

Analysis of Factors Affecting the Economic Growth of the Districts/Cities of West Java Province in 2017-2021

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Abstract

This research was conducted in 2022 to analyze the human development index, labor force participation rate, poverty, CO₂ emissions, and the number of MSMEs on the economic growth of districts/cities in West Java province in 2017-2021. The choice of a 5-year timeframe is because, during this period, the districts/cities of West Java province have increased economic growth every year except for 2020 due to the Covid-19 pandemic. Secondary data is an annual report, so researchers do not include 2022 because it has not accumulated a one-year period. The economy of districts/cities in West Java Province is influenced by positive factors such as the Human Development Index, CO₂ emissions, and an increasing number of MSMEs. However, the increase in economic growth is inseparable from the problems of increasing the poor population and the unequal labor force in each region. The panel data regression analysis method is used to align the hypothesis with the theory. Developing research that has existed before with differences in location selection and combining variables from various aspects so that differences in results become updates to the factors that influence economic growth in this study.

Keywords: economy growth, human, environment, labor, industry

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1. INTRODUCTION

Economic growth and development are two indicators that influence each other. The existence of economic growth gives rise to economic development by marking the distribution of the socio-economic welfare of the community. The higher achievement of regional economic growth shows that the region has succeeded in carrying out regional development accompanied by fulfilling the consumption of goods or services, the availability of public facilities such as educational institutions, health centers or hospitals, employment opportunities, and the role of the community

in developing themselves through public facilities. Based on statistical calculations by the Central Bureau of Statistics (2015), economic growth is measured by the real economic conditions of the region using Gross Regional Domestic Product at Constant Prices.

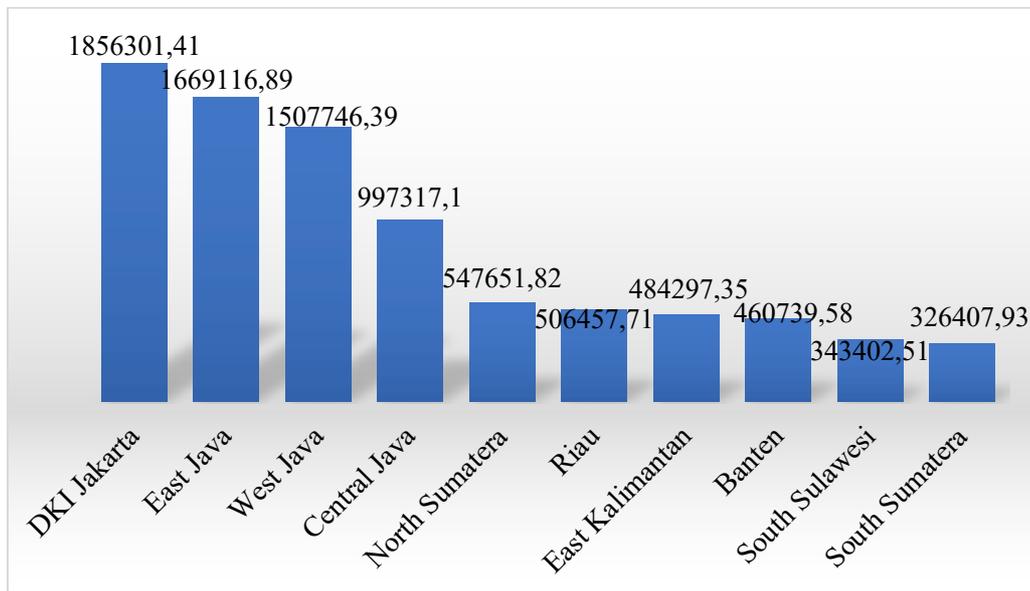


Figure 1. Gross Regional Domestic Product at Constant Prices for Indonesia's Highest Provinces in 2021

Provinces with the top three economic growth scores are controlled by DKI Jakarta Province in first place with a Gross Regional Domestic Product at Constant Prices value of 1,856,301.41 billion rupiahs, East Java Province in second place with a Gross Regional Domestic Product at Constant Prices value of 1,669,116.89 billion rupiahs, and the Province West Java is in third place with a Gross Regional Domestic Product at Constant Prices value of 1,507,746.39 billion rupiahs in 2021. Based on information obtained from the Central Bureau of Statistics (2022), the three provinces experienced a decrease in Gross Regional Domestic Product at Constant Prices in 2020 with the highest decrease occurring in the Province East Java amounted to 57,071.51 billion rupiahs from 1,673,981.27 billion rupiahs to 1,616,909.76 billion rupiahs, followed by DKI Jakarta Province with 43,837.12 billion rupiahs from 1,836,240.55 billion rupiah to 1,792,403.43 billion rupiah, and West Java Province with a decrease of at least 37,578.97 billion rupiah from 1,490,959.69 billion rupiah to 1,453,380.72 billion rupiah. Even though it experienced a downturn in the economy, West Java Province has a relatively balanced economy in dealing with the Covid pandemic compared to DKI Jakarta and East Java Province, which are above it.

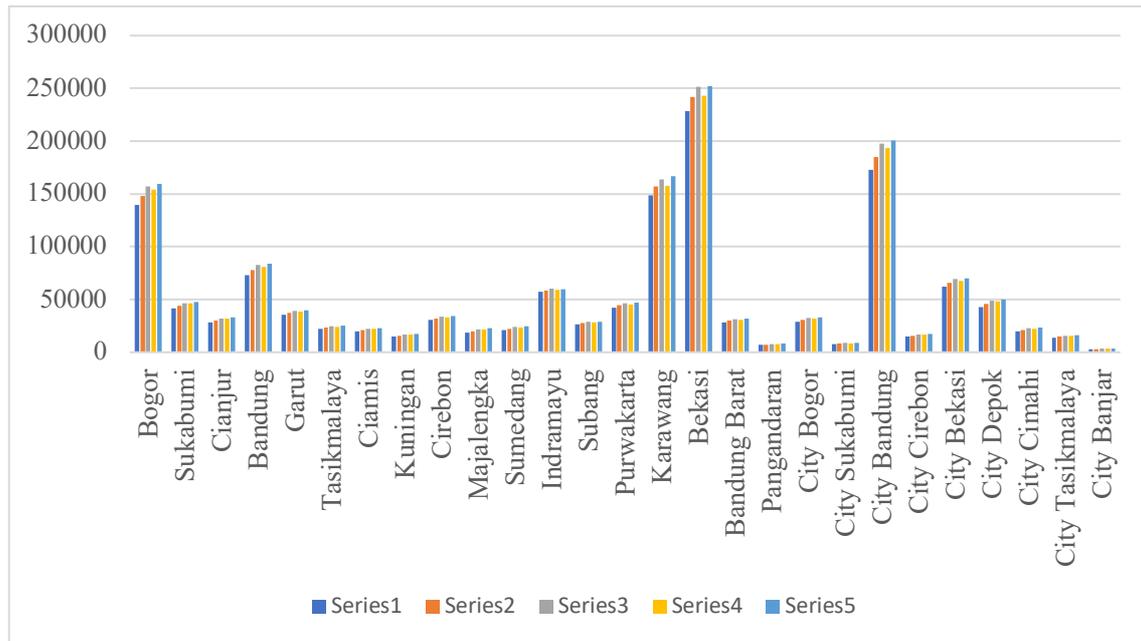


Figure 2. Gross Regional Domestic Product at Constant Prices for Regencies/Cities of West Java Province in 2017-2021

Apart from at the provincial level, according to information obtained from BPS of West Java Province (2022) in Figure 2, the Regency/City of West Java Province has a stable Gross Regional Domestic Product Value on the Basis of Constant Prices increasing both before and after the COVID-19 pandemic. Bekasi Regency is the area with the highest economic growth at district and city levels, followed by Bandung City, Karawang Regency, and Bogor Regency. The districts/cities of West Java Province have stability in maintaining the regional economy. The increase in the economy was supported by the realization of government policies related to community maintenance and empowerment, such as social assistance, so that people's purchasing power was maintained in the face of unstable economic conditions. Economic growth is influenced by the role of humans as human resource capital as well as regional driving assets, which are assessed through community involvement in education, health, and decent living standards (BPS). These three factors are accumulated in the Human Development Index as an indicator for measuring human welfare. BPS of West Java Province (2022) states that in 2017-2021, the Districts/Cities of West Java Province achieved an increased Human Development Index. There are areas with a Human Development Index above the Indonesian Human Development Index of 72.29%, namely the City of Bandung for the high category at the city level is 81.96%. Bekasi Regency is 74.45% for the very high category at the district level in 2021. According to the findings of Dankyi et al. (2022) states that the Human Development Index increases or the higher the percentage, the higher the significant positive effect on economic growth. The higher the Human Development Index, the seriousness of the region in providing added value to the output of goods or services through economic productivity towards increasing economic growth, which is supported by the existence of educated, healthy, and quality human capital.

Contribution of human resources in terms of employment, namely the Labor Force Participation Rate, as an illustration of the level of active contribution of the population in producing output of goods or services. The active participation of the workforce in market share is expected to be able to create high work productivity so that the economic growth of a region develops. This condition is in accordance with the findings of Yuniarti et al. (2020) state that the level of labor force participation has a significant positive effect on economic growth in Indonesia. The higher the labor force, the higher the growth in work participation of the productive age population to contribute to economic development. BPS of West Java Province (2022) states that West Java Province is the province with the second most poor population in Indonesia after East Java Province, with an increase in the percentage of poor people in all districts/cities during 2020 and 2021. The birth and development of poverty in the middle economic growth in the districts/cities of West Java Province, it has a negative impact on decreasing productivity and quality of life and has become the focus of anticipating these socio-economic problems in the framework of economic stability. Explained in the research of Marrero and Servén (2022) provides an explanation of high poverty inhibiting labor productivity, which results in a decrease in economic activity.

Economic growth cannot be separated from a healthy and quality environment. The development of economic activity in the industrial sector and transportation activities has resulted in gas output, namely CO₂ emissions. Indonesia has experienced reduced CO₂ emissions from 2017 to 2020, accompanied by increased economic growth. In 2021, there will be a simultaneous increase in CO₂ emissions and economic growth. These conditions indicate an imbalance between the gains in economic growth and the output of reducing CO₂ emissions. Meanwhile, at the Regency/City level of West Java Province, according to information from BPS of West Java Province (2022), CO₂ emissions increased in 2017-2020 and then decreased in 2021 without reducing economic productivity so that district/city economic growth increases accompanied by with reduced CO₂ emissions.

Besides all that, employment factors are no less important in improving people's welfare. Micro, Small, and Medium Enterprises have a high capacity for business development opportunities and have the opportunity to accept someone in their business, as written in Adeosun and Shittu (2022). Even though in 2020 globally there has been a decline in the condition of the economic sector due to the Covid-19 pandemic, Micro, Small, and Medium Enterprises in the Regency/City of West Java Province have actually increased in number compared to 2019 and will occur until 2021. The increase in Micro, Small, and Medium Enterprises shows that Micro, Small, and Medium Enterprises is an industrial sector that has a positive effect on economic growth and is able to survive in regional economic uncertainties.

Overall, economic growth in the Regencies/Cities of West Java Province for the 2017-2021 period experience an increase in economic growth through the value of Gross Regional Domestic Product at Constant Prices except in 2020. This condition is supported by regional factors that affect economic growth, namely achievements. The Human Development Index is in the moderate to very high category. The Labor Force Participation Rate fluctuates, the phenomenon of poverty through the increase in the number of poor people, the rise and fall of CO₂ emissions, and the increase in the number of Micro, Small, and Medium Enterprises before, during, and after the economic crisis. The phenomenon of economic growth, when viewed from the

regional area, which consists of the national, provincial, and district/city levels, will have different values due to differences in area coverage and the conditions or capabilities of indicators that influence economic growth. Similar indicators that affect the economic growth of two or more regions may not necessarily have the same effect between regions. This condition is because the economic growth of each region in Indonesia can be achieved maximally according to the characteristics of the most influential conditions of each region.

2. LITERATURE REVIEW

2.1. Economic Growth

According to Simon Kuznets (1955), economic growth is a process of developing the production factors of the work industry in the long term. Regional economic growth occurs with a marked increase in production factors, according to Sari et al. (2020), namely increasing the supply of capital and labor so that a regional economy can develop and develop. Meanwhile, according to Lewis (1954), economic growth begins with equal distribution of the number of workers in the industrial sector without reducing the number of workers in one of these industrial sectors.

2.2. Human Development Index

The United Nations agency through the UNDP (United Nations Development Programme) 1990 sparked the theory of human development (Human Development Theory) to determine the potential of human resources in terms of education, health, and a decent standard of living. Schultz (1993), in the theory of human capital (human capital theory), reveals that human capital consists of skills and education to increase productivity. Todaro and Smith (2000) supports Schultz's that the economy grows with the birth of a balance between the quality of education and human health. Yuniarti et al. (2020) revealed that on a micro and macro basis, education and health are used as the main determinants of community economic welfare and regional and national development rank.

2.3. Labor Force Participation Rate

The involvement of the workforce in the economy can be seen from the active population that participates in producing products through the Labor Force Participation Rate (Kurniawati et al, 2018). The economic contribution of the working population in an area can be seen from the percentage of Labor Force Participation Rate. In their research, Setyowati et al. (2019) revealed high labor force participation but not followed by developments in work productivity and output of economic goods, an area easily be covered by poverty and unemployment. The opposite condition, expressed by Soava et al. (2020), namely, the Labor Force Participation Rate, is balanced with employment, which is a bonus for workers in sectors that are lacking in labor through a balance in the distribution of the workforce so that economic growth increases.

2.4. Poverty

According to the book *Economic Development* by Todaro and Smith (2015), poverty is a condition of population income determined of regional national income. An area is said to be poor if there is still a number or percentage of people's poverty that gradually does not decrease every year. High poverty rate will reduce or slow down economic growth. The emergence of poverty, as written by Sari et al. (2020) and Dumais et al. (2022), This is caused by factors such as natural resources, education, self-confidence, and low living standards. According to Albagoury (2021), the poverty rate decreases when income inequality decreases and income distribution occurs. Arguments of Wadana and Prijanto (2021), which state that the income received by the community is able to contribute to regional income so that the economy grows.

2.5. CO₂ Emissions

Dwi et al. (2019) and Khabibi et al. (2020) provide an explanation regarding the increase in production of goods and services automatically accompanied by an increase in CO₂ emissions. If this is not balanced by reducing gas emissions, it will have an impact on environmental damage. The level of CO₂ emission is obtained from the accumulated calculation of economic growth and the percentage of CO₂ emission itself. CO₂ emissions at the district/city level are obtained by dividing the Gross Regional Domestic Product at the district/city constant price by the Gross Domestic Product value multiplied by the national CO₂ emission level. The formation of the Environmental Kuznets Curve in Simon Kuznets (1955) stems from the condition of increasing CO₂ emissions at the start of economic growth. Over time, the level of CO₂ emissions has increased to reach the peak of the curve due to regions increasing economic productivity. Awareness of the importance of reducing CO₂ emissions followed by an increase in income shows a negative slope or decrease in the Environmental Kuznet Curve. There is a more efficient use of natural resources and production resources so that the output of gas released is reduced. Kuznets Curve Environmental Relations in Alam and Adil (2020) experience changes in environmental improvement through increased economic growth that occurs when innovation follows the increase in CO₂ emissions in the management of environmental conservation technology. The ongoing development of production, which is able to increase economic growth according to Sarac and Yaglikara (2018), shows an increase in regional income or added value to be realized in an effort to overcome environmental damage.

2.6. Micro, Small and Medium Enterprises

Government Regulation Number 7 of 2021 concerning Ease, Protection, and Empowerment of Cooperatives and Micro, Small, and Medium Enterprises states that, Micro, Small and Medium Enterprises are community-based businesses that play a role as a pillar of national economic stability in the process of creating jobs, equal opportunities for all citizens, in setting up and developing a business without leaving the involvement of the government's role in protecting, empowering, and facilitating running it. Hakim et al. (2021) explained that Micro, Small, and Medium Enterprises have become an industry in overcoming differences in social status and structure as a solution to equal distribution of income and equal economic

opportunities for all levels of society. Regional and central government cooperation is needed to overcome the limited capabilities of Micro, Small and Medium Enterprises actors and the ability to compete with other industries in market share so that positive economic development is achieved as a result of the contribution of income per capita to the community originating from the creativity of the existence of Micro, Small and Medium Enterprises where this condition is expressed in the research of Adeosun and Shittu (2022), Prakash et al. (2022), and Woźniak et al. (2019).

2.7. Research Hypothesis

2.7.1 The Human Development Index Influences Economic Growth

Dankyi et al. (2022) state that the Human Development Index has a positive and significant influence on short-term and long-term economic growth. All resources, both natural resources, human resources, and capital resources, are renewed consistently so that future generations can feel the optimization of economic development.

2.7.2 The Labor Force Participation Rate Influences Economic Growth

The high level of labor force participation indicates higher economic productivity through increasing the contribution of labor to the economy. These conditions are written in Shari and Abubakar (2022) research. The higher the labor force participation rate, the higher the availability of jobs needed to maintain the economy and not cause employment problems.

2.7.3 Poverty Affects Economic Growth

Prameswari et al. (2021) stated that poverty influences economic growth, namely that higher poverty will reduce or slow down economic growth.

2.7.4 CO₂ Emissions Affect Economic Growth

Conditions for increased CO₂ emissions began at the beginning of economic growth. Over time, the level of CO₂ emissions has increased to reach the peak of the curve due to regions increasing economic productivity to increase economic growth.

2.7.5 Micro, Small, and Medium Enterprises Affect Economic Growth

The development of the number of Micro, Small, and Medium Enterprises provides benefits for a region as a community-based economic driver that can be reached by the middle and lower classes so that the eligibility of the community for production, consumption, and distribution needs is fulfilled.

3. METHODOLOGY

This research uses data analysis using the panel data method (pooled data), which is a method that combines analysis of time series data and cross section data. Panel data in this research consisted of 135 observation data consisting of 27 regencies/cities of West Java Province during the 2017 to 2021 fiscal year period. Panel data was processed using the E-views 10 statistical application to find out the

relationship between variables through panel data regression analysis with the OLS approach (Ordinary Least Square). This study uses an α (alpha) value of 5% via Eviews-10. The regression equation of this study is as follows:

$$EG_{it} = \alpha + \beta_1 HDI_{it} + \beta_2 L_{it} + \beta_3 POV_{it} + \beta_4 EM_{it} + \beta_5 SMEs_{it} + \epsilon_{it}$$

Information:

PE_{it} : Economic growth (billion rupiah/year)

HDI : Human Development Index (percent/year)

L : Labor Force Participation Rate (percent/year)

POOV : Poor population (percent/year)

EM : CO₂ Emissions (percent/year)

SMEs : Number of SMEs (unit/year)

α : constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$: Regression coefficient

i : district/city cross section data of West Java Province

t : time series data for the period 2017-2021

ϵ_{it} : error term

According to (Damodar N. Gujarati, 2004), the quality of panel data varies and information is more effective than time series and cross section data. The quality of the research data is proven through the classical assumption test of multicollinearity and heteroscedasticity. The regression model was obtained by selecting the best regression model through the Chow, Hausman, and Multiple Langrange tests. After selecting the regression model, hypothesis testing is carried out partially, simultaneously, and the coefficient of determination is carried out to determine the effect of the independent variables on the dependent variable.

4. RESULT AND DISCUSSION

4.1. Classic Assumption Test

Multicollinearity Test

Table 1. Multicollinearity Test Result

	HDI	L	POV	EM	LOGSMEs
IPM	1.000000	-0.151263	-0.730016	-0.241865	-0.142638
KM	-0.730016	0.068101	1.000000	0.111694	-0.033441
TPAK	-0.151263	1.000000	0.068101	-0.095677	-0.064073
EM	-0.241865	-0.095677	0.111694	1.000000	-0.164171
LOGUMKM	-0.142638	-0.064073	-0.033441	-0.164171	1.000000

Source: Data Processed.

The output of the multicollinearity test results is that the independent variables with each other have a correlation value greater than 0.8. In this study, the correlation value between the independent variables was less than 0.8, which means that multicollinearity problems were not found in this study. Heteroscedasticity Test.

Table 2. Heteroscedasticity Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.141712	0.110299	1.284804	0.2017
HDI	0.003143	0.005731	0.548462	0.5846
L	0.000296	0.000440	0.673466	0.5022
POV	0.003335	0.001779	1.874785	0.0637
EM	0.000667	0.000375	1.780375	0.0780
LOGMSEMS	-0.033482	0.038315	-0.873845	0.3842

Source: Processed BPS Data (2023).

The output of the heteroscedasticity test through the Glejser test is to look at the probability values of all independent variables with a value greater than alpha of 0.05. Based on the statistical results, all the independent variables in this study have a probability value greater than alpha 0.05. That is, this research is free from heteroscedasticity problems.

4.2. Regression Model Selection

4.2.1. Chow Test

Table 3. Chow Test Result

Effects Test	Statistic	d.f.	Prob.
Cross-section F	4126.126844	(26,103)	0.0000
Cross-section Chi-square	938.171921	26	0.0000

Source: Processed BPS Data (2023).

The Chow test was conducted to determine the best regression model between the Fixed Effect Model and the Common Effect Model for obtaining the probability value. Probability value greater than alpha 0.05 will reject H1 and accept H0 with the Common Effect Model selected. While the probability value is smaller than alpha 0.05 will reject H0 and accept H1 with the Fixed Effect Model selected. The Chow test in this study has a probability value of less than alpha 0.05, meaning that H0 is rejected and H1 is accepted, so the Chow test results choose the Fixed Effect Model. According to Caraka and Yasin (2017), if the Fixed Effect Model becomes the chosen model in the Chow Test, then proceed with conducting the Hausman Test to compare the best regression model between the Fixed Effect Model and the Random Effect Model.

4.2.2. Hausman Test

Table 4. Hausman Test Result

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	41.789464	5	0.0000

Source: Processed BPS Data (2023).

The Chow test was conducted to determine the best regression model between the Fixed Effect Model and the Random Effect Model for obtaining the probability value. Probability value greater than alpha 0.05 will reject H1 and accept H0 with the selected model Random Effect Model. While the probability value is smaller than alpha 0.05 will reject H0 and accept H1 with the Fixed Effect Model selected. The Hausman test in this study has a probability value of less than alpha 0.05, meaning that H0 is rejected and H1 is accepted, so the Hausman test results choose the Fixed Effect Model. According to Caraka and Yasin (2017), if the Fixed Effect Model is the selected model in the Hausman Test, then this model will be used as the basis for hypothesis analysis. If the Common Effect Model is selected, it will be followed by the Multiple Langrange Test to select the best regression model with the Common Effect Model.

Based on the results of the Fixed Effect Model panel data regression, the regression equation model is obtained as follows:

Table 5. Regression Fixed Effect Model Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.638105	0.212478	21.82867	0.0000
HDI	0.033342	0.011039	3.020343	0.0032
L	-0.000815	0.000848	-0.961807	0.3384
POV	-0.010921	0.003427	-3.186491	0.0019
EM	0.002230	0.000722	3.089752	0.0026
LOGMSMEs	0.294469	0.073810	3.989552	0.0001
Adjusted R-squared	0.999733			
F-statistic	16171.63			
Prob(F-statistic)	0.000000			

EG = 4.638105 + 0.033342 HDI – 0.000815 L – 0.010921 POV + 0.002230 EM + 0.294469 MSMEs + ϵ_{it} .

Source: Processed BPS Data (2023).

The constant value of 4.638105 means that if the value of the Human Development Index, Labor Force Participation Rate, poverty, CO₂ emissions, and the number of Micro, Small, and Medium Enterprises equals 0, then economic growth is 4.638105 points. The HDI coefficient value is 0.033342. If the Human Development Index increases by 1%, economic growth increases by 0.033342 points. The coefficient value of the Labor Force Participation Rate is – 0.000815. If the TPAK increases by 1%, economic growth decreases – 0.000815 points. Poverty coefficient value - 0.010921. If poverty increases by 1%, economic growth declines - 0.010921 points. The value of the CO₂ emission coefficient is 0.002230. If CO₂ emissions increase by 1%, economic growth grows by 0.002230 points. The coefficient value of Micro, Small, and Medium Enterprises is 0.294469. If the number of Micro, Small,

and Medium Enterprises increases by 1%, economic growth develops by 0.294469 points.

4.3. Hypothesis Test

4.3.1. Partial Test (t-test)

Table 6. Partial Test Result

Variable	<i>t-statistic</i>	Probability
IPM	3.020343	0.0032
TPAK	-0.961807	0.3384
KM	-3.186490	0.0019
CO₂	3.089752	0.0026
LOGUMKM	0.089552	0.0001

Source: Processed BPS Data (2023).

The Human Development Index variable has a count value of 3.020343, greater than the table of 0.67640. This value means that H₀ is rejected and H₁ is accepted, so the first hypothesis is accepted, stating that the Human Development Index has a positive effect on economic growth. The Labor Force Participation Rate variable has a count value of -0.961807, greater than table 0.67640. This condition means that the second hypothesis of this study is accepted with a negative effect value based on rejecting H₀ and accepting H₁, which states that the Kejra Force Participation Rate harms economic growth. The poverty variable has a count value of -3.186490, greater than the table of 0.67640. This condition means that the third hypothesis of this study is accepted with a negative influence value based on H₀ being rejected and accepting H₁, which states that poverty harms economic growth. The CO₂ emission variable has a count of 3.089752, greater than the table of 0.67640. This condition means that the fourth hypothesis of this study is accepted with a positive influence value based on H₀ being rejected and accepting H₁, which states that CO₂ emissions have a positive effect on economic growth. The variable number of Micro, Small, and Medium Enterprises has a count value of 3.989552, greater than the table of 0.67640. This condition means that the fifth hypothesis of this study is accepted with a positive influence value based on H₀ being rejected and accepting H₁, which states that the number of Micro, Small, and Medium Enterprises has a positive effect on economic growth.

4.3.2. Simultaneous Test (F Test)

Table 7. Simultaneous Test Result

<i>F-statistic</i>	Probability
16171.63	0.000000

Source: Processed BPS Data (2023).

Simultaneous Test (F Test) serves to determine the effect simultaneously (simultaneously) given the independent variable on the dependent variable by

comparing the value of F_{count} with F_{table} . The larger value of F_{count} F_{table} states that H_0 is rejected and H_1 is accepted, which means that all independent variables simultaneously affect the dependent variable. This study has a F_{count} value of 16171.63, greater than F_{table} 2.28, so H_0 is rejected, and H_1 is accepted. This means that the variables Human Development Index, Labor Force Participation Rate, poverty, CO₂ emissions, and the number of Micro, Small, and Medium Enterprises simultaneously have a positive effect on economic growth.

4.3.3. Determination Coefficient Test

The coefficient of determination is a hypothesis test carried out to determine if the sample data used in the regression model is well estimated and fits in the regression line. Based on the calculation results of Adjusted R-squared of 0.999733, it has a meaning of 0.999733 or 99.99% of the HDI variable, Labor Force Participation Rate, Poverty, CO₂ emissions, and the number of MSMEs affect economic growth and by 0.01 or 1% is influenced by independent variables outside models. The greater the Adjusted R-squared value means the greater the influence of the independent variables on the dependent variable or the greater the independent variables explain the dependent variable.

This study reveals that the Human Development Index has a significant positive effect on economic growth in the Regencies/Cities of West Java Province for the 2017-2021 period. The study by Dankyi et al. (2022) revealed similar human resource results, especially in terms of education influencing economic growth in countries on the African Continent in 1990-2015. The Human Development Index for the Regencies/Cities of West Java Province during that period of year steadily increased for each region, except for in 2020. The decline did not last long. In 2021, all Regencies/Cities of West Java Province succeeded in increasing the Human Development Index. There is conformity with the Human Development Theory, which reveals that the higher the value of the Human Development Index, a region has human capital that contributes to improving the economy.

The negative Labor Force Participation Rate is not significant for economic growth in the Regencies/Cities of West Java Province for the 2017-2021 period. This is in line with Azzahro and Prakoso (2022) research, which revealed similar results that the negative Labor Force Participation Rate was not significant for economic growth in Indonesia from 1991-2020. Yuniarti et al. (2020) stated the opposite result, namely, the Labor Force Participation Rate was significantly positive for economic growth in 34 Indonesian provinces in 2018. The growth of the labor force in each city of West Java Province has relatively decreased compared to the labor force in the districts. Pangandaran Regency is the area with the highest Labor Force Participation Rate in 2021, namely 74.75%. Sukabumi City is the area with the lowest Labor Force Participation Rate in 2021, namely 56.86%. This means that there is still an accumulation of labor in the districts, has an impact a decrease in the workforce in urban areas. The results of the study are in accordance with the supply labor theory, which reveals that equal distribution of labor is characterized by the down streaming of labor from traditional or rural economic areas to modern or urban economies, providing an increase in economic driving capital without reducing the number of workers in rural areas.

Poverty has a significant negative effect on economic growth in the districts/cities of West Java Province for the 2017-2021 period. In line with the research of Prameswari et al. (2021) that poverty has a significant negative effect on economic growth in East Java Province in 2015-2019. Poverty alleviation is a focus that needs to be increased by the District/City of West Java Province due to an increase in poverty for two consecutive years, namely in 2020 and 2021, after successfully reducing the poverty rate in 2018 and 2019. High poverty hampers labor productivity, which results in a decline in economic activity.

CO₂ emissions have a significant positive impact on economic growth in the Regencies/Cities of West Java Province for the 2017-2021 period. Shabbir's research (2020) provides different findings regarding CO₂ emissions that are not related to economic growth in Pakistan in the short term. Pakistan has a large number of industries but does not provide a large amount of CO₂ emission output. The results obtained are in line with the research of Khabibi and Safitra (2020) that positive CO₂ emissions significantly affected the economic growth of OECD countries between 1995-2014. That is, the increase in the contribution of CO₂ emissions contributes to the increase in economic growth. The increase in CO₂ emissions shows that regions can increase economic productivity by implementing the Environmental Kuznets Curve in the Districts/Cities of West Java Province in 2017-2021. In the early period, namely 2017 to 2019, CO₂ emissions have increased, accompanied by an increase in economic growth through the value of Gross Regional Domestic Product at Constant Prices. The year 2020 will be the culmination of the Environmental Kuznet Curve, which will decrease in 2021 under conditions of reduced CO₂ emissions accompanied by increasing economic growth in almost all regions.

The number of Micro, Small, and Medium Enterprises has a significant positive effect on economic growth in the Regencies/Cities of West Java Province for the 2017-2021 period. Similar results were found in the first study, by Harahap et al. (2020), with the results of research that the number of Micro, Small, and Medium Enterprises affected economic growth in Indonesia between 2010 to 2017. Second, research by Adeosun and Shittu (2022) increasing the number of Micro, Small, and Medium Enterprises that increased economic growth in Nigeria. Third, research by Woźniak et al. (2019) states that the contribution of Micro, Small, and Medium Enterprises to the economy as measured by the number of Micro, Small, and Medium Enterprises, number of employees, and the added value of Micro, Small and Medium Enterprises had a significant positive influence on economic growth in Poland in 2010-2016. The increase in the number of Micro, Small, and Medium Enterprises, including during the Covid-19 pandemic, shows that the Micro, Small, and Medium Enterprises industry is able to compete in market share.

5. CONCLUSION

This research reveals that the first Human Development Index influences the economic growth of districts/cities in West Java Province in 2017-2021. The higher the Human Development Index contributes through human capital to increased economic growth. Second, poverty affects economic growth. High poverty results in a decrease in economic growth due to the reduced ability of the community to meet a decent standard of living. Third, CO₂ emissions affect economic growth. The higher level of CO₂ emissions indicates that the area is active in carrying out economic

activities accompanied by the ability to manage the surrounding environment. The number of Micro, Small, and Medium Enterprises has an effect on economic growth. The increase in the number of Micro, Small, and Medium Enterprises is able to contribute to the uncertainty of the regional economy. Meanwhile, the Labor Force Participation Rate variable has an effect, but the influence given does not contribute enough to the economic growth of the Regency/City of West Java Province.

Based on the results of the discussion and conclusions, this study provides a basis for follow-up on further research studies as well as alternative options for developing and implementing improvement policies for economic growth in the Regency/City of West Java Province.

5.1. For Further Researchers

This study has a variable that has no significant effect on economic growth, namely the Labor Force Participation Rate. These conditions indicate that the effect of supply is not significant enough in economic growth. It is hoped that future researchers interested in conducting research similar to this study can pay more attention to the selection of variables and indicators to measure variables, especially in terms of employment that have a significant effect on economic growth, excluding the employment variable used in research. There is an update of variables synchronized using existing theory and similar research with the aim of completing the limitations of this research while strengthening the research results. Future researchers can include the variable percentage of the labor force and population, which are the source of the formation of the distribution of labor in the economy.

5.2. For Regency/City Government of West Java Province

Improving the quality and quantity of manpower, infrastructure facilities, and soft skills training so that the Regency/City of West Java Province is able to produce synergized human capital that is competitive in market share and the quality of welfare is fulfilled; expansion of employment opportunities and distribution of work force in accordance with age and level of education so that there is a balance between the output and input of the population's economy through contributions to the formation of labor productivity; distribution of cash and non-cash subsidy assistance such as groceries and construction of shelters for the poor in the Regency/City of West Java Province; Environmentally friendly production activities such as Solar Power Plants, biomass fuel, greening, and reduce reuse recycle systems so that economic growth can minimize environmental damage as well as organizing training and managing the local economy so that Micro, Small and Medium Enterprises can contribute to the economy through quality and quantity product.

REFERENCES

- Adeosun, O. T. and Shittu, A. I., 2022. Small – medium enterprise formation and nigerian economic growth. *Journal of Economics and Political Science*, 7(4), 286–301. <https://doi.org/10.1108/REPS-07-2020-0089>
- Alam, R. and Adil, M. H., 2020. Validating environmental kuznets curve in India : ARDL bounds testing framework. *Organization of the Petroleum Exporting Countries*, 43(3), 1–24. <https://doi.org/10.1111/opec.12156>
- Albagoury, S. H., 2021. African pathway to achieve inclusive growth: COMESA case study. *Journal of Humanities and Applied Social Sciences*, 3(2), 108–119. <https://doi.org/10.1108/JHASS-03-2020-0045>
- Azzahro, I. K. and Prakoso, J. A., 2022. Determinan pertumbuhan ekonomi di Indonesia 1991-2021. *Jurnal Ilmiah Ilmu Manajemen Dan Kewirausahaan*, 2(1), pp. 314–327. <http://103.114.35.30/index.php/Mas/article/view/6983>
- Caraka, Rezzy Eko; Hasbi Yasin. (2017). *Spatial Data Panels*. Babadan Ponorogo, East Java: 2017.
- Central Bureau of Statistics, 2015. *Human Development Index*. BPS Catalog. Available at www.bps.go.id. Retrieved 3 January 2023.
- Central Bureau of Statistics of West Java Province, 2022. *Provinsi Jawa Barat Dalam Angka 2017-2021*. Available at <https://jabar.bps.go.id>. Retrieved 21 November 2022.
- Damodar N. G., 2004. *Basic Econometrics, Fourth Edition*. The McGraw-Hill Companies: New York.
- Dankyi, A. B., Abban, O. J., Yusheng, K. and Coulibaly, T. P., 2022. Human capital, foreign direct investment, and economic growth : Evidence from ECOWAS in a decomposed income level panel. *Environmental Challenges*, 9(August), pp. 100602. <https://doi.org/10.1016/j.envc.2022.100602>
- Dumais, J. D., Rotinsulu, T. O. and Walewangko, E. N., 2022. Pengaruh investasi, tenaga kerja dan kemiskinan terhadap pertumbuhan ekonomi di kabupaten Minahasa Utara. *Jurnal Berkala Ilmiah Efisiensi*, 22(5), pp. 49–60.
- Hakim, L., Juwita, A. H., Bintariningtyas, S. and Guritno, D. C., 2021. Poverty and SMEs: A new pradigm of SDGs development. *Optimum: Jurnal Ekonomi Dan Pembangunan*, 11(2), pp. 224. <https://doi.org/10.12928/optimum.v11i2.3943>
- Harahap, E. F. and Luviana, Huda, N., 2020. Tinjauan defisit fiskal, ekspor, impor dan jumlah UMKM terhadap pertumbuhan ekonomi Indonesia 1,2,3. *Journal Befita*, 5(2), pp. 151–161.
- Htike, M.M., Shrestha, A. and Kakinaka, M., 2021. Investigating whether the environmental kuznets curve hypothesis holds for sectoral CO₂ emissions: Evidence from developed and developing countries. *Environment, Development and Sustainability*, 24(11), pp. 12712–12739. doi:10.1007/s10668-021-01961-5.

- Khabibi, A. and Safitra, D. A., 2020. Sampah padat, emisi gas karbondioksida , dan produk domestik bruto. *Jurnal Reformasi Administrasi*, 7(1), pp. 9–16.
- Kurniawati, V., Pudjihardjo, M. and Sakti, R. K., 2018. Analisa pengaruh jumlah tenaga kerja, nilai ekspor dan nilai investasi pada industri pengolahan terhadap pertumbuhan ekonomi di kabupaten Lumajang. *Jurnal Ilmu Ekonomi Dan Pembangunan*, 18(1), pp. 53–67.
- Kuznets, Simon. 1955. Economic Growth and Income Inequality. The American Economic Review. Volume XLV
- Lewis, A. 1962. The economics of underdevelopment. *South African Journal of Economics*, 30(2), pp. 169–169. <https://doi.org/10.1111/j.1813-6982.1962.tb02428.x>
- Marrero, G. and Luis S., 2022. Growth, inequality and poverty: A robust relationship? *Empirical Economics*, 63(2), pp. 725–791. <https://doi.org/10.1007/s00181-021-02152-x>
- Prakash, B., Kumar, I. and Verma, J. K., 2022. Barriers and potential solutions for msme in developing economies : Evidence from India. *Journal of Problems and Perspectives in Management*, pp. 19(4). [https://doi.org/10.21511/ppm.19\(4\).2021.26](https://doi.org/10.21511/ppm.19(4).2021.26)
- Prameswari, A., Muljaningsih, S. and Asmara, K., 2021. Analisis pengaruh kemiskinan, indeks pembangunan manusia (IPM), dan tenaga kerja terhadap pertumbuhan ekonomi di Jawa Timur. *Jurnal Ekonomi Pembangunan*, 7(2), 168–179.
- Sarac, Ş. and Yaglikara, A., 2018. Environmental Kuznets Curve (EKC): Evidence from Ghana. *Smart Of Journal* 4(13), 774782. <https://doi.org/10.21121/eab.2017225203>
- Sari, Y., Nasrun, A. and Putri, A.K., 2020. Analisis pengaruh indeks pembangunan manusia dan kemiskinan terhadap pertumbuhan ekonomi kabupaten/kota di provinsi Kepulauan Bangka Belitung tahun 2010-2017. *Equity: Jurnal Ekonomi*, 8(1), pp. 1–13. doi:10.33019/equity.v8i1.9.
- Schultz, T. Paul, 1993 Human Capital Investment in Women and Men, An International Center for Economic Growth Publication. San Francisco, California.
- Shari, R.M. and Abubakar, J., 2022. Pengaruh pertumbuhan penduduk, angka partisipasi sekolah dan tingkat partisipasi angkatan kerja terhadap pertumbuhan ekonomi pada 5 provinsi di Indonesia. *Jurnal Ekonomi Regional Unimal*, 5(2), p. 20. doi:10.29103/jeru.v5i2.8310.
- Setyowati, V. A. and Prasetyanto, P. K., and Hutajulu, D. M., 2019. Pengaruh angkatan kerja, harga minyak dunia, konsumsi energi, dan emisi CO₂ terhadap pertumbuhan ekonomi di Indonesia tahun 2000-2019. *Journal of Economic*, 3(1), pp. 36–52.
- Shabbir, A., 2020. The Role of natural resources in economic growth : New evidence from Pakistan. *Journal of Economics, Finance and Administrative Science*, 25(50), 221–238. <https://doi.org/10.1108/JEFAS-03-2019-0044>

- Soava, G., Mehedintu, A., Sterpu, M. and Raduteanu, M., 2020. Impact of employed labor force, investment, and remittances on economic growth in EU countries. *Sustainability (Switzerland)*, 12(23), pp. 1–31. <https://doi.org/10.3390/su122310141>
- Todaro, M. P. and Smith, S. C. 2015. *Economic Development (Twelfth Edition)*. Pearson Education Limited, Addison Wesley.
- Wadana, R. K. and Prijanto, W. J., 2021. Analisis pengaruh infrastruktur, tingkat kemiskinan, dan indeks pembangunan manusia terhadap pertumbuhan ekonomi Provinsi Bali 2015-2020. *Jurnal Sosial Sains*, 2(6).
- Woźniak, M., Duda, J., Gasiór, A. and Bernat, T., 2019. Relations of GDP growth and development of SMEs in Poland. *Procedia Computer Science*, 159, pp. 2470–2480. <https://doi.org/10.1016/j.procs.2019.09.422>
- Yuniarti, P., Wianti, W., and Nurgaheni, N.E., 2020. Analisis faktor-faktor yang mempengaruhi tingkat pertumbuhan ekonomi di Indonesia. *SERAMBI: Jurnal Ekonomi Manajemen Dan Bisnis Islam*, 2(3), pp.169-176.
- Zhu, Y., Bashir, S. and Marie, M., 2022. Assessing the relationship between poverty and economic growth: Does sustainable development goal can be achieved?. *Environmental Science and Pollution Research*, 29(19), pp. 27613–27623. doi:10.1007/s11356-021-18240-5.