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Determinant Analysis of Fiscal Decentralization in Indonesia

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Abstract

The Indonesian government implemented a fiscal decentralization policy in order to encourage regional autonomy policies and realize regional development. Regional Original Revenue (PAD) is a form of fiscal decentralization policy. This research aims to determine the factors that influence regional original income in provinces throughtout Indonesia. This is quantitative research with secondary data, and the data source comes from BPS reports for the 2021-2022 period. Data analysis used panel data regression with the help of the Eviews 9 program. The results showed that the level of unemployment rate, human development index, and investment had a negative and significant influence on regional original revenue, while the number of poor people had a negative but not significant influence.

Keywords: Regional Original Revenue, Unemployment Rate, HDI, Number of Poor People, Investment

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INTRODUCTION

Regional development is an integral part and foundation of national development to realize development targets that are adapted to regional development potential and problems. Regional development is also aimed at overcoming the problem of disparities between regions, between regions, between sectors, and even between groups of society. Fiscal decentralization is the forerunner to the delegation of regional autonomy in accordance with the targets to be achieved in order to realize regional development. Through regional autonomy and fiscal decentralization, regional

governments have the authority to collect revenues and carry out allocation roles independently in setting development priorities in accordance with the needs of the region.

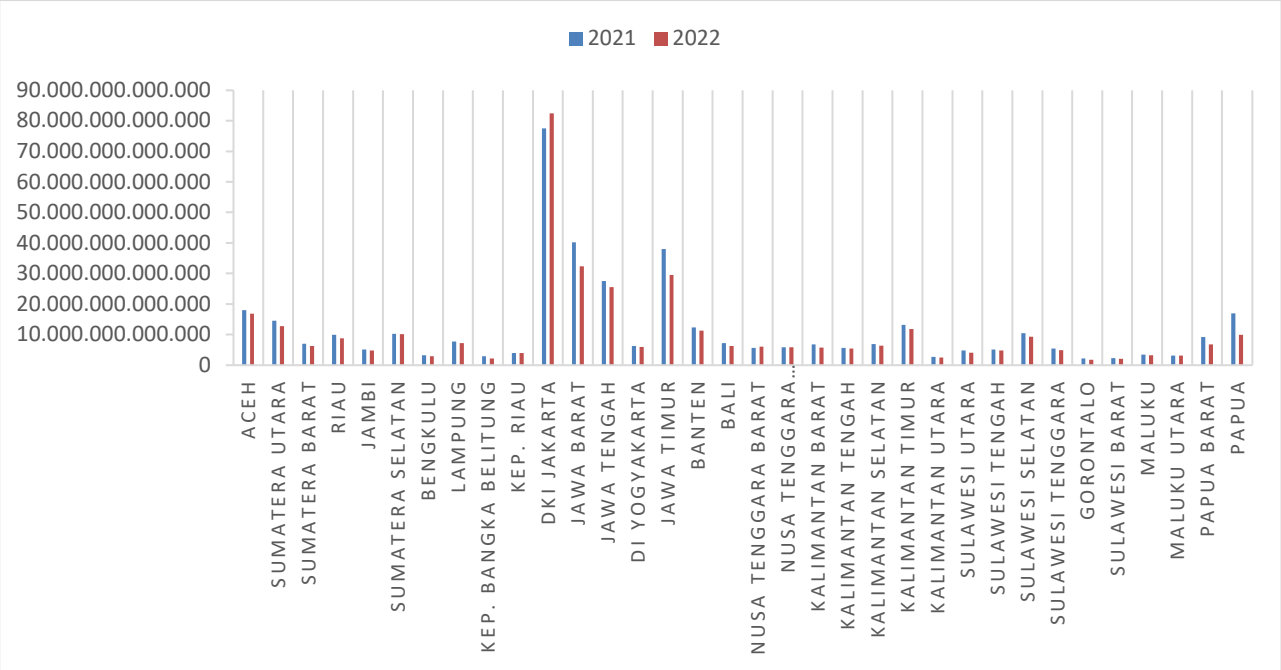

Figure 1. PAD Provincial Government in Indoensia 2021-2022
Source: BPS, 2023

The implementation of fiscal decentralization provides optimal benefits if it is accompanied by adequate financial capabilities in autonomous regions. Autonomous regions are intended so that a region can develop according to its own capabilities and increase its potential so that it does not depend on the central government (Elly Karmeli, Wahyu Haryadi, 2020). One component of fiscal decentralization is regional original revenue.

In general, regions are said to be ready to implement regional autonomy if their PAD can make a significant contribution to the Regional Revenue and Expenditure Budget (APBD). A region is said to be independent if its PAD contribution is higher than the balance fund, which comes from central government finances (Elly Karmeli, Wahyu Haryadi, 2020). Apart from coming from regional taxes, local revenue can also come from levies.

A levy is a levy imposed in connection with a service or facility provided by the government directly and in real terms to the payer. Fiscal policy became known when John Maynard Keynes expressed his opinion that fiscal policy was the most effective policy in influencing the course of the economy, especially in eradicating unemployment and increasing output through government intervention in the economy (Carter, 2021). Fiscal decentralization has been hotly discussed since the post-New Order reform era began. The centralized government system that has been adopted by President Soeharto's government is considered incapable of bringing prosperity and prosperity to the wider community, giving rise to demands for

greater authority from the regions to carry out development. The demand for authority from the regions to carry out development then gave birth to the Regional Autonomy Law, namely Law No. 22 of 1999 concerning Regional Government and Law No. 25 of 1999 concerning the balance of central and regional government finances, as well as the beginning of a new era of fiscal decentralization in Indonesia (Rusydi et al., 2022).

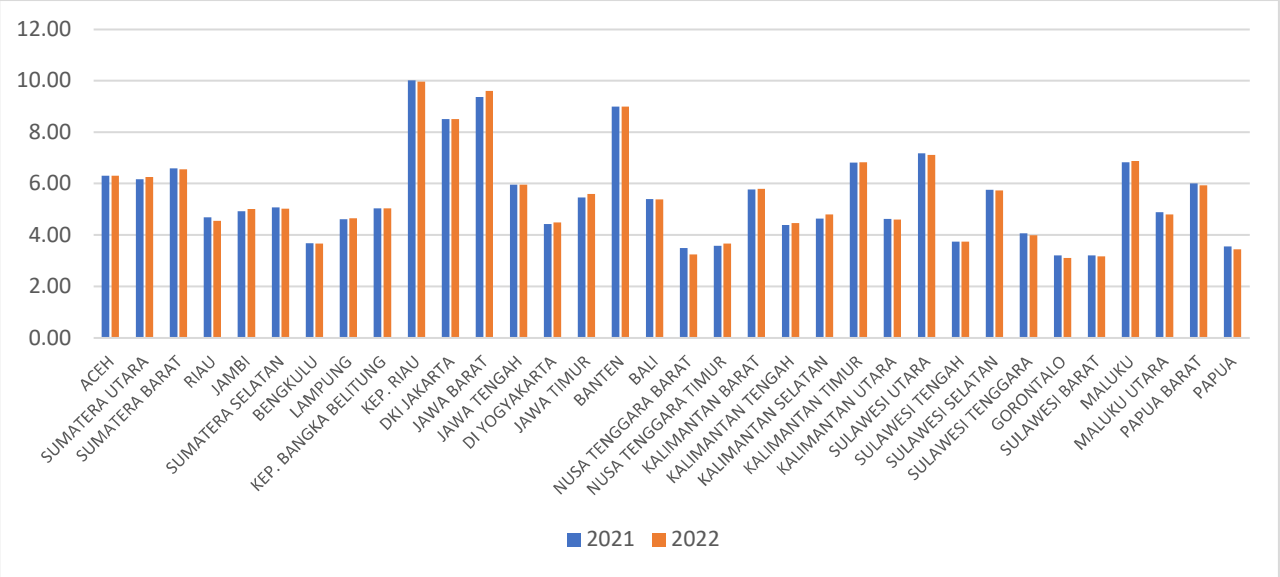

Figure 2. Unemployment Rate in Indonesia 2021-2022 (%)
Source: BPS, 2023

Fiscal decentralization allows regional governments, both provincial and district/city, to explore their own regional potential and turn it into a source of revenue called Regional Original Revenue (PAD). Based on Figure 1, it can be seen that the realization of PAD continues to increase from 2021 to 2022. This shows that the level of regional government independence is increasing.

In addition, the greater the PAD value, the smaller the role of the central government, in this case, transferring funds to regional governments. The trend of increasing PAD values also shows that fiscal decentralization makes regional governments more independent and less dependent on the central government, so it can be said that fiscal decentralization makes regional governments increasingly able to independently carry out their own regional autonomy (BPS, 2023).

The greater the PAD, the more it indicates that a region is able to implement fiscal decentralization and reduce dependence on the central government. However, if you look further, the proportion of original regional income is dominated by provinces on the island of Java, while regions outside Java tend to be much smaller and tend to give the impression of very large inequality.

This means that there are factors that influence regional original income, which can vary in value. One factor that can influence local revenue is the level of unemployment rate. Conditions where the growth of new workers is

faster than the jobs provided cause unemployment (Hendri Doni et al., 2022). Unemployment in Indonesia is a continuous problem and must receive serious attention.

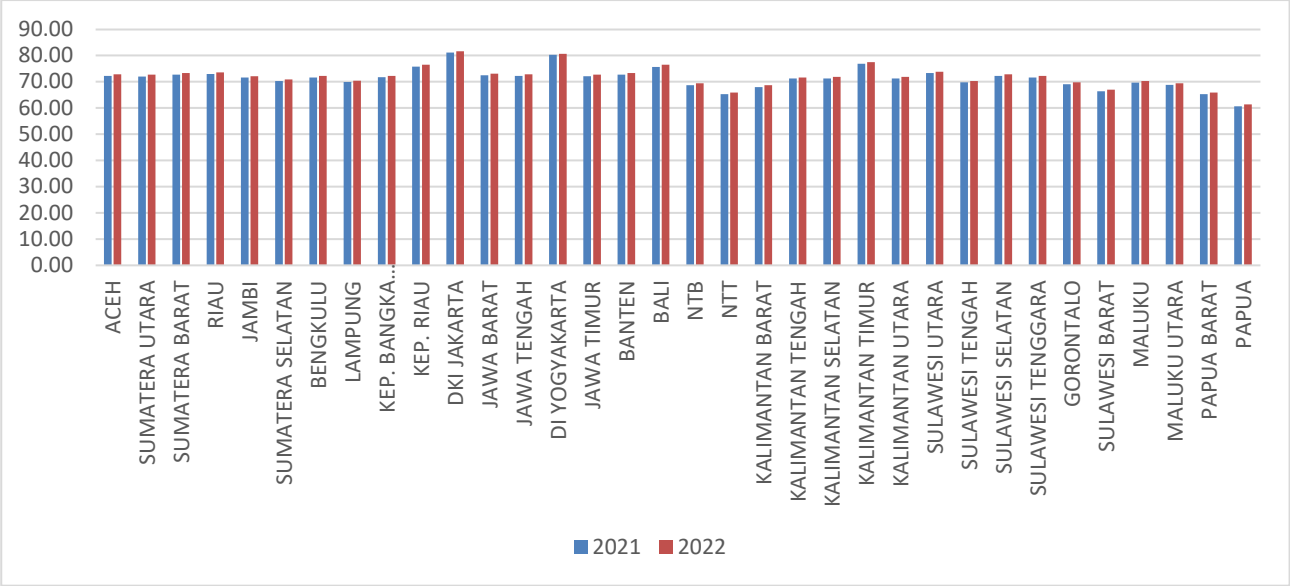

Figure 3. Human Development Index Province in Indonesia 2021-2022
Source: BPS, 2023

High population growth can cause unemployment if the productive age population cannot be absorbed by existing jobs (Nasution, 2019). Open unemployment tends to give the impression that the more open unemployment increases, the more sluggish the economy becomes. This is because humans become a resource in the production factor process. When the labor used does not reach the optimal point that should be employed in order to obtain maximum output, the economy experiences a setback or tends to be sluggish.

Figure 2 shows the dynamics of open unemployment from 2021-2022, which tends to be relatively constant, but provinces on the island of Java such as DKI Jakarta, West Java, and Banten dominate the unemployment rate above 8% nationally, meaning an increase in the number of residents in these provinces. is not balanced with an adequate increase in employment opportunities, thereby encouraging inequality between the labor force and the working population or in other words unemployment. When open unemployment conditions increase, the ability to pay taxes and levies will decrease. This will have an impact on decreasing PAD.

Human capital is linguistically composed of two basic words, namely human and capital, which is knowledge, expertise, skills, and creativity that are realized in work abilities that can be used to produce professional services and economic value (Ibrahim, 2023). Human capital can be seen from the Human Development Index (HDI) and the unemployment rate.

HDI explains how residents can access development results in obtaining income, health, education, and so on. HDI is formed by three basic dimensions, namely: 1) a long and healthy life, 2) adequate knowledge or level of

education, and 3) decent living standards (Ham & Octaviani, 2022). Human capital as human resources emphasizes the importance of quality, in addition to quantity. In this research, what will be discussed is human capital as seen from the HDI value.

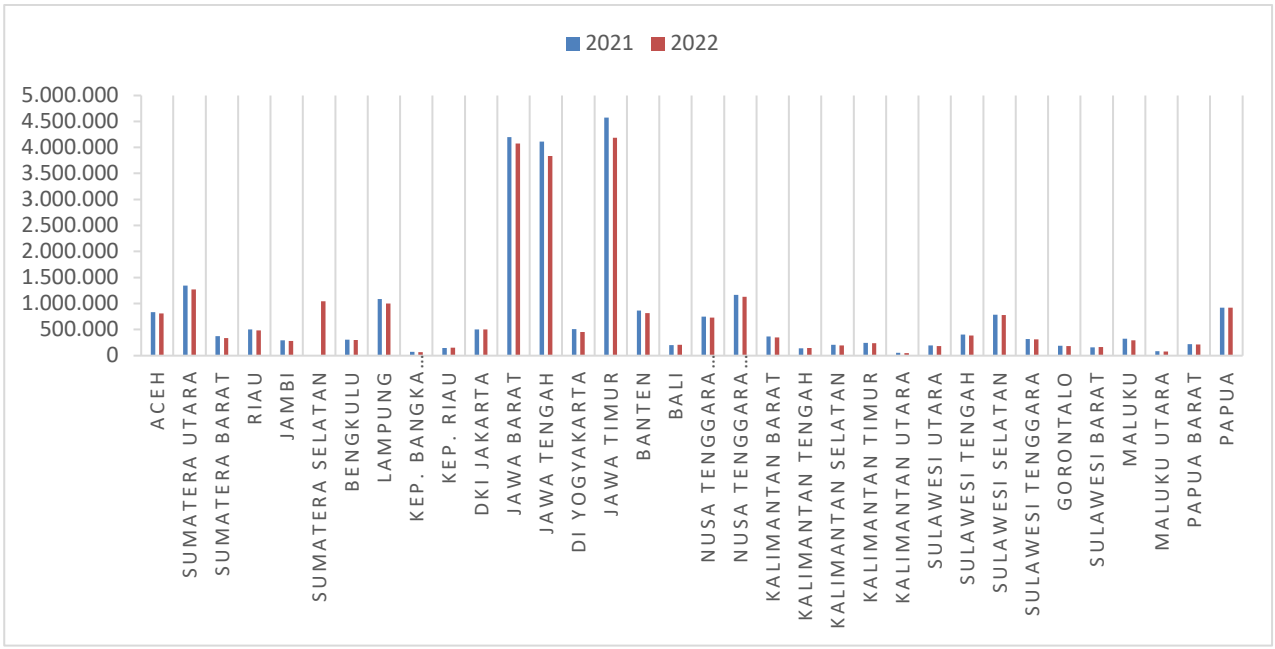

Figure 4. Number of Poverty Population in Indonesia 2021-2022
Source: BPS, 2023

The quality of human resources also plays an important role in the economy, where labor plays a role in economic growth. The workforce must have quality, the importance of quality is the foundation for someone to be able to do work productively and increase their productivity. Educated and trained workers are more able to increase their productivity compared to workers who are less educated and trained. Increasing labor productivity can spur faster economic growth and development and encourage increased welfare, which in turn contributes to supporting local original income through the payment of taxes and levies will also increase.

Figure 3 shows the human development index figures for all provinces in Indonesia for 2021-2022. Human development in western Indonesia tends to be higher compared to provinces in eastern Indonesia. Differences in the quality of human resources also determine how far human capabilities can increase their income and welfare. In this case, the better the quality of humans, the more likely they are to increase their income and welfare, which in turn can contribute to local original income.

The number of poor people is the population that falls into the category of living below the poverty line. The population's inability to improve their welfare also affects their ability to pay taxes and levies imposed by the regional government (Sihombing & Sihombing, 2022). Figure 4 shows the number of poor people by province in Indonesia in 2021-2022. The largest contribution to the number of poor people is dominated by provinces on the

island of Java, where Java itself has the largest population compared to other islands.

The provinces with the highest number of poor people include West Java, Central Java, and East Java. The large number of poor people allows for reduced local revenue, this is caused by reduced purchasing power and the level of community welfare. In turn, the increasing number of poor people can affect the amount of local revenue. Investment is an investment activity carried out by investors both from within the country and from abroad. Investment is also an important component in encouraging more exciting economic activity. The foundation of an economy that moves through investment not only drives the demand and supply of goods/services, but also drives the demand and supply of labor.

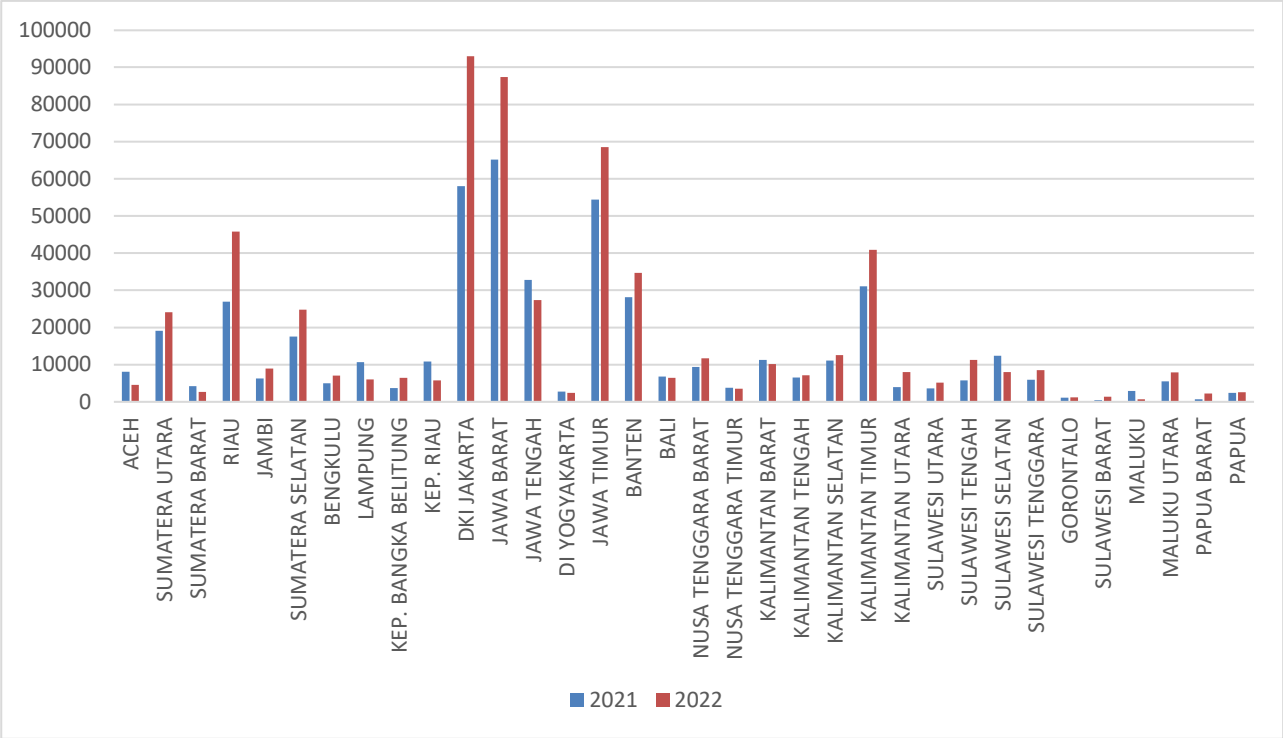

Figure 5. Investment in Indonesia 2021-2022 (Billion IDR)
Source: BPS, 2023

Figure 5 shows the investment value by province in 2021-2022. Investment value tends to be concentrated on the islands of Java, Sumatra and Kalimantan, where the investment value of these islands is much higher than other islands, meaning that the economsic driving potential of these areas is much higher than others. In this case, a productive economy encourages increased distribution of income and an increase in per capita income in a region. The higher the community's income, the higher their welfare and ability to contribute to their local revenue.

In research (Sihombing & Sihombing, 2022) the number of poor people and open unemployment has a positive influence on regional original revenue. In research (Sri Hartati, 2021), investment has an effect on regional original revenue. In this case the amount of capital invested in each economic sector has stimulated an increase in production

capacity, so that regional per capita income automatically increases. An increase in per capita income represents an increase in the welfare of the people of a region, which in turn increases the potential for regional sources of original income.

Based on the description above, it can be seen that there is a link between fiscal policy, which in this research is represented in the local original income variable, with human capital variables (unemployment rate, number of poor people, and HDI) and investment. This research aims to determine the relationship between fiscal policy as seen from Regional Original Revenue and human capital and investment in Indonesia.

RESEARCH METHODS

The dependent variable used is regional original income. Data analysis uses panel data regression with the help of the Eviews 9 program. Panel data regression aims to determine the effect of fiscal policy on human capital in Indonesia. The model used in this research uses a logarithmic (log) model, this aims to equate units and reduce the possibility of heteroscedasticity due to transformations that place variable measurement scales and slope coefficients (Gujarati, 2015). The equation model is as follows :

$$\log PAD_{it} = \beta_0 + \beta_1 TPT_{it} + \beta_2 IPM_{it} + \beta_3 \log JPM_{it} + \beta_4 \log INV_{it} + \mu_{it}$$

Where logPAD is regional original revenue, TPT is the unemployment rate, HDI is the Human Development Index, logJPM is the number of poor people, logINV is the investment value, β_0 is a constant, β(1-) β_4 is the coefficient of each variable, log is the logarithm, and μit is the error at time t for unit cross section i. Because the data used is secondary data and panel data, it is necessary to test classical assumptions on the selected models, including the Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). Several methods can be used to test and select the best estimation model, these test methods include the Chow Test, Hausman Test, and LM Test.

This research uses a descriptive quantitative approach, namely a research approach with data in the form of numbers and analyzed statistically (Jailani, 2023). The type of data used in this research is secondary data obtained from the Central Statistics Agency (BPS). The independent variables used include the open unemployment rate, the human development index, the number of poor people, and investment.

RESULTS AND DISCUSSION

The first test to select the best estimated model is to carry out the Chow test. The Chow test is carried out to select the best model between the Common Effect Model (CEM) and the Fixed Effect Model (FEM) (Iqbal, 2015). Based on the data that has been collected, data analysis was carried out with the help of the Eviews 9 program. The results of the Chow test are as follows:

Table 1. Chow Test Result

Effects Test	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section F	55.056051	(33,30)	0.0000
Cross-section Chi-square	280.162666	33	0.0000

Source: Eviews 9, 2023

The Chow test results show that the probability value (Prob) of Cross-Section F is 0.00. A Cross-Section F probability value of less than 0.05 indicates that the Fixed Effect Model is better than the Common Effect Model (Ghozali, 2018). Based on the Chow test results, the next step is the Hausman test which aims to determine the comparison of the Fixed Effect Model with the Random Effect Model (Iqbal, 2015). The Hausman test results are as follows:

Table 2. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	34.124878	4	0.0000

Source: Eviews 9, 2023

The Hausman test results show that the Random Cross-Section probability (Prob) value is 0.00. A Random Cross-Section probability value of less than 0.05 indicates that the Fixed Effect Model is better than the Random Effect Model (Iqbal, 2015). Based on the results of the Chow test and Hausman test, it can be seen that the best model for data analysis is the Fixed Effect Model.

The classic assumption test for panel data regression in this study does not use a normality test because the normality test does not need to be carried out if the number of observations is more than 30 (Verbeek, 2005). The classic assumption test for panel data regression also does not use an autocorrelation test because panel data regression uses the Generalized Least Square (GLS) method, where GLS can overcome autocorrelation symptoms that usually arise in data analysis using the Ordinary Least Square (OLS) method (Gujarati, 2022).

Table 3. Coefficient of Determination Test

R-squared	0.999904

Source: Eviews 9, 2023

If the R-Square value that appears is close to one hundred percent, it can be interpreted that almost all the variables used in the research can fully explain what is needed to predict variations in the dependent variable. In this study, the R-Square result was 0.999904, which shows that the variables TPT, HDI, JPM and INV can explain the dependent variable, namely PAD, of 99.99%, while the remaining 0.000096 is explained by other variables outside the model in this study.

If the t-statistic value > t-table, then the independent variable is considered significant in influencing the dependent variable. In this study using 68 data, the degree of freedom is determined as follows: df=n-k (df=68-5), so the degree of freedom used is 63 in the t-table, and the t-table number in df 63 is 1.66940.

Table 4. Significance Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23.12850	2.020118	11.44908	0.0000
TPT	-0.122556	0.068358	-1.792847	0.0831
IPM	-0.181772	0.013923	-13.05514	0.0000
LOG(JPM)	-0.036873	0.174048	-0.211858	0.8337
LOG(INV)	-0.034673	0.011276	-3.075050	0.0045

Source: Eviews, 2023

Table 4 shows that the TPT variable has a negative and significant influence, the HDI variable has a negative and significant influence, the JPM variable has a negative but not significant influence, and the investment variable has a negative and significant influence. The estimation results can be seen in Table 4. Based on the fixed effect model estimation

results, the regression coefficient for each variable in this study is as follows:

LOG(PAD) = 23.1284970236 - 0.122556*TPT - 0.181772*IPM - 0.036873*LOG(JPM)- 0.0346723*LOG(INV) + eit

From the estimation equation results above it shows that the constant coefficient is 23.1284970236, which means that when the Unemployment Rate, Human Development Index, Number of Poor People and Investment do not increase at all, the amount of Regional Original Revenue is 23.1284970236 percent.

The influence of the Unemployment Rate on Regional Original Revenue has a coefficient of – 0.122556065947, which means that when there is a decrease in the Unemployment Rate of 1%, Regional Original Revenue will experience an increase of 0.122556065947 percent assuming ceteris paribus.

The influence of the Human Development Index on Regional Original Revenue has a coefficient of – 0.181771945598, which means that when there is a decrease in the Human Development Index of 1%, Regional Original Revenue will experience an increase of 0.181771945598 percent assuming ceteris paribus.

The effect of the number of poor people on Regional Original Revenue has a coefficient of -0.03687347447 86, which means that when there is a decrease in the number of poor people by 1%, Regional Original Revenue will increase by 0.03687347447 86 percent assuming ceteris paribus.

The effect of investment on Regional Original Revenue has a coefficient of -0.0346729672792, which means that when there is a decrease in investment of 1%, Regional Original Revenue will increase by 0.0346729672792 percent assuming ceteris paribus. From the estimation results above, it shows that the unemployment rate variable has a negative and significant influence on regional original revenue, as evidenced by the calculated t-statistic value of -1.792847>1.66940.

This means that a decrease in the unemployment rate has an impact on increasing Regional Original Revenue. This is caused by labor being absorbed into employment and the distribution of income. When a lot of labor is absorbed, it will increase the subject of taxes and potentially increase sources of local revenue.

From the estimation results above, it shows that the human development index variable has a negative and significant influence on Regional Original Revenue, as evidenced by the t-statistic value of -13.05514>1.66940. This means that an increase in HDI actually has an effect on decreasing regional original revenue.

This can be possible for several reasons, first, not being able to find regional advantages that have the potential to be utilized as a source of regional original revenue; second, relatively low compliance and awareness of taxpayers or levies; and third, weak legal and administrative systems in monitoring regional original revenue.

In research (Todaro, 2016), the benefit of HDI is to show that a country can perform better even if a country's revenue is low. On the other hand, when a country's revenue is high, it does not necessarily mean that its human development is also high.

From the estimation results above, it shows that the variable number of poor people has a negative and insignificant influence on regional original revenue, as evidenced by the t-value of -0.211858<1.66940. This means that reducing the number of poor people will increase regional original revenue. This is due to

the large number of people getting out of the poverty line or, more precisely, becoming more prosperous.

When someone begins to prosper, they have purchasing power and the ability to improve their quality of life. On the other hand, the more prosperous people are, the greater the taxpayer's ability to pay their obligations. And the more prosperous the community, the more people will become taxpayers, in this case, it will increase regional original revenue.

From the estimation results above, it shows that the investment variable has a negative and significant influence on regional original revenue, as evidenced by the t-value of -3.075050>1.66940. This means that increasing investment has the effect of decreasing regional original revenue.

This can be caused by the fact that many investments carried out in various regions of Indonesia are still capital-intensive compared to labor-intensive, so that there is minimal distribution of income through labor absorption mechanisms in investment projects. So that income received from taxpayers is reduced. In this case, income distribution is an important key to equalizing people's income and welfare because it is related to purchasing power and the ability to pay taxes or levies.

CONCLUSION

Based on the research results, it can be concluded that the open unemployment rate, human development index, and investment have a negative and significant influence on regional original revenue, while the variable number of poor people has a negative but not significant influence. These findings indicate the need to review fiscal decentralization policies in Indonesia and economic policies, so that human capital and investment problems can be resolved as well as become a solution for increasing regional original revenue in various provinces in Indonesia. Future researchers are expected to be able to use other variables outside the model and/or use different analytical methods to present new findings in future research.

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