

# The Effect of Gross Regional Domestic Product and Human Development Index on Economic Growth

*The Effect of Gross  
Regional Domestic  
Product*

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## **ABSTRACT**

This study analyzes the effect of Gross Regional Domestic Product, Human Development Index, and Open Unemployment Rate on economic growth in Central Java Province during the period 2020-2022. Using panel data from 35 districts/cities, the purposive sampling method is applied to capture regional economic disparities. The analysis was carried out using a panel data regression model, using the Random Effect Model, Fixed Effect Model, and Common Effect Model which were validated through the Chow and Hausman tests. The results showed that Gross Regional Domestic Product had a significant effect on economic growth ( $p < 0.05$ ), while Human Development Index had a significant but negative effect on economic growth. Conversely, did not have a significant effect on these variables ( $p > 0.05$ ). These findings underline the importance of improving the quality of human resources and managing GRDP to support economic growth, although unemployment is not always a direct determinant. The practical implication of this study is the need for policies focused on increasing productivity and resource management to support sustainable growth in Central Java.

**Keywords:** *Gross Regional Domestic Product, Human Development Index, Economic Growth, Central Java*

## **ABSTRAK**

Penelitian ini menganalisis pengaruh Produk Domestik Regional Bruto (PDRB), Indeks Pembangunan Manusia (IPM), dan Tingkat Pengangguran Terbuka (TPT) terhadap pertumbuhan ekonomi di Provinsi Jawa Tengah selama periode 2020-2022. Menggunakan data panel dari 35 kabupaten/kota, metode purposive sampling diterapkan untuk menangkap disparitas ekonomi regional. Analisis dilakukan dengan model regresi data panel, menggunakan Random Effect Model, Fixed Effect Model, dan Common Effect Model yang divalidasi melalui uji Chow dan Hausman. Hasil penelitian menunjukkan bahwa PDRB memiliki pengaruh signifikan terhadap pertumbuhan ekonomi ( $p < 0,05$ ), sedangkan IPM memiliki pengaruh signifikan namun negatif terhadap pertumbuhan ekonomi. Sebaliknya, TPT tidak memberikan pengaruh signifikan terhadap variabel tersebut ( $p > 0,05$ ). Temuan ini menggarisbawahi pentingnya peningkatan kualitas sumber daya manusia dan pengelolaan PDRB untuk mendukung pertumbuhan ekonomi, meskipun pengangguran tidak selalu menjadi determinan langsung. Implikasi praktis dari penelitian ini adalah perlunya kebijakan terfokus pada peningkatan produktivitas dan pengelolaan sumber daya untuk mendukung pertumbuhan yang berkelanjutan di Jawa Tengah.

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## INTRODUCTION

Annual economic improvement indicators can be seen from economic growth. The economic picture in a country must be improved so that it can be a link to increase prosperity for the community. Izami et al. (2022), every country must have development goals by achieving economic growth. Economic growth is a measure of a country's performance in economic development. Thus, both developed and developing countries continue to strive to increase their economic growth and progress. Economic growth is an ongoing issue that needs to be reviewed periodically in both developed and developing countries and is expected to experience rapid improvement (Salim et al., 2020). If economic growth can be increased, it will increase income, open up wider employment opportunities, increase investment. Darussalam et al. (2019), as with the situation in Indonesia, the rate of economic growth is still relatively slow due to high levels of unemployment and poverty, thus categorizing this country as a developing country.

Every country must also think about how to increase its economic growth including Indonesia. Because every year there is an increase in output per capita in significant economic growth that occurs and is long-term. A country that can be said to be healthy or not economically is seen from the economic growth that occurs and is an absolute requirement for a country to develop and prosper the nation. If economic progress does not get a boost, a nation will face new economic and social challenges, such as unemployment and poverty rates that will increase (Salim et al., 2020). As in Indonesia, poverty has increased significantly. Data from the Central Statistics Agency (*Badan Pusat Statistik/BPS*) states that in 2020 the percentage of poverty in Indonesia increased by 10.14 percent. The significant increase in poverty that occurred was due to the Covid-19 situation that contaminated half the world, including Indonesia (Maulana et al., 2022). However, data Indonesia's economic growth also experienced significant growth in 2021, reaching 3.70% and 5.31% in 2022 (Indonesia, 2023). However, things are different in Central Java, where economic growth is slightly different from other regions in Indonesia itself.

This situation shows that Central Java's economic growth can recover after experiencing a significant decline in 2020. This increase is a good thing because the benchmark for economic progress in a region or area is seen from whether or not economic growth in the region is progressing (Patriamurti & Septiani, 2020). This is in line with research Alwaini et al. (2022), which explains the overall strategy or economic framework of a country views economic growth as the main goal. Because economic growth is an important indicator of community concerns in several regions or areas. In certain regions or areas, an important indicator is the goal of knowing the economic conditions indicated by the Gross Regional Domestic Product (*Produk Domestik Regional Bruto/PDRB*), so that the region will be given an illustration of the PDRB value of how resources can be managed and used (Yunianto, 2021). Therefore, each region needs to increase production of goods, services and development in the region in order to increase regional income and economic growth (Retno et al., 2022; Zulfikar et al., 2024). Because according to BPS data 2022, economic growth in Central Java is still not very rapid compared to urban areas due to the lack of jobs and low wages received. Economic growth is a recurring issue that requires hard work and is expected to improve faster in both developed and developing countries. The purpose of this study is to examine the influence of PDRB, Human Development Index (*Indeks Pembangunan Manusia/IPM*), and Open Unemployment Rate (*Tingkat Pengangguran Terbuka/TPT*) on Central Java's economic growth between 2020 and 2022.

## LITERATURE REVIEW

According to Kuncoro (2001), the increase in Gross Regional Domestic Product (*Produk Domestik Regional Bruto/PDRB*) of a province, district, or city is an important focus in traditional development methods. On the other hand, the increase in Gross Domestic Product (*Produk Domestik Bruto/PDB*) figures indicates economic expansion. The population variable has an individual (partial) influence on economic growth. Furthermore, the test results are based on the t-test. The Adj. R-Square value obtained from the determination coefficient is 0.708. This means that 70.8% of economic growth is influenced by the population.

**H1:** Gross Regional Domestic Product has a significant effect on economic growth

Economic development or what is also called the Human Development Index (*Indeks Pembangunan Manusia/IPM*) can be considered successful if a region or area achieves a balanced increase in economic growth and people's standard of living. The high or low IPM will affect the level of population productivity (Herrero et al., 2019; Tripathi, 2021; Hasan, 2022). Conversely, the lower the IPM, the lower the level of population productivity; as a result, poor productivity can result in low income. However, the higher the IPM, the higher the level of population productivity, which means that the income level will increase (Suparman & Muzakir, 2023). It can be said that the IPM is one of the elements that influences regional/regional inequality. There are three indices used to measure the IPM, namely the standard of living, the level of education quality, and the level of quality of life, all of which influence each other.

The indicator that evaluates the physical and non-physical components of population welfare is the Human Development Index (*Indeks Pembangunan Manusia/IPM*). Life expectancy can be used to measure physical quality, and average years of education is used to measure non-physical quality (Suhartono et al., 2020; Noor & Mulyana, 2024). Indonesia distributes central government transfer payments, including the General Allocation Fund (*Dana Alokasi Umum/DAU*), based on the Human Development Index (*Indeks Pembangunan Manusia/IPM*). The latest approach to determining the Human Development Index (*Indeks Pembangunan Manusia/IPM*) differs significantly from the previous one. The main difference is in the Education component, which is assessed using literacy rates and school participation in the previous approach. Meanwhile, school age and average school age indicators are considered when updating the Education component in the new approach. Based on the results of the data testing that has been done, it is seen that the development index variable has a statistically significant influence of 0.000. The human development index variable according to the findings has a degree of relationship that is lower in significance than  $\alpha$  (0.05), which results in the conclusion that the variable has a significant impact, implications and influence on economic growth.

**H2:** Human development index has a significant effect on economic growth

In addition, the Open Unemployment Rate (*Tingkat Pengangguran Terbuka/TPT*) is also an important thing to look at because if the unemployment rate increases, it will increase the poverty rate and decrease the percentage and affect economic growth (Purwanda, 2022). According to data from Central Statistics Agency (*Badan Pusat Statistik/BPS*), unemployment and poverty in Central Java experienced a significant decline, namely in 2020 (6.48%), 2021 (5.96%) and 2022 (5.57%) therefore the poverty rate also decreased in 2020 (11.84%), 2021 (11.25%), 2022 (10.93%). This has a good impact on economic growth because the lower the percentage of open unemployment and poverty, the higher the economic growth (Pambayun, 2021; Yuniarti & Imaningsih, 2022). Based on the facts mentioned above, it can be concluded that a number of factors influence economic growth, and these are the elements that need to be addressed to build a prosperous society.

### H3: Open unemployment rate has a significant effect on economic growth

According Arifin (2016), when economic growth occurs, the economy is characterized by an expansion in the quantity of goods and services. Four elements have an influence on the classical economic theory of economic growth: population, capital stock, geographic area, population wealth, and technical progress. This theory states that population growth is the dominant factor influencing economic growth because it expands the market. As a result, this increases in market size increases competition for resources, which in turn supports technological progress and increases worker productivity. Economic growth will be affected by a slowdown in population growth (Alkhoiriyah et al., 2021; Gendalasari & Riyadi, 2021).

A region has the most important indicator of economic well-being which can be seen from its regional gross domestic product. This metric is calculated using current and constant prices to evaluate the progress of regional economic growth. Regional Gross Domestic Product (*Produk Domestik Bruto/PDB*), refers to the net value of finished goods and services produced by the productivity of the economy in a region during a certain period (Sasana, 2006).

According Arinze (1991), it is stated that the Human Development Index (*Indeks Pembangunan Manusia/IPM*) is a new concept for assessing human development which was first introduced by United Nations Development Programmed in its 1990 magazine. The process of expanding people's choices is known as human development. According to this idea, a country's growth must prioritize its people as a very important state resource. The unemployment rate shows the percentage of people who want to work but have not yet found a job. The discussion of unemployment is closely related to population issues. The process of population change itself is influenced by the process of economic development. This process is realized through improvements in health, nutrition, and education facilities, as well as adjustments to the structure of supply and demand which are realized through increasing per capita income (Jasman & Hwihanus, 2022).

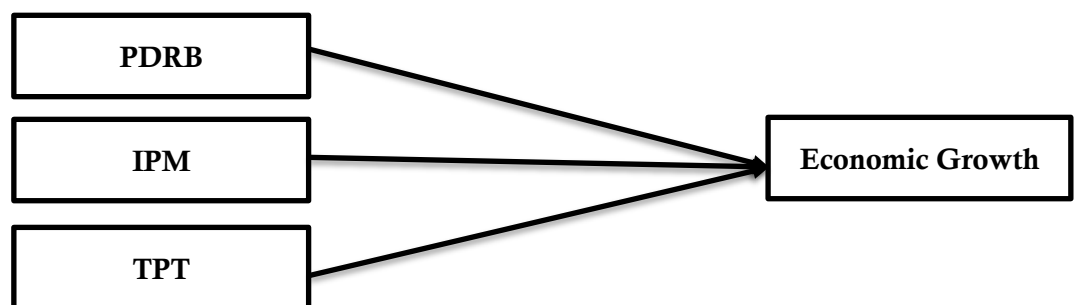


Figure 1. Research Framework

## METHODS

This quantitative study uses statistical tools to process data and test findings (Gozali, 2016). Secondary data sourced from annual reports published by the Central Statistics Agency (*Badan Pusat Statistik/BPS*). This study combines the Eviews application for panel data analysis and hypothesis testing using statistical analysis techniques. This study focuses on all districts/cities in Central Java Province, using purposive sampling due to the economic disparities between regions. These disparities can be seen from the variations in Gross Regional Domestic Product (*Produk Domestik Regional Bruto/PDRB*), Human Development Index (*Indeks Pembangunan Manusia/IPM*), and Open Unemployment Rate (*Tingkat Pengangguran Terbuka/TPT*) in 35 cities/regencies. The purposive sampling method ensures the selection of samples that are in accordance with the research criteria and support quantitative analysis. For this study, data were collected over a three-year period (2020–2022), resulting in a sample size of 105

observations, corresponding to 35 selected districts/cities each year. With four variables (PDRB, IPM, TPT, and Economic Growth), a total of 420 data points were analyzed based on the sampling criteria. The dependent variable in this study is Economic Growth, while the independent variables include the Open Unemployment Rate, Human Development Index, and Gross Regional Domestic Product. Panel data regression models are evaluated using various estimation methods such as Random Effect Model, Fixed Effect Model, and Common Effect Model. To select the most appropriate model, the Chow test and the Hausman test are used. These tests serve as important tools to determine whether the Common Effect, Fixed Effect, or Random Effect model best fits the panel data, increasing the robustness of the statistical analysis and ensuring that the research findings accurately reflect the dynamics in the observed region.

## RESULTS

The Chow and Hausman test is conducted to determine the best model in panel data analysis, namely whether the model used is more appropriate with the Fixed Effect Model or Random Effect Model. This test is important to ensure that the analysis conducted produces more accurate and relevant estimates according to the characteristics of the data.

Table 1. Chow and Hausman Test Results

Test	Effect Test	Prob.	Conclusion
Chow	Cross Section Chi-Square	0.0000	Fixed Effect Model
Hausman	Cross-section Random	0.0000	Fixed Effect Model

The Finite Element Method model is selected if the probability value of the Chow test result is equal to 0.0000 or lower than 0.05. The Finite Element Method model is used when the Hausman test probability value is equal to 0.0000 or <0.05. In addition, given the selection of the Finite Element Method model, there is no requirement to perform the Lagrange Multiplier test.

Table 2. Fixed Effect Model Estimation Results

Variable	Coefficient	Prob.	t-Statistic	Conclusion
C	-368.3034	0.0000	-6.626834	Negative Significant
PDRB	4.42E-07	0.0306	2.208951	Negative Significant
IPM	4.946034	0.0000	6.259712	Negative Significant
TPT	-0.490023	0.1769	-1.364792	Positive Not Significant

The results of testing the fixed effect model in the poverty study in Central Java Province in 2020-2022, the following regression equation was formed

$$PE = -368.303426397 + 4.94603366599 * IPM + 4.42465050522e 07 * PDRB - 0.490022952481 * TPT + \epsilon_{it}$$

Table 3. Results of the Determination Coefficient Test (R<sup>2</sup>) and Simultaneous Significance (F Test)

R-squared	0.718487
Adj. R-squared	0.563024
S.E. of regression	2.230658
Sum squared resid	333.3808
Log likelihood	209.6431
F-statistic	4.621611
Prob(F-statistic)	0.000000

The Adjusted R Square value is equal to 0.563024 or 56.3%, it indicates that the independent variable affects the dependent variable at the same time. is 56.3%. However, additional factors not taken into account in this study have an influence on the remaining 43.7% (100-56.3). H<sub>0</sub> is accepted if its significance value can be > 0.05. While H<sub>a</sub> can be accepted if its significance value does not exceed j or < 0.05. The

output results show that the independent variables (IPM, PDRB, and TPT) at the same time also play a major role in influencing the dependent variable (Economic Growth). This is based on the F-Statistic of 4.621611 and the Prob. (F-Statistic) value of 0.0000 which means that the value is less than 0.05.

Table 4. Result of t-Test (Partial Test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-368.3034	55.57758	-6.626834	0.0000
IPM	4.946034	0.790138	6.259712	0.0000
PDRB	4.42E-07	2.00E-07	2.208951	0.0306
TPT	-0.490023	0.359046	-1.364792	0.1769

The t-test results, the variables Human Development Index (*Indeks Pembangunan Manusia/IPM*) (p-value 0.0000) and Gross Regional Domestic Product (*Produk Domestik Regional Bruto/PDRB*) (p-value 0.0306) have a significant effect on the dependent variable, while the variable Open Unemployment Rate (*Tingkat Pengangguran Terbuka/TPT*) (p-value 0.1769) is not significant. The IPM coefficient of 4.946034 shows a strong positive effect, while PDRB (4.42E-07) has a positive but small effect. On the other hand, TPT (-0.490023) does not have a statistically significant effect.

The results of the Prob. Estimation Model analysis, the Significant Gross Regional Domestic Product (*Produk Domestik Regional Bruto/PDRB*) variable has a substantial impact on the Economic Growth variable, as indicated by the confirmed H1 coefficient of 0.0306 (p <0.05). The gross income of a province is assessed through the gross regional product PDRB. Through increasing the amount of output at fixed prices and redistributing wealth and gross income, PDRB has a contribution to the economy and economic growth. However, at current prices, it has no real effect on growth (Kaban & Robertus, 2023). The continuous decline in PDRB has created uncertainty regarding regional development and community welfare. If the Gross Regional Domestic Product (*Produk Domestik Regional Bruto/PDRB*) continues to decline every year, it will have a negative impact on regional development. In addition, the decline in economic activity will cause a decline in national income, as well as an increase in unemployment and poverty rates. The results of this study are similar to the results of previous studies which formulated those high levels of poverty in an area will have an impact on increasing crime rates (Romhadhoni et al., 2018).

The results of the Prob. Significant value estimation model analysis show a figure of 0.0000 (<0.05), then H2 is accepted. The Human Development Index variable is known to have a significant influence on the Economic Growth variable. Fluctuations in economic growth are influenced by the Human Development Index (*Indeks Pembangunan Manusia/IPM*). This study illustrates that the economic growth of Central Java Province is influenced by fluctuations in the IPM. This analysis provides evidence for research conducted by MN Fitria in 2023 which states that there is no significant relationship between economic growth and IPM between the two (Muqorrobin, 2017). Data estimation from multiple linear regression shows that IPM variable has significant and negative impact on economic growth. The economy of a region is correlated with the quality of its human resources, and as a result, economic growth can be achieved and potentially increased (Marliana, 2022).

The results of the Prob (Significant) value estimation model analysis, the figure is 0.1769 > 0.05, so H3 is rejected. This indicates that the Economic Growth variable is not significantly influenced by the Open Unemployment Rate (*Tingkat Pengangguran Terbuka/TPT*) Open Unemployment Rate variable. Many factors may cause the slow economic growth of Central Java, one of which is unemployment. The economy can be adversely affected by the high unemployment rate, because actual production may lag behind potential production. As a result, the population of Central Java Province may face challenges in increasing their level of welfare. Research conducted Hasibuan et al.

(2019); Purwanti & Rahmawati (2021), have similarities in this study, namely producing findings that the Open Unemployment Rate does not have any real benefits.

## CONCLUSION

The calculated Gross Regional Domestic Product Prob. (significant) value of 0.0306 <0.05 indicates that Gross Regional Domestic Product has a significant influence on economic growth in Central Java from 2020 to 2022. Thus, the H1 hypothesis is accepted. The decline in Gross Regional Domestic Product itself can raise concerns regarding community welfare and regional development, although it functions as an indicator of a province's gross domestic product. Based on the Prob. (significant) value of the Human Development Index of 0.0000 <0.05, it illustrates the significant impact of the Human Development Index on the economic growth of the province of Central Java in 2020 to 2022; thus, H2 is accepted. This shows that, despite the common belief that the quality of human capital is related to the quality of the economy, changes in the Human Development Index affect economic growth in Central Java Province. The Open Unemployment Rate in Central Java province has no effect on economic growth in 2020 to 2022, as evidenced by the Prob. significant Open Unemployment Rate value of 0.1769 > 0.05, which means H3 is rejected. It is proven that there is no significant effect given by TPT on economic growth in Central Java during the study period, although it is generally believed that it generally has a detrimental effect on the regional economy.

## REFERENCES

- [1] Alkhoiriyah, S. F., & Sa'roni, C. (2021). Pengaruh Indeks Pembangunan Manusia (IPM) dan Pengangguran terhadap Pertumbuhan Ekonomi di Kota Banjarmasin. *JIEP: Jurnal Ilmu Ekonomi Dan Pembangunan*, 4(2), 299-309.
- [2] Alwaini, H., Fadhila, R., Herlambang, P., & Lestari, H. (2023). Determining Factors of Credit Risk for Conventional Banks Listed on the Indonesian Stock Exchange. *Jurnal Ilmiah Manajemen Kesatuan*, 11(3).
- [3] Arifin, S. R. (2021). Pengaruh Indeks Pembangunan Manusia (IPM) dan Tingkat Pengangguran Terhadap Pertumbuhan Ekonomi di Provinsi Jawa Timur Tahun 2016-2018. *Iqtishadia Jurnal Ekonomi & Perbankan Syariah*, 8(1), 38-59.
- [4] Darussalam, A. Z., Adilah, A. N., Berlian, B., & Danial, M. (2019). Konsep Pertumbuhan Ekonomi dan Kesejahteraan dalam Islam. *Jurnal Iqtisaduna*, 5(2), 264-273.
- [5] Gendalasari, G. G., & Riyadi, R. (2021, December). The Effect of GRDP Growth, Per Capita GRDP, Population on School Expectation Rates in West Java Province (2012-2019 Period). In *International Conference on Global Optimization and Its Applications 2021* (pp. 263-263).
- [6] Ghozali, I. (2016). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 23*. Semarang: Badan Penerbit Universitas Diponegoro.
- [7] Hasan, Z. (2022). The Effect of Human Development Index and Net Participation Rate on the Percentage of Poor Population: A Case Study in Riau Province, Indonesia. *International Journal of Islamic Economics and Finance Studies*, 8(1), 24-40.
- [8] Hasibuan, M., SAFIRA, R., & JANNAH, N. (2022). Pengaruh Inflasi Dan Tingkat Pengangguran Terhadap Pertumbuhan Ekonomi di Indonesia Periode 2017–2021. *Jurnal Ilmiah Kohesi*, 6(1), 35-45.
- [9] Herrero, C., Martínez, R., & Villar, A. (2019). Population structure and the human development index. *Social Indicators Research*, 141, 731-763.
- [10] Izami, R., Kornita, S. E., & Desweni, S. P. (2022). Analisis Pengaruh Indeks Pembangunan Manusia Pengangguran dan Pertumbuhan Ekonomi Terhadap Tingkat Kemiskinan di Kabupaten Pelalawan. *Journal of Social and Policy Issues*, 135-139.
- [11] Jasman, J., & Hwihanus, H. (2023). Economic Growth Dynamics in West Nusa Tenggara Province: Investment, Gross Regional Domestic Product, and Government Finance. *Jurnal Ilmiah Manajemen Kesatuan*, 11(3), 905-918.
- [12] Kuncoro, A. (2001). *Cara Menggunakan dan Memaknai Analisis Asumsi Klasik*. Cetakan Pertama. Bandung: Alfabeta.

- [13] Marlina, L. (2022). Analisis pengaruh indeks pembangunan manusia, pertumbuhan ekonomi dan upah minimum terhadap tingkat pengangguran terbuka di Indonesia. *Ekonomis: Journal of Economics and Business*, 6(1), 87-91.
- [14] Maulana, A., Fasa, M. I., & Suharto, S. (2022). Pengaruh Tingkat Kemiskinan Terhadap Pertumbuhan Ekonomi Dalam Perspektif Islam. *Jurnal Bina Bangsa Ekonomika*, 15(1), 220-229.
- [15] Muqorrobin, M. (2017). Pengaruh Indeks Pembangunan Manusia (IPM) Terhadap Pertumbuhan Ekonomi Provinsi Jawa Timur. *Jurnal Pendidikan Ekonomi (JUPE)*, 5(3).
- [16] Nathania, S. D., & Muzayyanah, I. (2023). Analysis Of The Relationship Between Economic Growth And Poverty: Indonesian Case Study 2018-2022. *Tamansiswa Accounting Journal International*, 9(1), 96-109.
- [17] Noor, T. D. F. S., & Mulyana, M. (2024). The Brand Gestalt and Green Marketing As Part of Achieving Village Tourism Sustainability. *Jurnal Ilmiah Manajemen Kesatuan*, 12(4), 1081-1090.
- [18] Pambayun, D. (2021). Indicators of the association of Unemployment in Indonesia with the Level of Employment Opportunity, GDP, and SER. *Research Horizon*, 1(5), 189-206.
- [19] Patriamurti, R., & Septiani, Y. (2020). Analisis pengaruh PMA, PMDN, dan tenaga kerja terhadap pertumbuhan ekonomi Jawa Tengah. *EKOMBIS: Jurnal Fakultas Ekonomi*, 6(2).
- [20] Purwanda, E. (2022). The influence of the human and economic index development components on the unemployment rate in Indonesia. *International Journal of Demos*, 4(2), 761-772.
- [21] Purwanti, S. D., & Rahmawati, F. (2021). Pengaruh Pengeluaran Pemerintah Dan Tingkat Pengangguran Terbuka (TPT) Terhadap Pertumbuhan Ekonomi Inklusif Indonesia. *Ecoplan*, 4(1), 32-44.
- [22] Romhadhoni, P., Faizah, D. Z., & Afifah, N. (2019). Pengaruh Produk Domestik Regional Bruto (PDRB) daerah terhadap pertumbuhan ekonomi dan tingkat pengangguran terbuka di Provinsi DKI Jakarta. *Jurnal Matematika Integratif*, 14(2), 113.
- [23] Salim, A., Fadilla, F., & Purnamasari, A. (2021). Pengaruh inflasi terhadap pertumbuhan ekonomi indonesia. *Ekonomica Sharia: Jurnal Pemikiran dan Pengembangan Ekonomi Syariah*, 7(1), 17-28.
- [24] Sasana, H. (2006). Analisis dampak desentralisasi fiskal terhadap pertumbuhan ekonomi di kabupaten/kota provinsi Jawa Tengah. *Jurnal Dinamika Pembangunan (JDP)*, 3(Nomor 2), 146-170.
- [25] Suhartono, S., Hadziq, M. F., & Kurniawai, R. T. (2020, May). The Influence of Human Development Index, Economic Growth and Allocation of Operational Expenditures to the Capital Expenditures in the Province of Banten. In *2nd International Seminar on Business, Economics, Social Science and Technology (ISBEST 2019)* (pp. 73-76).
- [26] Suparman, S., & Muzakir, M. (2023). Regional inequality, human capital, unemployment, and economic growth in Indonesia: Panel regression approach. *Cogent Economics & Finance*, 11(2), 2251803.
- [27] Tripathi, S. (2021). How does urbanization affect the human development index? A cross-country analysis. *Asia-Pacific Journal of Regional Science*, 5(3), 1053-1080.
- [28] Yunianto, D. (2021, October). Analisis pertumbuhan dan kepadatan penduduk terhadap pertumbuhan ekonomi. In *Forum Ekonomi: Jurnal Ekonomi, Manajemen dan Akuntansi* (Vol. 23, No. 4, pp. 688-699).
- [29] Yuniarti, Q., & Imaningsih, N. (2022). Pengaruh Pertumbuhan Ekonomi, Tingkat Kemiskinan dan Indeks Pembangunan Manusia terhadap Tingkat Pengangguran Terbuka di Kabupaten Sidoarjo. *Ekonomis: Journal of Economics and Business*, 6(1), 44-52.
- [30] Zulfikar, A. L., Mahardika, S. G., Maulana, I., & Swandari, S. (2024). Identification of Natural Resource-based Economic Potential around New Indonesian Capital. *Economic and Business Horizon*, 3(2), 1-10.