# Analysis of Economic Growth and Welfare Levels in Indonesia

Enny Khotimah[1], Achmad Rodoni[2], Karno[3]
Ennykesehatan17@gmail.com[1], akhmad_rodoni@gmail.com[2], karno@borobudur.ac.id[3]

Universitas Borobudur[1,2,3]

**Abstract**: Indonesia's quarterly GDP growth on a y-on-y basis in the 2016-2019 period shows a downward trend. This was caused by the global economic conditions that had not yet recovered during this period. In the health sector there were still problems with uneven and inadequate infrastructure, and the distribution of human resources for health was uneven. This study used descriptive and quantitative analysis. compiled based on secondary data, journals, articles, and other sources. While the quantitative analysis used the econometric model of panel data analysis. The goal of this study is to look at how health services, health financing, the Human Development Index, social status, and employment affect Indonesia's economic growth and people's level of welfare. The consequences of this study presume that wellbeing administrations, wellbeing supporting affect monetary development, the Human Improvement List, Gini Proportion and Open Joblessness Rate affect financial development.

**Keywords:** Health Services, Human Development Index, Economic Growth

## 1. Introduction

Economic growth is a problem that is always a priority because economic growth can indicate an increase in per capita income in a country, economic growth can lead to economic development in various fields. High economic growth in a country will have a high effect on other fields. Therefore, economic growth is a country's top priority in the welfare of its population. According to Sollow, economic growth always comes from one or more of three factors, namely increasing the quantity and quality of the workforce through population growth and improving education, adding capital and technology. One tool to measure the development of the quality and quantity of the workforce is the Human Development Index (Budi et al. , 2002) Public welfare is the main goal and aspiration of every country. The level of welfare of a country is one of the benchmarks to determine the success of development. The economic development of a country can be measured by economic growth, The level of people's income will also rise if economic growth is positive, and the community will be able to meet its daily needs as a result of the increased income. This is the relationship between economic growth and people's welfare. People's incomes will ultimately rise as a result of increased government spending, which will encourage the creation of new employment opportunities. The demand for goods and services will also increase if individuals' incomes rise. then, the output of the nation will rise. Thus, the higher the monetary development, the higher the degree of financial action, and that implies the more prosperous individuals around there. (Rahmadia et al., 2020)

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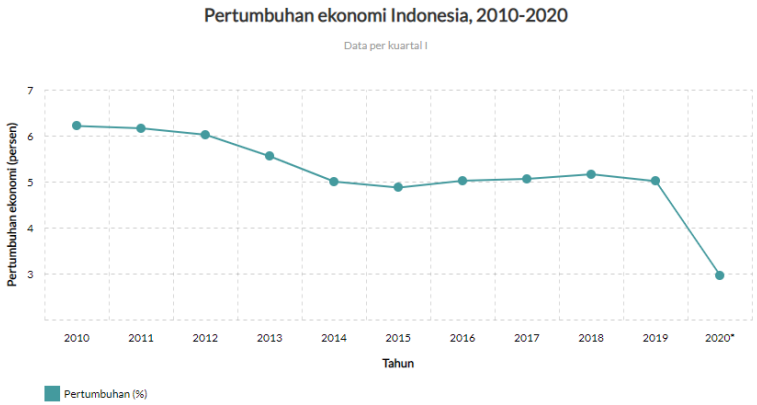


Figure 1 Indonesia's Economic Growth in 2010-2020
Source: BPS 2020

Figure 1 shows Indonesia's financial development in the primary quarter of 2020, in particular 2.97 percent. During the most recent decade, monetary development has would in general decay.

The quality of human resources (HR) is an indicator of community welfare as seen from the quality of the economy, education and health. Attention to human development emphasizes the human condition and individual circumstances such as health, education, food and non-food consumption, freedom to make decisions, and so on. Human development indicators with the level of success achieved describe the level of community welfare which is usually measured by the Human Development Index (IPM). The following is the development of the Human Development Index in Indonesia in the last 10 years, the HDI has been recorded to have continued to increase since 2010 and even reached high status in 2016 (index 70-80). Where HDI portrays how occupants can get to improvement brings about acquiring pay, wellbeing, instruction, and others. In both 2018 and 2019, Indonesia's human development index increased. This increase is a sign of improvement in development outcomes in Indonesia. This improvement in development is supported by strengthening and improvement in terms of health, education and the economy.

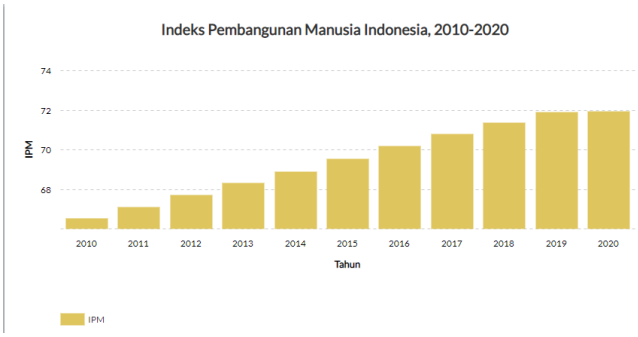


Figure 2: Development of Indonesia's HDI
Source: BPS 2020

One of the factors that influence economic growth is the quality of human resources (HR), including health. Health is a very useful investment for improving the quality of human

resources, health is considered an important factor affecting the quality of human resources. Countries that have a low level of health have more serious challenges in achieving economic growth, because it is assumed that if people are healthy then production will increase and this will lead to economic growth. Wellbeing is one of the human necessary resources to help monetary turn of events. This is due to the fact that good health is necessary for increased productivity. According to Tjiptoherijanto, a person's health can have an impact on economic growth in a number of ways. For instance, improving a person's health can result in an increase in labor participation; improving a person's health can also result in improvements in education levels, which in turn contribute to economic growth; or improving a person's health can result in an increase in population, which will bring about higher levels of education. Participation in the labor force. The environment, behavior, and health services are just a few of the many factors that influence overall health. In the meantime, a variety of factors have an impact on health services, such as the availability and quality of health care facilities, medical equipment, personnel, and health management and financing.

## 2. Literature Review

### 2.1 Gross Regional Domestic Product

GDP is the complete added esteem created by all units in an economy or the all out worth of definite labor and products delivered by every single monetary unit. In contrast, the total gross added value of all economic sectors in a region or regions is the Gross Regional Domestic Product. This type of production or output that has its value added reduced by intermediate costs is known as gross value added. Depreciation, net indirect taxes, and income (wages, salaries, interest, land rent, and profits) are all components of the gross added value. By ascertaining the gross added worth of every area and afterward adding it up, the aftereffects of this computation will create the Gross Local Homegrown Item (BPS, 2021) To work out the worth of Gross Territorial Homegrown Item, there are three methodologies or strategies that can utilized, incorporate:

1. Production Approach: The added value of goods and services produced in an economic sector within a region or area over a predetermined time period is the Gross Regional Domestic Product.
2. Income Approach, Gross Provincial Homegrown Item is determined by including all the compensation got by the variables of creation. Here, wages, salaries, land rent, interest on capital, business profits, depreciation, and net indirect taxes are all forms of compensation for factors of production.
3. Expenditure Approach, The Gross Regional Domestic Product of an area is calculated by adding up the final use value of goods and services produced in the country where the total production of goods and services is used for household consumption purposes, private institutions, gross domestic fixed capital formation, stock changes, net exports and government consumption

### 2.2 Economic Growth

Todaro made sense of that monetary development is a decent cycle where there is an expansion underway limit in an economy over the long haul and can bring forth an expansion in public pay. The development of periodic economic activity that results in an increase in real national income is referred to as economic growth. Monetary development shows the degree to which financial action will produce extra pay every once in a while. Monetary action is a course of utilizing elements of creation to deliver yield, then this interaction then, at that point,

produces correspondence on the variables of creation utilized. As per Todaro, there are three most significant parts in a country's monetary development: Technological development, population and labor force expansion, as well as the accumulation of money. It is feasible to reach the determination that monetary development is an adjustment of the action of the economy that is portrayed by an expansion in how much labor and products created, which thusly prompts an expansion in pay. Adam Smith was the one who first proposed the Neoclassical theory, and Robert Solow and T. W. Swan came back to it later. According to this theory, capital, labor, and technological advancements are the three primary drivers of economic expansion. Additionally, this theory holds that an increase in the number of employees can lead to an increase in the average income per capita. However, this increase will not have a positive effect on national economic growth unless modern technology is developed. According to Sadono Sukimo, economic growth is a variation in the level of economic activity from year to year. An examination of public pay is required from one year to another to decide a country's monetary development. This is the thing we as a rule call the pace of monetary development.

**2.3 Human Development Index**

A nation's primary economic capital is its human capital. The goal of human resource development is to produce high-quality people, as measured by an increase in the human development index, which will show how well-off people are becoming. Human Development Report (BPS 2015), as stated. Human improvement has different sides. The first one is the development of human capacities like health, education, and capacity building. Second, the use of capabilities for productive purposes. In this concept, income is one of the choices that must be had to support human development, however, development is not just an expansion of income and welfare. Human development must focus on humans. Achievement of the Human Development Index in a region can be grouped into several categories. The grouping aims to be able to organize a common area in terms of human development. A region's human development accomplishments are correlated with the Human Development Index's value. The geometric average of the health, education, and purchasing power indices is calculated in the Human Development Index. Wellbeing is one of the human necessary resources to help monetary turn of events. This is due to the fact that good health is necessary for increased productivity. According to Tjiptoherijanto (1993), improving one's health can have a number of effects on economic growth. These effects include an increase in labor force participation, an increase in education, and an increase in population, all of which increase the level of economic growth. People in good health contribute significantly to poverty reduction, economic expansion, and long-term economic development at the macro level. The job of the state in satisfying the fundamental necessities of individuals is direly required, particularly as extensive wellbeing administrations, with wellbeing being perceived as one of the common freedoms, specifically a number of privileges that come naturally to people because they are animals of God, the all-powerful God, and are essential gifts. regarded, maintained, and protected for the honor and assurance of human respect by the state, regulation, and government, and everyone else. Wellbeing is a basic freedom that each individual has, and the state is committed to regard, maintain, and safeguard it. A sufficient standard of living for one's own health and that of one's family is a fundamental human right. This includes the right to housing, food, and clothing,

## 3. **Methodology**

The quantitative data analysis method used in this study includes statistical data collection to make statistical data-based calculations easier. A study that presented and analyzed data using statistical tests was known as quantitative research. with the assistance of the Eviews program. From 2016 to 2020, the study was conducted in 34 Indonesian provinces using secondary data collected from the Indonesian Central Statistics Agency (BPS).

The variables of interest we selected for the study were the following:

1. GDP growth rate, which measures the annual growth of a nation's economy compared to the previous year in percentage points.
2. Human Improvement Record (HDI) as an intermediary for near proportion of future, proficiency, instructive fulfillment and way of life. HDI explains how individuals can gain access to income, health, education, and other development outcomes.
3. Health Financing (PMS) as a proxy for Percentage of Population Self-Medicated During the Last Month.
4. Gini Ratio (GR) as a proxy for the level of spending inequality of the Indonesian population
5. Employment ( TPT ) as a proxy the percentage of the number of unemployed to the total labor force.

The researchers employ a multi-linear regression technique, with economic growth as a proxy for constant price GDP (PE) serving as the dependent variable and the human growth index (IPM) and health services serving as independent variables, Health Financing (PMS) Employment ( TPT), Gini Ratio ( GR)

$PEit = \beta o + \beta 1PKit + \beta 2PMSit + \beta 3IPMit + \beta 4GR + \beta 5TPT + eit$ (1)

The model is reformatted as follows:

GDP = 0+ 1 HDI + 2 PK + 3 PMS et .....
.....(2)

Where :
GDP : Growth Economy
0 : constant
1, 2, 3 : Regression Coefficient
HDI : Human Growth Index
PK : Health services
PMS Health Financing
IPM : Human Development Index
TPT : Employment
GR : Gini Ratio
et : Error term

## 4. Results and Discussion

1. **Regression Model Selection**

The determination of the model in this review utilizes the best examination test, in light of the board information relapse model methodology with Eviews 10 (Normal Impact Model, Fixed Impact Model, and Irregular Impact Model) and the tests that have been completed (Chow Test, Hausman Test) show that the relapse model that more suitable to use in this review is the Decent Impact Model.

Chow Test ( Likelihood Ratio **)**

The objective of the statistical test known as the Chow test is to choose between the Common Effect Model and the Fixed Effect Model for this investigation. The Chow Test's outcome is as follows:

Table 1. Chow test The goal is to determine the best model

Test cross-section fixed effects

| Effects Test | Statistic | d.f. | Prob. |
|---|---|---|---|
| Cross-section F | 2864.759227 | (33,130) | 0.0000 |
| Cross-section Chi-square | 1120.399769 | 33 | 0.0000 |

Hypothesis

The ideal model is Fixed Effect if the Prob Cross-section Chi-square value is less than 0.05. The ideal model is Common Effect if the Prob Cross-section Chi-square value is greater than 0.05. In light of these tests, it shows that the likelihood worth of the cross-area F is 0.0000 and the likelihood cross-segment Chi-square is 0.0000 and is more modest than alpha 5% (0.00000 <0.05) so H0 is dismissed and H1 is acknowledged. The Fixed Effect model is a good one based on the Chow test results, so the values of the following equations are generated. Following are the consequences of assessed information with a sum of perceptions of 34 territories in Indonesia north of 5 years (2016-2020).

Table 2. Fixed Effect Model Regression Results

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 1.801.181 | 1.554.613 | 1.158.604 | 0.2487 |
| LNPK? | 0.037466 | 0.026740 | 1.401.104 | 0.1636 |
| LNPMS? | 0.039173 | 0.054564 | 0.717931 | 0.4741 |
| LNIPM? | 4.298.703 | 0.390828 | 1.099.896 | 0.0000 |
| LNGR? | -0.378275 | 0.117965 | -3.206.659 | 0.0017 |
| LNTPT? | -0.055563 | 0.028538 | -1.946.983 | 0.0537 |

Source: Eviews Processing Results (processed data, 2022)

Table 2 contains the results of panel data regression using the model Fixed Effects based on the table 2 shows the PK, PMS variables have no significant effect, HDI has a significant effect on economic growth. GR, TPT have a significant influence on economic growth.

2. **Statistical Test**

**Simultaneous Testing (F-Test)**

Concurrent testing or F-measurable test to show how the impact at the same time or together on the autonomous variable on the reliant variable. The F test is additionally called the achievability test in the relapse model which is utilized to recognize regardless of whether the assessed relapse model is possible. The estimated model can be used to explain the overall effect of the independent variables on the dependent variable, as indicated by the regression model's feasibility. By contrasting the

probability value (F-statistic) with the significance level, the statistical F-test is carried out.

Table 2. F-statistical test

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 1.801.181 | 1.554.613 | 1.158.604 | 0.2487 |
| LNPK? | 0.037466 | 0.026740 | 1.401.104 | 0.1636 |
| LNPMS? | 0.039173 | 0.054564 | 0.717931 | 0.4741 |
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| LNGR? | -0.378275 | 0.117965 | -3.206.659 | 0.0017 |
| LNTPT? | -0.055563 | 0.028538 | -1.946.983 | 0.0537 |
| R-squared | 0.999207 | | | |
| Adjusted R-squared | 0.998969 | | | |
| F-statistic | 4.198.239 | | | |
| Prob(F-statistic) | 0.000000 | | | |

Source: Eviews Processing Results (processed data, 2022)

The F-statistic's probability value is 0.000000, which indicates that H0 is rejected and H1 is accepted, according to the F test results. Subsequently it very well may be inferred that all the while there is a critical impact between the free factors (Wellbeing Administrations, Wellbeing Funding, HDI, gini proportion and work) on Monetary Development.

**Partial Testing (t-test)**

` Partial testing can be used to determine how much the coefficients of the independent variables affect the dependent variable. The level of meaning of every free factor in the board information relapse model is analyzed during halfway testing. The likelihood esteem is contrasted with the importance level in levels of certainty of = 0.05 for halfway testing. The free factor fundamentally affects the reliant variable if the p-esteem (t-measurement) is not exactly or equivalent to 0.05. If the p-value is greater than or equal to = 0.05, the independent variable has no significant effect on the dependent variable.

**Testing the Coefficient of Determination (R-squared)**

The purpose of testing the coefficient of determination is to demonstrate how much the dependent variable can be explained by the regression model. The strength of the independent variables' ability to explain the regression model can also be measured using the coefficient of determination R-squared. In working out the coefficient of assurance, the more noteworthy the valueR-squaredthe more prominent the job of the autonomous variable in making sense of the reliant variable. Table 2 shows the results of the regression using Fixed effect models. The test results on the model equation where the variables Health services. Human Development Index (HDI),Health Financing (PMS), Gini Ratio (GR),Employment (TPT) on Gross Regional Domestic Product have a valueR-squared of 0.999207 or has a coefficient of determination of

99.92 percent. This means that all independent variables such as the Health Index, Education Index, Purchasing Power Index, and the Work Force used in the model can explain the dependent variable, namely the Gross Regional Domestic Product of 99.92%. While the rest of the coefficient of determination (R-squared) of 0.2% is explained through other variables outside the research model.

## 5. Conclusion

This study demonstrates that Indonesia's economic growth is significantly influenced by the Human Development Index, Gini Ratio, and employment. In the mean time Wellbeing administrations affect financial development in Indonesia. In conclusion, we found that Indonesia's economic growth has been significantly aided by the Human Development Index, the Gini Ratio, and employment. Medical issues significantly affect financial development in Indonesia. This is because during the research period, some information was found that showed the low quality of health services. The low use of health facilities is often caused by the factor of the distance between these facilities and the people who are too far away (both physically and socially distanced), high tariffs, including the very limited number of medical personnel, inadequate equipment.

**Recommendation**

In light of the consequences of these ends, the ideas that the essayist can give are as per the following:

1. In order for individuals to have easier access to health facilities, it is anticipated that governments will be able to increase the availability of supporting facilities and infrastructure in the health sector. Provide guidance to the community about the importance of maintaining health so that they can remain productive in old age. It is necessary to carry out periodic supervision and monitoring of people who are elderly.
2. Governments are expected to be able to improve the quality of education by providing educational support facilities and infrastructure evenly and adequately because education is an important capital in improving the quality of human resources. Economic growth will increase sharply if assisted by qualified human resources. The expertise possessed by the workforce is expected to be able to improve the economy in Indonesia.

**References**


[1] BPS. (2020).

[2] Safitri, Aliasuddin, 2016, Student Scientific Journal (JIM) Development Economics Faculty of Economics and Business Unsyiah Volume 1 Number 1, August 2016. P.56-65

[3] Sukirno, 2016. Introduction to Macroeconomic Theory, Edition: Third. PT. King Garfindo Persada.

[4] C, N., & et al. (2014). The Effects of Population Growth on Economic Growth in Nigeria. The International Journal Of Engineering And Science (IJES), 7-18.

[5] Gujarati, D. (2003). Basic Econometry. Translation: Sumarno Zain, Jakarta: Erlangga.
[6] https://id.wikipedia.org/wiki/Index_Development_Humans
[7] https://www.bps.go.id/subject/173/perdagangan-dalam-negeri.html#subjekViewTab1
[8] Hasibuan, LS (2015). The Influence of Population Factors That Affect
[9] Economic Growth in Medan City. Journal of Economists.
[10] Pramusinta, EB (2011). Analysis of the Relationship Between Population Growth and Dependency Ratio with Economic Growth in Semarang City in 1986-2008. Semarang: Faculty of Economics and Business, Diponegoro University, Semarang.
[11] Subri, M. (2003). Human Resource Economics. Jakarta: PT Raja. Grafindo Persada.
[12] Thuku, GK, & et al. (2013). The Impact Of Population Change On Economic Growth In Kenya. International Journal of Economics, 43-60.
[13] Todaro, MP (1999). Economic development in the Third World. Jakarta: Erlangga.
[14] Todaro, MP (1995). Economic Development in the Third World Volume 1. JAKARTA: Erlangga.
[15] Todaro, MP (2000). Third World Economic Development Sixth Edition Volume 1. Jakarta: Bumi
[16] Todaro, MP, & Smith, SC (2006). Economic Development. Jakarta: Erlangga.
[17] Todaro, MP, & Smith, SC (2003). Economic Development in the Third World Eighth Edition. Jakarta: Erlangga.
[18] Appiah, M., Amoasi, R., & Frowne, D. I. (2019). Human Development and Its Effects on Economic Growth and Development. 12(2), 101–109.
[19] Ahyar, H., Maret, U. S., Andriani, H., Sukmana, D. J., & Mada, U. G. (2020). Buku Metode Penelitian Kualitatif & Kuantitatif (Issue March).
[20] Basuki, A. T. R. I. (n.d.). Regresi MREGRESI MODEL PAM , ECM DAN DATA PANEL DENGAN EVIEWS 7.
[21] Kusumawardani, R. (2022). Ekonometrika Fakultas Ekonomi dan Bisnis Islam UIN Raden Mas Said Surakarta (Issue February).
[22] Widarjono, A. (2013). Ekonometrika: Pengantar dan Aplikasinya Disertai Panduan EViews. Yogyakarta: UPP STIM YKPN, 378. http://repository.ut.ac.id/3891/1/EKSI4417-M1.pdf
[23] Gujarati, Damodar N. (2004). Basic Econometrics, (4th ed). The McGraw−Hill Companies.