitas Udayana (Unud), Bali , Indonesia Fenomena kemiskinan merupakan salah satu penyakit ekonomi makro yang dihadapi oleh negara-negara di dunia termasuk Indonesia (Sri Budhi , 2013). Kemisk*. 1022–1049.
- [8] Gita Ratnasari. (2017). *Pengaruh Tingkat Pengangguran Terhadap Tingkat Kemiskinan di Indonesia*. (December 2015), 1–13.
- [9] Harlik, Amir, A., & Hardiani. (2013). Faktor-Faktor yang Mempengaruhi Kemiskinan di Kota Jambi. *Jurnal Perspektif Pembiayaan Dan Pembangunan*, 1(2), 109–120. Retrieved from <http://online-journal.unja.ac.id/index.php/JES/article/view/1500>
- [10] Ilmiah, J. (2013). *Pengangguran Di Indonesia Periode. 2017*(December), 1–7.
- [11] Imam Ghozali. (2016). *Aplikasi Analisis Multivariate dengan Program IBM/SPSS 23* (8th editio). Semarang: Badan Penerbit Universitas Diponegoro.
- [12] Kemiskinan, P., Ekonomi, P., Modal, D. A. N. B., & Mirza, D. S. (2015). Pengaruh Kemiskinan, Pertumbuhan Ekonomi, Dan Belanja Modal Terhadap Ipm Jawa Tengah. *JEJAK: Jurnal Ekonomi Dan Kebijakan*, 4(2), 102–113. <https://doi.org/10.15294/jejak.v4i2.4645>
- [13] Misi, V. (2017). *Persentase Penduduk Miskin Menurut Provinsi 2007 - 2017 Tabel Unduh Data*. 2017.
- [14] Probosiwi, R. (2016). Pengangguran dan Pengaruhnya terhadap Tingkat Kemiskinan. *Balai Besar Penelitian Dan Pengembangan Pelayanan Kesejahteraan Sosial (B2P3KS)*, (1), 89–100.
- [15] Rintuh, C. M. . (2003). *Kelembagaan dan Ekonomi Rakyat*. Dikti, Jakarta. Kelembagaan dan Ekonomi Rakyat. Dikti, Jakarta.
- [16] Samuelson, Paul, and Nordhaus, W. D. (2001). *Macro Economics* (14th and 1). New York : Mc Grau-Hill Companies.
- [17] Saragih, A. H. (2018). An Analysis of Local Taxes Revenue’s Effect on Human Development Index. *Jurnal Economia*, 14(2), 197–211. <https://doi.org/10.21831/economia.v14i2.21595>
- [18] Sen, A. (n.d.). *Development as freedom* (1st Ed, Ed.). Oxford University Pres. New York.
- [19] Sugiyono. (2013). *Statistika Untuk Penelitian*. Alfabeta.
- [20] Susanti, S. (2013). Pengaruh Produk Domestik Regional Bruto , Pengangguran dan Indeks Pembangunan Manusia terhadap Kemiskinan di Jawa Barat dengan Menggunakan Analisis Data Panel. *Jurnal Matematika Integratif*, 9(1), 1–18.
- [21] Todaro, M. P., & Smith, S. C. (2009). *Economic development*. England: Pearson Education Ltd.
- [22] Lincy, G., Ponnaivaikko, M., Anselm, L. Review of optimal siting and sizing techniques for distributed generation in the distribution system (2018) *International Journal of Pharmaceutical Research*, 10 (4), pp. 80-83.