

The Effect of Poverty, Income Inequality, Unemployment, and Education on Economic Growth in D8 OIC Countries: A Study of the Kuznets Curve Analysis

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Abstract

The Group of Eight Developing Countries (D-8) of the OIC was established through the Istanbul Declaration, which was agreed upon at the First D-8 Summit. The establishment of D-8 aims for peace, dialogue, cooperation, justice, equality, and democracy. D-8 together has a vision and mission of gathering strength and economic growth. The purpose of this study is to answer the research questions, namely: To test and analyze the influence of poverty on economic growth in D-8 OIC countries. This study was conducted to measure the impact of poverty, income inequality, unemployment, and education on economic growth in the D8 OIC countries (study of the Kuznets Curve Analysis). The research method used was quantitative-descriptive, adopting Ordinary Least Squares (OLS); the data used were from countries that joined the D-8 OIC from 2005 to 2018. The results showed that economic growth in the D8 OIC countries can be affected by poverty, income inequality, unemployment, and education.

Keywords: *Poverty, Income Inequality, Unemployment, School, and Economic Growth.*

JEL Classification: *O15 and O47.*

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Introduction

The D-8 (eight) OIC was established through the Istanbul Declaration, which was agreed upon at the First D-8 Summit on June 15, 1997 (Ministry of Foreign Affairs of the Republic of Indonesia, 2022). The countries included in D-8 are Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan, and Turkey. The establishment of D-8 aims for peace, dialogue, cooperation, justice, equality, and democracy. In addition, D-8 together has a vision and mission in gathering strength and economic growth.

Improving people's welfare is the primary objective of economic growth (Alin et al. 2019). More economic growth and more fair income distribution are needed to improve people's welfare (Alin et al. 2019). Additionally, it requires a number of steps and a lengthy time to result in higher economic growth (Sukardi and Hidayah, 2021). According to Alin et al. (2019), there is frequently a conflict between promoting economic growth and lowering income disparity and poverty.

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According Mohamad et al. (2021), state that a nation's primary objective in its growth and development is its economy. However, there are a number of issues with its execution, including issues with unemployment, poverty, and inequality in income. The following information relates to the D-8 countries' economic growth:

Table 1. Economic Growth, Poverty, Income Inequality, Unemployment and Education in D-8 Countries 2022

Country	Economic Growth	Poverty	Income Inequality	Unemployment	Education
Bangladesh	12,5 %	11,44%	0,57%	4,70%	76,10%
Mesir	25,2%	27,9%	29,7%	7,2%	60%
Indonesia	5,31%	9,54%	0,38%	5,86%	40%
Iran	59,1%	30%	0,3877%	10,96%	90,4%
Malaysia	7,0%	6,2%	0,3%	3,73%	99,4%
Nigeria	15,7%	63%	35,1%	4,1%	69%
Pakistan	1,7%	39,4%	42%	6,42%	62,8%
Turkey	3,5%	32,6%	0,415%	10,03%	97,6%

Source: ceicdata.com

Iran has seen the greatest economic growth, with an increase of 59.1%, according to the figures in Table 1.1. Pakistan has the lowest growth rate, at 1.7%. Nigeria has the largest rate of poverty among the D-8 OIC countries at 63%, while Malaysia has the lowest level at 6.2%. Malaysia has the lowest income disparity at 0.3%, while Pakistan has the most at 35.1%. With 10.73%, Iran has the highest unemployment rate, while Malaysia has the lowest at 3.73%. With respect to education, Indonesia has the lowest rate at 40%, while Iran has the highest rate at 99.4%.

According to Adam Smith, the two primary components of the economic growth process are the expansion of the population and the growth of GDP (gross domestic product) (Alin et al. 2019). Kuznets, on the other hand, defined economic growth as the nation's increased long-term ability to supply the community with goods and services at a profit (Alin et al. 2019). According to Kuznets, income inequality happens at the beginning of a particular development, but after it reaches a certain point, distribution of income will equalize (Alin et al. 2019). As stated by Alin et al. (2019), there exists a short-term positive correlation between economic growth and income distribution inequality, indicating that an increase in income inequality figures will follow economic growth. Long-term, however, the relationship between the two turns into a negative correlation, which can be understood to mean that as income rises, income distribution inequality will fall (Alin et al. 2019). Errygers (2019) asserts that the Kuznets curve is thought to be able to depict the effectiveness of economic growth and inequality, or at the very least, its long-lasting effects.

There are research findings in Jadhav's (2022) study that support and refute the application of the inverted U theory. Regional inequality and national growth have an N-shaped relationship, according to research by Lessmann and Seidel (2017). According to research by Nikensari et al. (2019), the high-income and lower-income countries under study had not experienced the EKC hypothesis in the form of U-Inverse until 2014. In the meantime, the study by Alin et al. (2019) shows that while the Kuznets curve or U-Inverse cannot be proven to exist over the long term, from 2001 to 2016, it can be proven if examined from two different periods, namely 2001-2009 and 2009-2016. Regional inequality and GNI per capita were found to have an inverted U-shaped relationship in Jadhav's (2022) study.

Based on the study conducted by Nuryanto (2017), it was found that the Kuznets curve was evidenced by the impact of tourism, government spending, and economic growth in Bali, which led to an increase in inequality in income distribution. In the study of Zulfariska and Bariyah (2021), using the Kuznets curve, the relationship between the variables of economic growth and regional income disparity among regions in West Kalimantan province is not statistically significant in the observation period from 2011 to 2018. A positive relationship was found to exist. Regional income disparities persist, although they are classified as moderate.

From the various reference sources, data, and research results above, which still have debates and different results. The purpose of this study is to answer the research questions, namely: To test and analyze the influence of poverty on economic growth in D-8 OKI countries. To test and analyze the influence of income inequality on economic growth in D-8 OKI countries. To test and analyze the influence of unemployment on economic growth in D-8 OKI countries. To determine the influence of education on economic growth in D-8 OKI countries. The research questions above are important to be answered because they can provide insights into the relationship between these factors and economic growth in D-8 OKI countries.

Literature Review

In the study conducted by Adeleye et al. (2020), it was found that the consistent findings of the multi-analysis approach using pooled ordinary least squares, fixed effects, and GMM system revealed the following results: economic growth shows poverty-reducing properties; the level of inequality growth increases poverty; inequality exacerbates the impact of growth on poverty; and the growth-poverty-inequality trilemma differs across income groups and regional samples. The study conducted by Adeleye et al. (2020) shows that the interaction of income inequality dampens the positive impact of economic growth on the emergence of poverty and supports the argument that the level of inequality reduces the inclusive effect. Therefore, income inequality is an important determinant of poverty.

In the study conducted by Toyozawa et al. (2022), it was found that OECD countries have experienced a "Great U-Turn" since 1970. Therefore, the Kuznets hypothesis has reached its endpoint. From the 1980s to the 2000s, the "Great U-Turn" event became a historical phenomenon that widened economic inequality. This can be seen in the occurrence of inequality and structural change from manufacturing to services. In addition, the effect of structural change from manufacturing to knowledge on inequality after 2010.

In the study by Alin et al. (2019), it is mentioned that per capita growth in the province of Jambi is followed by relatively fluctuating income inequality. Therefore, the Kuznets hypothesis does not apply in the province of Jambi.

Based on the research by Nuryanto (2017), it was found that tourism and economic growth have an impact on income distribution inequality in Bali. This result was obtained from the data processing conducted in 2006-2015. The study also found that the Kuznets hypothesis, which states that economic growth will increase inequality, also occurs in Bali in 2006-2015.

Economic growth and development emphasize a country's readiness to increase output that can exceed the population growth rate and be accompanied by changes in the economic structure from an agricultural to an industrial structure (Badriah, 2019).

Some modern economies have the paradigm of dethronement of GNP (decrease in the level of economic growth), poverty alleviation, reduction of income distribution inequality, and reduction of the unemployment rate (Badriah, 2019). This situation brings about a change in the development paradigm that development must be seen from a multidimensional process (Badriah, 2019).

According to Kuznets in (Estrada & Wenagama, 2020), he explains that growth and poverty have a very strong relationship. This is because in the early stages of the development process, the poverty rate tends to increase. Poverty gradually decreases when it approaches the end of development (Estrada & Wenagama, 2020).

According to Indrawati et al. (2020), economic growth can be used as a benchmark for the welfare and poverty levels of the community. An increase in economic growth shows that the income of the population is sufficient to meet their needs, meaning that economic growth provides a trickle-down effect on the economy of a region (Indrawati et al., 2020).

According to Muhammad et al. (2021), poverty is the state of not having any property and being in a state of deprivation. According to the Central Bureau of Statistics (BPS), poverty is defined as the inability of an individual to meet the minimum basic needs to live a decent life. Poverty is a condition that is below the standard value of minimum needs, both for food and non-food, which is called the poverty line (poverty line) or also called the poverty threshold (poverty threshold) (Muhammad et al. 2021).

According to Muhammad et al. (2021), some of the causes of poverty in a region or country are due to the lack of income and assets to meet basic needs such as food, clothing, housing, health, and education. In addition, poverty is also synonymous with limited employment opportunities. Limited employment opportunities cause someone to not earn an income so they cannot meet their needs.

According to Indrawati et al. (2020), poverty is related to income inequality or income distribution. The relationship between poverty and income inequality in a household or region is caused by low income (Indrawati et al., 2020).

Economic inequality or income inequality is a reality that occurs in both developed and developing countries (Muhammad et al. 2021). Income distribution itself is the division of income in society (Muhammad et al. 2021). In a production process, the owners of production factors will receive rewards equal to the production factors that are contributed in the production process, and there will be a cycle or turnover of consumers who must pay the price of goods (Muhammad et al. 2021).

According to Sholihah and Kustanto (2017), income inequality from an economic perspective can be divided into three categories: 1) Income distribution inequality between income recipients (size distribution income); 2) Income distribution inequality between urban and rural areas (urban-rural income disparities); 3) Income distribution inequality between regions (regional income disparities). National income distribution shows whether the results of development in a country are distributed evenly among its population (Sholihah and Kustanto, 2017).

According to Muhammad et al. (2021), the first aspect is how to improve the welfare of people who are still below the poverty line, while the second aspect is to equalize income comprehensively in the sense of narrowing the difference in income levels between residents. One of the efforts made to improve income distribution is to carry out economic development. According to Muhammad et al. (2021), economic development is a process that causes the per capita income of a population or society

to increase in the long run. Therefore, sustainable economic development is needed and carried out well, because the implementation of economic development will encourage economic growth and improve income distribution for the community.

The Environmental Kuznets Curve (EKC) hypothesis, also known as the Kuznets curve, explains that economic growth initially increases income distribution inequality (Nikensari et al. 2019). According to Todaro (2006), the U-shaped Kuznets curve explains that in the early stages of economic development, income inequality increases and then decreases at a certain point, forming a U-shaped curve.

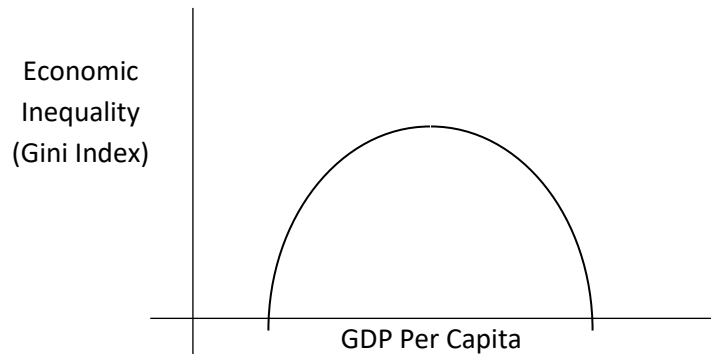


Figure 2. Kuznets Curve
Source: Firmansyah (2021)

At an increase in economic growth, income inequality initially increases for a certain period of time (also called the turning point). The Kuznets curve plays a role in analyzing problems in endogenous economic variables, namely technology, population, and institutions, and has an impact on political stability and increasing the scale of political democratization (Firmansyah, 2021).

Hypothesis

The Effect of Poverty on Economic Growth

According to Ariadi et al. (2020), poverty has an impact on income inequality. According to Hindun et al. (2019), poverty has a significant impact on income distribution inequality. Poverty causes income distribution inequality. In a study conducted by Zainudin et al. (2022), poverty has a significant impact on income distribution inequality. This is because poverty is synonymous with income that is used for daily consumption is very low. So there is no capital that can be used to improve welfare.

H₀: Poverty does not affect economic growth.

H₁: Poverty has a positive impact on economic growth.

The Effect of Poverty on Economic Growth

In the Kuznets curve theory, economic growth has a relationship with income distribution inequality. Based on this theory, economic growth causes income distribution inequality in the early stages of development. In a study conducted by Adeleye et al. (2020), economic growth has a reducing impact on income distribution inequality. A study conducted by Hendarmin (2019) found that economic growth has

an impact on income distribution inequality. In a study conducted by Thofan (2019), economic growth has an impact on income inequality between regions.

H₀: Income inequality does not affect economic growth.

H₂: Income inequality has a positive impact on economic growth.

The Effect of Unemployment on Economic Growth

According to Okun's law, there is a negative relationship between unemployment and economic growth (Putri et al. 2022). In this theory, unemployment is negatively correlated with economic growth. If the unemployment rate increases by 1%, it will lead to a decrease in economic growth of approximately 2% (Putri et al. 2022). A study by Pertiwi et al. (2023) found that unemployment has a positive impact on economic growth in the long run, but it is not significant. In the short run, however, unemployment has a negative impact. Another study by Mukaromah et al. (2023) found that unemployment has a negative and significant impact on economic growth. According to Widarjono (2016), slow labor absorption caused by rapid population growth leads to social problems that have a negative impact on economic growth, such as reduced foreign investment.

H₀: Unemployment does not affect economic growth.

H₃: Unemployment has a negative impact on economic growth.

The Effect of Education on Economic Growth

According to Todaro (2006), human capital can be measured through education and training, which increase the value of a person. As a person's skills increase from formal or informal education, it leads to an increase in productivity, which allows them to compete in the labor market and meet their basic needs (Iksan & Arka, 2022).

H₀: Education does not affect economic growth.

H₄: Education has a positive impact on economic growth.

Methods

Research Type

The research uses a descriptive-quantitative approach. According to Yusuf (2019), quantitative research is a type of research that aims to explain, in a sequential, factual, and accurate manner, the characteristics of a particular population, or to try to provide a picture of a phenomenon. Descriptive-quantitative research aims to explain facts in a sequential manner and the characteristics of a population or area of interest.

According to Yusuf (2019), descriptive-quantitative research is a conscious and sequential effort to provide answers to a problem that occurs and to obtain more in-depth and extensive information about a phenomenon by using the stages of research with a quantitative approach. Descriptive-quantitative research is characterized by focusing on solving a problem that exists at present, or actual and meaningful events, the research is intended to explain the situation or event accurately and accurately, to find causal relationships.

Data

The research used a yearly period from 2000 to 2022 with a focus on economic growth, poverty, and income distribution inequality in Indonesia. As a result, the collected data amounted to approximately 24 data points. The data were obtained from the World Bank website.

Population and Sample

Population in a research is an important element that receives special attention from researchers to obtain conclusions from research results that are reliable and relevant to the object of their research (Yusuf, 2019). According to Yusuf (2019), population is the entirety of a certain aspect such as region, individual, or characteristic of the object of research.

A sample is a small portion of the population that is selected and can represent the population (Yusuf, 2019). In determining the sample, various formulas can be used so that the sample taken from the population can truly represent the requirements of the level of confidence that can be accepted from the level of sample error that may be tolerated (Yusuf, 2019).

In the sampling of the research using purposive sampling with a sample of 24 years from 1980-2021 in Indonesia. As a result, 24 samples were obtained. The criteria used in determining the sample are as follows:

- a. The sample is a report on data on economic growth, poverty, and income distribution from 2010-2022.
- b. The data country that is the sample is in the D-8 countries of the OIC.

Type and Sources of Data

According to Sekaran and Bougie (2017), the data source in a study can be distinguished into primary and secondary data sources. A primary data source is a data source that refers to information obtained directly (from the first person) related to a variable to be discussed. The secondary source of data is information acquired and collected by someone other than the researcher who is conducting the current study (Sekaran and Boughie, 2017).

Operational Definition of Research Variables

Variables are concepts that have variation in value, and something that has value is called a constant (Yusuf, 2019). According to Yusuf (2019), Kerlinger defines a variable as a symbol of something that has value. Bohnstedts states that a variable is a characteristic of a person, object, or event that differs in the values that are found in people, objects, or phenomena that differ in the values that are found in people, objects, events, that differ in the value that is found in people, objects, or phenomena (Yusuf, 2019).

The variables used in this study will be conducted by testing economic growth, poverty, and income distribution inequality. In this study, there are two types of variables, namely the dependent variable symbolized by (Y) and the independent variable or the independent variable symbolized by (X).

Dependent Variable (Y)

Dependent variables are variables that are influenced or explained by other variables but cannot influence other variables (Yusuf, 2019). The dependent variable used in this study is economic growth. According to Sholihah and Kustanto (2017), economic growth and development become macroeconomic problems in a country with a long time horizon. Economic growth can be defined as an increase in per capita and national product (Sholihah and Kustanto, 2017).

According to Sholihah and Kustanto (2017), one of the tools used to determine the growth rate of the economy in a country is Gross Domestic Product (GDP) or in the English term Gross Domestic Product (GDP). According to the Central Bureau of Statistics (BPS), GDP is the sum of the added value generated by all businesses in a particular country, or the sum of the value of final goods and services produced by all economic units.

Independent Variables (X)

Poverty according to Imanto et. al. (2020), poverty is generally described as the low income that people or individuals receive to meet basic needs. In Indonesia, the measurement of poverty uses the BPS criteria using the basic needs approach. According to Imanto et. al. (2020), based on the basic needs approach, there are 3 poverty indicators used, namely (1) Headcount Index, (2) Poverty Gap Index, (3) Poverty Severity Index.

Income inequality is a situation that occurs due to differences in income received by the community (Muttaqin and Safitri, 2021). According to Muttaqin and Safitri (2021), income inequality can be measured using the Gini coefficient index.

According to the Central Bureau of Statistics (BPS), the Gini ratio is a measure of equality that is calculated by comparing the area between the diagonal and the Lorenz curve (area A) divided by the area of the triangle below the diagonal. According to the Central Bureau of Statistics (BPS), the Gini ratio is a tool that can be used to measure the degree of inequality in income distribution.

According to Okun's law, there is a negative linear relationship between unemployment and economic growth (Putri et al. 2022). In this theory, an increase in unemployment by 1% leads to a decrease in economic growth of approximately 2% (Putri et al. 2022). In a study conducted by Pertiwi et al. (2023), unemployment in the long term has a positive effect on economic growth, but it is not significant.

According to Todaro (2006), human capital can be measured through education and training, which increase the value of a person. With the increase in the ability of a person obtained from formal or non-formal education, it results in an increase in the productivity of that person so that they can compete in the labor market and meet a decent life (Iksan & Arka, 2022).

Data Analysis Techniques*Descriptive Analysis*

Descriptive analysis is used to show a number of information that is usually associated with statistical data such as mean, median, mode, minimum, maximum, and standard deviation.

Panel Data Regression

This study uses time series data regression. The study will process the data based on the data used. Then the researcher can analyze based on the results of the selected capital estimation. This is intended to find the influence of independent variables on dependent variables based on the selected research model. To see this, the researcher processed the data using the EViews 10 application.

Hypothesis Test

The t-test or partial test is a test to determine whether or not there is an individual effect of the independent variable on the dependent variable. The way to find out this effect is by looking at the significance value. If the sig value is greater than 0.05, then the independent variable individually does not affect the dependent variable. Conversely, if the sig value is less than 0.05, then the independent variable individually or individually has a significant effect on the dependent variable.

The F-test, or simultaneous test, is a test to determine whether or not there is a simultaneous effect of the independent variables on the dependent variable. The way to find out this effect is by looking at the significance value. If the prob (F-statistic) value is greater than 0.05, then H₀ is accepted. This means that the independent variables do not have a simultaneous effect on the dependent variable. Meanwhile, if the prob (F-statistic) value is less than 0.05, then H₁ is accepted. This means that the independent variables have a simultaneous effect on the dependent variable of the study.

The presence of this test is done to show how much the contribution of the independent variables of the research to the dependent variable. The value of R² is between zero and 1; if the value is close to one, it means that the independent variables can explain the information to predict the dependent variable. Whereas, if the value is smaller or does not approach one, then the ability of the independent variables to explain the dependent variable is limited.

The analysis used in this study is to estimate the relationship between one dependent variable and several independent variables. This study tests the influence of economic growth and poverty on income distribution inequality. The regression equation is written as follows:

$$\text{GDPPC} = \alpha + \text{POVERTY} + \text{INCOME INEQUALITY} + \text{UNEMPLOYMENT} + \text{EDUCATION} + e \quad (1)$$

Results and Discussion

Descriptive Statistic

Descriptive statistical analysis is an analysis that is carried out by explaining the data that has been collected. This analysis aims to provide an explanation of the data overview of the variables used in the research. This explanation includes the mean (mean), minimum value, maximum value, and standard deviation. The following Table 4 presents the descriptive statistics of the research variables.

From Table 4.1 above, it can be seen that the variables used are GDPPC (GDP per capita) as the dependent variable to project economic growth. In addition, the independent variables used in this study are POVERTY as the first independent

variable to describe the level of poverty. The GINIRASIO variable is the second independent variable to measure the level of inequality. UNEMPLOYMENT as the third independent variable to see the level of unemployment. And SCHOOL is the fourth independent variable to measure the education rate.

Table 4. Descriptive Statistic

	GDPPC	Poverty	Inequality	Unemployment	Education
Mean	3.010598	2.446854	26.54386	6.458857	97.92624
Median	3.610417	0.500000	36.51429	4.450000	99.93905
Maximum	9.733147	16.37143	45.50000	13.68000	120.7104
Minimum	-6.015622	0.000000	28.30000	0.400000	69.86381
Std. Dev.	2.70709	3.722472	4.937672	1.761146	12.19337
Jarque-Bera	29.85836	109.5536	7.749136	9.875035	10.13473
Probability	0.000000	0.000000	0.020763	0.007172	0.006299
Sum	3.371870	274.0476	4092.912	723.3920	10967.74
Sum Sq. Dev	813.4456	1538.104	2706.248	1600.140	16503.29
Observation	112	112	112	112	112

Source: Eviews

The data used to see economic growth, poverty, inequality, education, unemployment, and education levels were each 112 data samples. With an average economic growth of 3.01 percent, the highest economic growth was 9.7%, and the lowest was -6.01%. In the poverty data, the data show that the average value of the poverty rate is 2.4%, the highest value is 16%, and the lowest is 0%. The INEQUALITY variable to explain income inequality, it can be seen that the average value is obtained at 36.5%, with the highest value of 45.5% and the lowest at 28.3%. In UNEMPLOYMENT, as an indicator of unemployment, it can be seen that the average value of unemployment is 6.4%, with a maximum value of 13.6% and a minimum value of 0.4%. In the SCHOOL variable, to see education, it is known that the average education is 97.92%, with a maximum value of 120% and a minimum of 69%.

Model Selection

Table 5. Chow test

Effect Test	Statistic	d.f.	Prob.
Cross-Section F	4.143191	(7.100)	0.0005

Sumber: Eviews

From Table 5 above, it can be seen that the estimation results show a probability value of 0.0005. This result is less than the value of 0.05. Therefore, the better model selection is the fixed effect model (FEM), and we continued with the Hausman test.

Table 6. Hausman test

Test Summary	Chi-Sq. Statistic	Chi-Sqd.f.	Prob.
Cross-Section random	8.740728	4	0.0679

Sumber: Eviews

From the results of the Hausman test data processing in Table 6, it is known that it shows a probability value of 0.0679. This result is greater than 0.05. Therefore, it

can be concluded that this test is better to use the random effect model (REM) and continue to the next test, namely the LM test.

Table 7. LM test

Null (no rand. Effect) Alternative	Cross-section One-sided
Breusch-Pagan	0.810926
	-0,3678

Sumber: Eviews

From the results of the LM test data processing in Table 7, it can be seen that the test results obtained a value of 0.810926. This result is above 0.05. Therefore, it can be seen that the best model test in this study is to use the random effect model (REM).

Regression Test

Multiple linear regression test is a test that uses more than one independent variable. This test is used to get an answer to whether or not the independent variables affect the dependent variable.

Table 8. Regression test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-12.07185	2.645618	-4.562962	0.0000
Poverty	0.261464	0.050602	5.167114	0.0000
Inequality	0.211372	0.062061	3.405891	0.0010
Unemployment	-0.357031	0.69413	-5.143608	0.0000
School	0.092155	0.018503	4.980440	0.0000
R-square	0.787857			
Adjusted R-Squared	0.764521			
F-Statistic	33.76184			
Prob(F-statistic)	0.000000			

Source: Eviews

Coefficient of Determination, R-Square

The coefficient of determination R-Square (R²) is used to measure the ability of a model to explain the variation of the dependent variable. Based on Table 8, it is known that R-Square is 0.787857 or 78.78%. This means that the variables of poverty, income inequality, unemployment, and education are able to explain 78.78% of economic growth. The remaining 21.22% is explained by other variables that are not being studied.

Partial test

A partial or t-test is performed to determine the influence of independent variables on the dependent variable individually. In the test of the poverty variable on economic growth in Table 8, it is known that the result of the probability value is 0.0000 or 0%. This value is smaller than the significance value of 0.05 or 5%. Therefore, it can be concluded that poverty affects economic growth. So H₁ is accepted, and H₀ is rejected.

In Table 8 from the results of processing the data on the income inequality variable against economic growth. It can be seen that the result of the data processing

is 0.0010 or 0.1%. This result shows that the probability value is smaller than 0.05 or 5%. Therefore, it can be concluded that income inequality has a positive effect on economic growth. This result concludes that H2 is accepted and H0 is rejected.

The test of the unemployment variable on economic growth in Table 8 is known to be 0.0000 or 0%. This result shows that the significance level is below 5%. Therefore, it can be concluded that unemployment has a negative effect on economic growth. Therefore, in this study, H3 is accepted, and H0 is rejected.

In the research variable of education on economic growth, the probability result is 0.0000 or 0%. This value is below the significance level of 0.05 or 5%. Therefore, it can be concluded that education has a positive effect on economic growth. Therefore, H4 is accepted, and H0 is rejected.

Simultaneous Test

Based on the results of the tests that have been carried out in Table 4.5, it is known that the probability of the F-statistic shows a value of 0.000000 or 0%. This result is below the significance level of 0.05 or 5%. Therefore, the four variables, namely the variables of poverty, income inequality, unemployment, and education, have an effect on economic growth.

Discussion

The Effect of Poverty on Economic Growth

The results of the regression test in Table 4.5 show that poverty has a positive effect on economic growth in the D8 OKI countries. This result can be seen from the data processing, which shows a significance probability level of 0.0000 or 0%. This value is lower than the significance level of 0.05 or 5%. The coefficient of the poverty variable tested against economic growth is 0.261464. The result of this coefficient means that every 1% increase in economic growth, poverty increases by 0.261464%.

The findings of this study prove that the effect of poverty on economic growth in the D8 OKI countries is in line with the Kuznets theory. The Kuznets curve hypothesis explains that in the early stages of economic growth, it has a negative impact on poverty and inequality, which increases (Nikensari et al., 2019).

The results are in line with the study 'Ula and Fayyadh (2023), where poverty depicted by consumption variables has a positive impact on economic growth in Indonesia. The same results are also found in the studies by Hakib (2018), Haya et al. (2022), and Ichvani et al. (2019).

Consumption can increase economic growth because consumption is one of the important components of macroeconomics and has a relationship with income and savings (Icvani et al., 2019). This is because the increasing consumption of the community indicates that the community's income is increasing. With increasing income, the demand for goods and services increases, which will ultimately lead to economic growth.

The Effect of Income Inequality on Economic Growth

From the results of data processing in Table 4.5, it can be seen that income inequality has a positive effect on economic growth in the D8 OKI countries. This result can be seen from the significance value in the regression test of 0.0010 or 0.01%. This value

is below the significance level of 0.05 or 5%. As for the coefficient value, it is 0.211372, which can be interpreted as a 1% increase in economic growth causing income inequality to increase by 0.211372%. Therefore, H2 is accepted, and H0 is rejected.

Income inequality is a reality that occurs both in developed and developing countries (Mohammad et al. 2021). Income distribution itself is the division of income in society (Mohammad et al., 2021). The results of this study are in line with the Kuznets curve hypothesis. The Kuznets curve hypothesis explains that economic growth initially increases income inequality (Nikensari et al., 2019). These results are consistent with the research of Rahmadi et al. (2019).

The inequality is caused by the fact that during economic growth, there are several groups that experience a more positive impact than others. Examples of these groups include entrepreneurs, investors, and skilled workers. They are very likely to receive higher salaries or wages than other workers, thus leading to income inequality. In addition, labor factors can also lead to income inequality. Skilled workers who are needed by the market are more likely to find jobs and wages than unskilled workers.

The Effect of Unemployment on Economic Growth

Based on the results of the test that has been carried out and displayed in Table 4.5, the test value of 0.0000 or 0% is known. This means that unemployment has a negative effect on economic growth in the D8 OKI countries. The test coefficient of the unemployment variable on economic growth is -0.357031. This can explain that with an increase in economic growth of 1%, unemployment will decrease by 0.357031%. These results state that H3 is accepted and H0 is rejected.

The results are in line with Okun's law. Okun's law explains the relationship between unemployment and economic growth (Putri et al. 2022). In this theory, unemployment is negatively correlated linearly with economic growth (Putri et al. 2022). These results are consistent with the research of Yuanda et al. (2022).

Unemployment is negatively correlated with economic growth because when unemployment falls, the number of workers increases. This means that many people are productive and earn wages, salaries, income, or payments. With this income, a person can engage in economic activities such as buying and selling products and services, which will drive the economy to improve.

The Effect of Education on Economic Growth

The results of the education test on economic growth in Table 4.5 are 0.0000 or 0%. This result has a value below the significance level of 5%. The coefficient value of the education variable is 0.092155. This result concludes that education has a positive and significant effect on economic growth. For every 1% increase in education, economic growth increases by 0.092155%. This result explains that H4 in the study is accepted and H0 is rejected.

According to Todaro (2006), human capital can be measured through the fields of education and training, which increase the value of a person. With the increase in a person's abilities obtained from education, both formal and non-formal, it will have an impact on the increase in productivity of that person, so that they can compete in the labor market and meet their lives with dignity (Iksan & Arka, 2022).

Conclusion

The conclusion of this study is that economic growth in the D8 OKI countries can be influenced by poverty, income inequality, unemployment, and education. This result can be seen from the tests that have been conducted. The results show that the probability of the poverty variable shows a significance probability level of 0.0000 or 0%. In the income inequality variable, the results of the regression test were 0.0010 or 0.01%. In the unemployment variable, the regression test results were 0.0000 or 0%. The education variable is 0.0000 or 0%. Of all the variables, the results show that they are below the significance level of 5%.

The researchers realize that this study still has many limitations, such as the data used being limited to the years 2010-2022. Therefore, it is suggested that future research should aim to include more data. Additionally, it is hoped that subsequent studies will use different methods to produce more varied conclusions or discussions.

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