

## Research Article

## The Effect of Local Original Income and Economic Growth on the Human Development Index

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The Human Development Index (HDI) is an indicator that can be used to measure development achievements in the quality of human life, seen from health, education and economic aspects. So these three aspects are important to improve in creating the welfare of the people of a region. In this research, there are at least two factors that can influence the human development index, namely, local original income (PAD) and economic growth. The aim of this research is to analyze local original income (PAD) and economic growth against the human development index (HDI) in Pekanbaru City. This research uses secondary data obtained from the Official Publication of the Central Statistics Agency (BPS) of Pekanbaru City, namely Regional Original Income (PAD), Economic Growth and Human Development Index (HDI) from 2018-2023. Based on the results in this research, the research data is then analyzed using the Eviews 13 application and then analyzed in the discussion. So it shows that local original income (PAD) and economic growth have a positive and significant influence on the human development index (HDI).

**Keywords:** Regional Original Income, Economic Growth, Human Development Index



## INTRODUCTION

Everyone carries out their activities in social life in order to gain prosperity. There are three kinds of activities in the economy of a country, namely, production, distribution and consumption activities, all of these activities are in order to obtain prosperity. So that prosperity is the goal of every human being. So when every individual gets prosperity, then the State is said to be a prosperous State, and this is all the goal of every State, how to ensure that its people can live prosperously. With one of them can see from the quality of life of the community.

Human development index (HDI) is an indicator that can be used to measure the achievement of development of the quality of human life. As a measure of quality of life, the Human Development Index (HDI) is constructed using three basic approaches to this approach, namely health aspects used average life expectancy. And to measure aspects of knowledge used a combination of literacy rates and average length of schooling. Meanwhile, to measure aspects of decent life, people use indicators of people's purchasing power for a number of basic needs measured from the level of per capita expenditure. (Rashid & Beautiful, 2023) Human development is basically guaranteed a decent life as a process of expanding diverse choices to the community by prioritizing the empowerment of basic human resource capabilities so that they are able to participate fully in all fields of development. Meanwhile, the elements of human development explain that the targets to be achieved, namely economy, health and knowledge. (Nurhalimah et al., 2021)

The human development index (HDI) is considered a better indicator in measuring the level of human well-being, as it covers important aspects such as health, education and economy. taking into account disparities and inequalities in income distribution and access to health and education. So the problem of the human development index (HDI) is important to be studied and discussed in various studies, so as to produce references and the best solutions. If we look at the human development index data in Pekanbaru City can be explained as follows:

82,38

| Tahun | Indeks Pembangunan Manusia (IPM) |
|-------|----------------------------------|
| 2018  | 80,66                            |
| 2019  | 81,35                            |
| 2020  | 81,32                            |
| 2021  | 81,58                            |
| 2022  | 82,06                            |
| 2023  | 82,38                            |

Source : BPS Pekanbaru City 2023

Based on Table 1 above, the human development index (HDI) over the last six years has experienced an increasing trend, from 2020 of 81.32 to 2023 of 82.38. However, there was a slight decrease from 2019 of 81.35 to 81.32 in 2020. In general, it can be said to have increased. This means that people's quality of life is getting better. In the calculation, there are several indicators that show the magnitude of the human development index (HDI) nationally and internationally. On a national scale the scale used ranges from 1-100, while the international scale ranges from 0-1 in decimal number values. (Adam Hawari, 2020) While on an international scale, with these three measures of human development, it can be ranked into three groups: the first, countries with low development indices ranging from 0.0 to 0.50. In the second,

Countries with a medium development index ranging from 0.51 to 0.78. Third, countries with high development indices ranging from 0.80 to 1.0 (Subandi, 2014) So of course there are several factors that influence the human development index. In this study, namely local original income (PAD) and economic growth. In the same study conducted by Joni Fernandes and Megi Laila Putra the results showed that local native income and economic growth had a positive and significant effect on increasing the human development index.

Local Original Revenue (PAD) is the main source of revenue for local governments, such as local taxes, levies, natural wealth proceeds, and other legitimate revenues. Become an important source of income for a region in financing economic development and services for the people of the region. So it is necessary to develop sources of income, the potential possessed by the region. (Repair & Rijal, 2023) With the increase in local original income (PAD), the regional budget also increases. The increase in regional spending will increase the development of infrastructure and economic facilities will further create jobs, so as to create prosperity, which in turn can increase the human development index (HDI) of a region. (Fernandes & Son, 2022)

Economic growth is one of several indicators that can be used to see the economic performance of a country. Economic growth is an increase *aggregate output* or *Gross Domestic Product*, which is closely related to the process of increasing the production of goods and services in the economic activities of society. Economic growth is a process, not a picture of the economy in a certain period, there is a development or change in the use of a certain period of time. Increasing economic growth means increasing the production of goods and services in community economic activities so that it will provide income for people who are able to create prosperity, so that from this welfare is reflected in an increase in the quality of life of the community or called the human development index. (Ashwant, 2023) You can see the following data related to local original income (PAD) and economic growth of Pekanbaru City:

6,06

| Tahun | PAD             | Pertumbuhan Ekonomi |
|-------|-----------------|---------------------|
| 2020  | 618090322805,90 | 4,38                |
| 2021  | 684642966382,18 | 5,24                |
| 2022  | 799021484425,65 | 6,78                |
| 2023  | 890308284260,38 | 6,06                |

Source : BPS Pekanbaru City 2023

Based on Table 2 above, it shows that local original income (PAD) has increased every year from 2020 by 618,090,322,805.90 until 2023 of 890,308,284,260.38 while economic growth has increased from 2020 of 4.38 to 2022 of 6.79 but decreased in 2023 to 6.06. So with the increase in local original income and economic growth, this will affect the human development index (HDI) in Pekanbaru City. There are several aFirst, many developing countries have achieved high economic growth, but have failed to reduce socioeconomic inequality and poverty. Second, many developed countries with high income levels have failed to reduce social problems, such as drug abuse, vagrancy, and domestic violence. Third, some low-income countries are able to achieve high levels of human development because they are able to use wisely all resources to develop their human capital capabilities. (Bhakti et al., 2018).

## RESEARCH METHODS

In money the scope of this research by using the type of Quantitative Descriptive research. With the aim to test and provide empirical evidence on the effect of local original income (PAD), economic growth on the human development index (HDI) in Pekanbaru City. While The source of data used is secondary data, namely data obtained indirectly, in this study data obtained through the publication of the official website of the Central Bureau of Statistics of Pekanbaru City. (BPS, 2023)

The data analysis techniques used in this study are descriptive and analysis. Where this study used multiple linear regression analysis tools. Using the Eviews data processing tool 13. With the research variable, the original income of the region is the independent variable, while the human development index is the dependent variable. Produce the following equation:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \epsilon \dots\dots\dots(1)$$

Dimaana:

Y : Human Development Index (HDI)

A : Konstanta

$\beta_1$  : Value of Regression Coefficient

$X_1$  : Local Original Revenue (PAD)

$X_2$  : Economic Growth

E: *Term of Error*

The steps in data analysis techniques in this study can be explained as follows:

a. Normality Test

Normality Test is a test conducted with the aim of assessing the distribution of data on data or variables, whether the data is normally distributed or not normally distributed.

b. Heteroscedasticity Test

The heteroscedasticity test aims to test whether the regression model occurs variance inequality from the residuals of one observation. A good regression model is one that is free from heteroscedasticity

c. Coefficient of Determination Test

The Coefficient of Determination ( $R^2$ ) is a number that gives the proportion or percentage of total variation in the non-free variable (Y) described by the independent variable (X)

d. Simultasn Test (F-Test)

The F test is used to show whether all independent variables have an effect on the dependent variable.

e. Partial Test (T-Test)

The T test is performed to show how far the influence of one explanatory or independent variable individually in explaining the variation of dependent variability.

## RESULT AND DISCUSSION

### Research variables and operations

The variables used in this study are local original income (PAD) and economic growth as independent variables while the human development index (HDI) as the dependent variable. For research operations can be explained as follows:

1. Local original revenue (PAD) is revenue obtained from sources of income within its own area. The Regional Original Revenue is collected based on regional regulations in accordance with applicable laws and regulations in Indonesia.
2. Economic growth is a process, not a picture of the economy in a certain period, there is a development or change in the use of a certain period of time. Which is closely related to the process of increasing the production of goods and services in the economic activities of the community
3. The human development index (HDI) is a composite indicator to measure the achievement of human quality of life development. In 1990, the *United Nations Development Programme* (UNDP) established this index to emphasize the importance of people and their resources in development.

### Data analysis techniques

In the form of equations from the processed research data as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

$$Y = 7917.29 + 1.17 X_1 + 31.26 X_2$$

0.043930

Year

80,66

2020

81,58

2023

|                             |                |                                                 |          |          |
|-----------------------------|----------------|-------------------------------------------------|----------|----------|
|                             | 684642966382,1 |                                                 |          |          |
| 4,38                        | 2021           | 8                                               | 5,24     | 2022     |
| C                           | 7917.288       | 85.11546                                        | 93.01821 | 0.0000   |
| Pendapatan asli daerah (X1) | 1.17E-10       | 3.14E-11                                        | 3.737038 | 0.0334   |
| Pertumbuhan ekonomi (X2)    | 31.92525       | 15.09689                                        | 2.114691 | 0.1248   |
| R-squared                   | 0.875498       | Mean dependent var                              |          | 8155.833 |
| Adjusted R-squared          | 0.792497       | S.D. dependent var                              |          | 60.57200 |
| S.E. of regression          | 27.59205       | Dependent Variable: Human development index (Y) |          | 9.779785 |
| Sum squared resid           | Squares        | Schwarz criterion                               |          | 9.675665 |
| Date: 03/24/24 Time: 13:03  | -26.33936      | Hannan-Quinn criter.                            |          | 2023     |
| F-statistic                 | 10.54802       | Included observations: 6                        |          | 2.332984 |
| Prob(F-statistic)           | 0.043930       |                                                 |          |          |

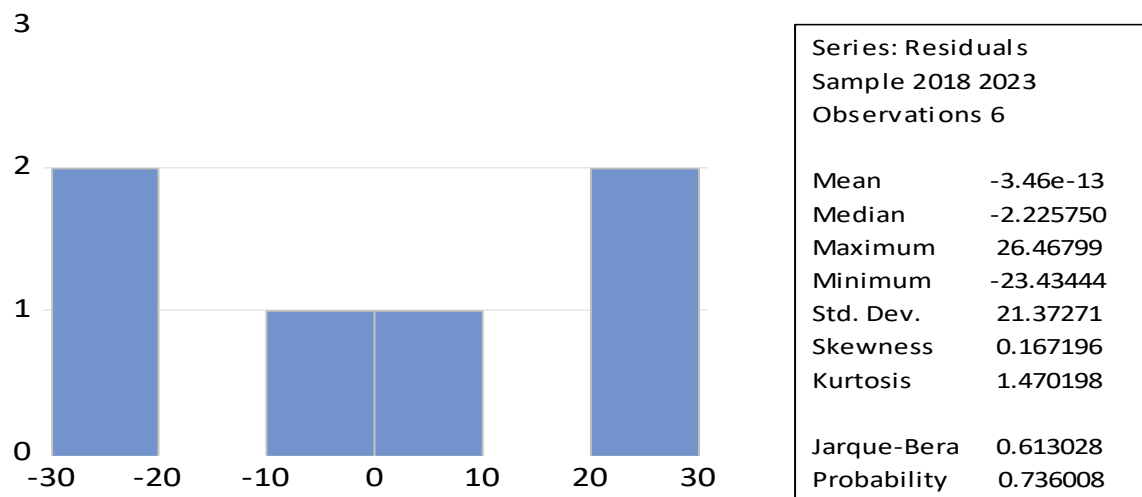
Source : Processed Data

Then the first step that needs to be done is the normality test on research data, which is as follows:

### a. Normality Test

The Normality Test aims to test whether the research data is normal or not. Regression models can be said to be good if the study has normal data. This normality test is the first step that is done before the next steps. The Normality Test in this study by looking at the value of Jurque-Bera Probability with the following conditions: If the Jurque-Bera Probability value is below 0.05 it indicates the data is not normally distributed and if the Jurque-Bera Probability value is above 0.05 it indicates the research data is normally distributed.

Figure 1 Normality Test



Source : Data Processing Output

Based on the processed data, it can be seen that the value of Jurque-Bera Probability is 0.74. This means that the value of Jurque-Bera Probability in this study is greater than the value of 0.05. So it can be concluded that in this study the data is Normal Distributed.

### b. Heteroscedasticity Test

The heteroscedasticity test aims to test whether the regression model occurs variance inequality from the residuals of one observation. A good regression model is one that is free from heteroscedasticity. In this study with conditions, seen the value of obs R\*squar Prob chi-squar. If the value is above 0.05 then there is no heteroscedasticity.

0.8787

Prob.

Null hypothesis: Homoskedasticity

| Local original revenue |                  |          |
|------------------------|------------------|----------|
| 93.01821               | 0.0000(X1)       | 1.17E-10 |
| Economic growth        |                  |          |
| 3.14E-11               | 3.7370380.0334   | (X2)     |
| 31.92525               | 15.096892.114691 | 0.1248   |

Source : Data Processing Output

Based on the results in Table 4, it can be seen that the obs R\*squar Prob chi-

squar(2) value of 0.11 means that the obs R\*squar Prob chi-squar(2) value is greater than 0.05. Then it can be concluded in this study free from heteroscedasticity.

#### c. Test Coefficient of Determination

The Coefficient of Determination is a measure used to measure the effect of the independent variable on the variance of the dependent variable. Which in this study is the independent variable (PAD and economic growth) and the dependent variable (HDI) of Pekanbaru City.

0.792497

|                  |                 |
|------------------|-----------------|
| <b>R-squared</b> | <b>0.875498</b> |
|------------------|-----------------|

|                           |          |
|---------------------------|----------|
| <b>Mean dependent var</b> | 8155.833 |
|---------------------------|----------|

Source : Data Processing Output

From the calculation results, the Coefficient of Determination or ( $R^2$ ) in this study is 0.8755 or 87.55%, meaning that local original income ( $X_1$ ), economic growth ( $X_2$ ) is 87.55% and the remaining 12.45% is influenced by other variables that are not studied in this study.

#### d. Simultasn Test (F-Test)

Simultaneous tests are conducted to determine the proportion of dependent variables described by independent variables together in the study.

0.043930

|                           |                 |
|---------------------------|-----------------|
| <b>Adjusted R-squared</b> | <b>0.792497</b> |
|---------------------------|-----------------|

|                           |          |
|---------------------------|----------|
| <b>S.D. dependent var</b> | 60.57200 |
|---------------------------|----------|

Source : Data Processing Output

Based on the table above, it can be known that the significant value of the Simultaneous Test is 0.04 smaller than 0.05, which means that together local original income and economic growth have a significant effect on the human development index (HDI) of Pekanbaru City.

#### A. Uzi Perial (UZ-T)

Partial Test is the testing of regression coefficients individually and to find out from each variable in influencing the dependent variable, assuming the other variables are constant or fixed.

0.1248

|                           |                 |                              |
|---------------------------|-----------------|------------------------------|
| <b>S.E. of regression</b> | <b>27.59205</b> | <b>Akaike info criterion</b> |
|---------------------------|-----------------|------------------------------|

|          |                   |          |
|----------|-------------------|----------|
| 9.779785 | Sum squared resid | 2283.964 |
|----------|-------------------|----------|

|                 |          |                       |
|-----------------|----------|-----------------------|
| Black criterion | 9.675665 | <b>Log likelihood</b> |
|-----------------|----------|-----------------------|

|           |                      |                 |
|-----------|----------------------|-----------------|
| -26.33936 | Hannan-Quinn criter. | <b>9.362984</b> |
|-----------|----------------------|-----------------|

Source : Data Processing Output

Partial Test Results can be seen in Table 7. Where the local original income probability value t is 0.03 which is smaller than 0.05, it can be said that the local original income has a positive and significant effect on the human development index. Furthermore, for economic growth, it can be seen from the probability value t of 0.12 greater than 0.05, it can be said that economic growth has no effect on the human development index of Pekanbaru City.

## **DISCUSSION:**

### **Local original income (PAD) against human development index (HDI)**

Based on the results in this study, it shows that local original income (PAD) has a positive and significant effect, meaning that every increase in local original income can increase the human development index (HDI) in Pekanbaru City. So it is the attention of Pekanbaru City to be able to increase the original income of the region every year. So that the influence on the human development index can create improvements in the quality of life of the community, both in terms of health, knowledge and income.

When one's income is low, one's least expenditure on improving human development falls. Provide direct benefits to the improvement of human development through an increase in one's income. Increased income will increase one's spending allocation for food that is more nutritious and can cost education, and other things. Increasing income encourages a person to spend his household expenses in order to improve the quality of health and education of family members so as to create a good quality of life. (Eka Pratiwi & Hidayat, 2013)

Economic development that is truly realized will create an economy for developing communities. An economy that develops will indirectly increase income due to convenience, so as to create the welfare of the community. (Muhammad Hasan, Hartoto, Abdelina, Muhammad Haris Riyaldi, Aswanto, 2022)

So the most important thing after getting the results from these various reference sources so that the Pekanbaru City government can make its strategic policies in empowering all the potential of its regional resources to produce as much as possible in order to create a better human development index.

### **Economic growth against Human Development Index (HDI)**

In this study, economic growth had no effect on the human development index (HDI). In this context, it is also necessary to pay attention to why it does not affect the human development index. So that when the cause is found, this can help the Pekanbaru City government to design policies in an effort to create improvements in the quality of life of the community. Economic growth that does not pay attention to the aspek of its human resources will not last long (*sustainable*) because human resource development or improving the quality of human resources is very important in the national development policy strategy. So in this case, it is hoped that the role of the government in its policies so that with the improvement of economic growth can improve the quality of the welfare of the community. (Sahlan et al., 2022)

With the development of science and technology so as to accelerate the process of economic development of a region. The original work pattern using human labor was replaced by sophisticated machines had an impact on efficiency, quality and quantity that was getting better and more so that in the end it created an acceleration in economic growth, which in turn affected the human development index. (Maulana and Bowo, 2013)

Increasing economic growth changes consumption patterns due to increased purchasing power. The high purchasing power of the community will improve the quality of life of the community because the purchasing power of the community is one of the composite indicators in the human development index called in the income aspect. According to Schultz, there are five ways of human resource development, as follows: (i) improvements to health facilities and services (ii)



providing training, internships and others (iii) formally organized education (iv) study programs for adults that are not organized (v) migration of individuals to adjust to job opportunities that are changing every time. (Jhingan, 2014).

## CONCLUSION

One of the indicators in determining regional progress is human development, so there is a need for steps planned and implemented by local governments as an effort to increase regional development which is expected to produce a positive impact on improving community welfare. In an effort to improve human development, it is important to pay attention to the Human Development Index (HDI) indicators and efforts that can be made to increase the HDI value, such as increasing access to health and education, as well as creating decent jobs and improving people's living standards. Thus, HDI becomes an important tool in efforts to improve human welfare and sustainable development.

Local governments are expected to utilize resources, regional potential to maximize local original income (PAD) and pay attention to strategic policies in accelerating economic growth in Pekanbaru City so as to provide improvements in the quality of the human development index (HDI) of Pekanbaru City.

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