



JOURNAL
**THE EFFECT OF PROVINCIAL MINIMUM WAGE, INVESTMENT
AND LABOR FORCE PARTICIPATION RATE ON ECONOMIC
GROWTH IN CENTRAL JAVA**

Sufriyandi

Email : Sufriyandi99@gmail.com

Fakultas Ekonomi, Universitas Negeri Jakarta, Indonesia

Dr. Karuniana Dianta A. S, S.IP., M.E

Email : dianta.sebayang@unj.ac.id

Fakultas Ekonomi, Universitas Negeri Jakarta, Indonesia

Dr. Suparno, S.Pd, M.Pd

Email : suparno@unj.ac.id

Fakultas Ekonomi, Universitas Negeri Jakarta, Indonesia

Abstract:

This study aims to determine the effect of provincial minimum wage, investment and labor force participation rate on economic growth in Central Java. The research method used in this study is in the form of panel data from 2015 to 2019 in Regencies/Cities in Central Java Province with a descriptive quantitative model. Data is presented annually obtained from BPS Central Java Province. Based on the results of the partial analysis, the variables of the provincial minimum wage and investment have a positive and significant effect on economic growth in Central Java, which is seen from the probability value which is smaller than (0.05). Variable of the labor force participation rate have a positive but not significant effect on economic growth in Central Java, which is seen from the probability value greater than (0.05). Simultaneously all research variables have a significant effect on economic growth and have an influence shown by R² of 82.49%, indicating that all research variables can explain variable Y and the remaining 17.51% is explained by other variables outside the study.

Keywords: *Economic Growth, Provincial Minimum Wage, Investment, Labor Force Participation Rate*

Background

Indonesia is a country with many islands and one of the most populous countries. This means that Indonesia consists of many regions. Therefore, it takes an economic development in each region that needs to be carried out evenly so that there are no gaps between regions and reduce differences in abilities between regions. Regional development is an integral part of national development, which is based on the principles of regional autonomy and control of national resources. The achievement or failure of regional economic development is inseparable from the improvement of economic growth. Increasing economic growth can be said to be more prosperous for the people in the area, because the level of community welfare is described by the high and low economic growth of the area (Hasibuan, 2022). Central Java Province as one of the autonomous regions that has certain territorial boundaries with the third largest population on the island of Java, is also undergoing a process of



economic development. The economy of the community in Central Java Province is increasing with the regional development that takes place comprehensively and sustainably. The existence of the Regency / City of Central Java Province with its resources greatly influences the achievement of development outcomes in Central Java Province. The Central Java Provincial Government as the implementer of development in the Central Java region is also faced with the problem of how to spur the growth of its regional output to improve the welfare of its population.

Table 1. Economic Growth Rate in Central Java Province
(In Percent)

Year	Economic growth
2015	5.47
2016	5.28
2017	5.27
2018	5.30
2019	5.36

Source: BPS Central Java Province various years

It can be seen in Table 1.1 above, that Central Java Province has the potential for economic growth which is quite volatile from 2015 – 2019. Central Java's economic growth in 2016 grew by 5.28%, slowing down compared to 2015 which grew by 5.47%. Then in 2017 it grew stagnant at 5.27%, this was due to high dependence on the processing industry and limited sources of sustainable economic growth, limited mobility of people's savings and low quality of human resources. Central Java's economic growth in 2019 was 5.36% higher than 2018 which was 5.30%, the increase in economic growth was supported by the information and communication business field of 11.62%.

Based on the explanation above, although the economic growth in 2015-2019 showed a high level of stability. This does not mean that Central Java Province is free from problems that affect economic growth such as the provincial minimum wage, investment and labor force participation rate. Every year the population continues to grow, so every year the daily consumption needs of the population also increase. Tambunan (2014) explains that every year income is needed. And according to Tarigan (2012) income for workers is wages and salaries. In a study by Sholeh (2007), based on the theory of demand and supply of labor in a competitive market, one of the factors that determine the level of demand and supply of labor is wages. In its application, to determine the level of wages, government intervention is required through the minimum wage policy applicable in the market. The establishment of a minimum wage policy in order to protect and increase the income of workers who still earn below the minimum wage is the government's goal without neglecting the interests of the company and the economy in general. Because if the government does not make a UMP policy, it will result in an economic imbalance and hamper the wheels of the economy in the area, this happens due to the level of production, consumption, and distribution which is influenced by an inappropriate minimum wage increase (Sulistiawati, 2012). Minimum wages have an important role in achieving the welfare and prosperity of workers. Therefore, the element of the minimum wage is needed in economic growth.



In addition to the minimum wage, according to Todaro (2000) investment has an important role in increasing regional development and is a factor that is positively related to economic growth. The ability of the region to make policies related to investment and the business world as well as to improve the quality of services for the community will be the success of the region in increasing its attractiveness to investment. The growth of a competitive and healthy investment climate is expected to spur mutually beneficial investment growth in regional development. The existence of capital in the form of investment is one of the factors to increase regional development. Investment has a close relationship with economic growth. With increased investment, it will increase production capacity which is expected to produce output and added value, so that economic growth will increase (Arsyad, 2010).

In addition to investment as capital in regional economic development, human resources are also an important capital. With the active participation of the community because the sense of belonging to the region is greater, regional development will be faster. According to Prawira (2017) the labor force participation rate (TPAK) can be said to be one of the components that can increase economic growth. TPAK is a workforce that is active in economic activities and economic growth is created because of the growing cycle of economic activity in the community. According to Syafitri & Ariusni (2019), the labor force is one of the drivers of economic growth if it is balanced with wide job opportunities. When the workforce is large and balanced with wide job opportunities, production will increase so that it has an impact on increasing economic growth

Based on the description above, the authors are interested in conducting research to find out further whether the variables of the provincial minimum wage (UMP), investment and labor force participation rate (TPAK) affect the variables of economic growth in Central Java Province. Therefore, the author conducted this research with the title "The Influence of UMP, Investment and TPAK on Economic Growth in Central Java"

THEORETICAL FRAMEWORK

Economic growth

According to Sukirno (2004), economic growth is all a series of activities that result in an increase in goods and services produced so that the welfare and prosperity of the community increases. One of the prerequisites for the sustainability and sustainability of economic development is high economic growth.

In the neo-classical theory Robert Solow suggests that economic growth is influenced by three main factors, namely: (1) Capital accumulation, that is, if part of the income is invested and saved back in the hope of increasing the value of output in the future. The accumulation of capital includes investments invested in physical equipment, land, as well as increases in wages received by workers when capital intensification occurs and human resources. (2) The number of workers includes the population in a country (3) Technological progress. Progress is due to innovations in the handling of traditional occupations such as in making clothes, building houses and farming activities.

Economic growth is one of the indicators or parameters to measure the welfare of the people in a country. With these parameters, we can see the level of development of economic activity



from time to time. Thus, if a country consistently experiences economic growth or development in a positive direction or progress within a certain period of time, it can be interpreted that the country is experiencing economic growth. In addition, according to Yuliani (2019), the increase in production capacity or power in terms of goods and services, the results of which are reflected in the increase in national income, can be defined as economic growth.

Provincial Minimum Wage

According to article 1 point 1 of the Regulation of the Minister of Manpower No.PER-01/MEN/1999 concerning Minimum Wages, the minimum wage is the lowest monthly wage consisting of basic wages and fixed allowances (Kementrian Tenaga Kerja, 1999). The minimum wage itself is used as a benchmark by entrepreneurs in determining the real wages given by workers or laborers in their companies (Asyhadie & Kusuma, 2019). The minimum wage is divided into the minimum wage based on the province or district/city (UMK) and the minimum wage based on the sector in the province or district/city.

Investment

Based on economic theory, investment means spending or purchasing capital goods and means of production that are used to replace and especially increase the ability to produce goods/services available in the economy. In other words, investment means shopping activities to increase the production capacity of an economy (Sukirno, 2004). In addition, investment leads to capital accumulation which can increase the country's potential output and develop long-term economic growth (Samuelson & Nordhaus, 2004).

Labor Force Participation Rate

According to the Solow-Swan theory, economic growth depends on and increases the supply of production factors such as population, labor, and capital accumulation, as well as the level of technological progress. Manpower is an important factor that can encourage development, the number of workers will continue to change every year, this is because the demographic process also continues to occur. The labor force participation rate (TPAK) is used as a measure of the development of the workforce in Indonesia. LFPR is the percentage of the population who have entered the age of 15 years and over who are the economically active labor force in a country/region. The higher the LFPR indicates that the higher the supply of labor available to produce goods and services in an economy (BPS, 2021).

METHOD

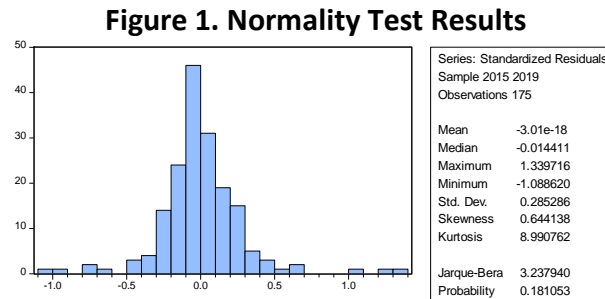
This study uses quantitative methods. Quantitative method is a research method that can be interpreted as a research method based on the philosophy of positivism to examine several populations or samples, analyze quantitative data for the purpose of testing predetermined hypotheses (Sugiyono, 2016). The data used in this study used panel data in the form of time series during the 2015-2019 period and a cross section of 35 districts/cities in Central Java.



RESULT

Classic assumption test

Normality test



Source: Output Eviews 10

Based on the results of the normality test, the Jarque-Bera probability value was calculated at $0.496679 > 0.05$, which means the data is normally distributed.

Multicollinearity Test

Table 2. Multicollinearity Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.489336	434.8016	NA
X1	0.003762	108.0091	1.827108
X2	0.001311	31.79983	1.173232
X3	0.000146	618.1790	1.609771

Source: Output Eviews 10

The technique used to detect multicollinearity is by examining the Variance Inflation Factor (VIF) correlation matrix, that the independent variables (UMP, Investment and TPAK) have a correlation value not exceeding 10, which means they do not have multicollinearity problems.

Heteroscedasticity Test

Table 3. Heteroscedasticity Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.035563	0.331499	-0.107279	0.9147
X1	-0.032427	0.027033	-1.199521	0.2324
X2	0.009527	0.015707	0.606548	0.5452
X3	0.005117	0.005508	0.928982	0.3545

Source: Output Eviews 10

Based on the test results, the probability value of the independent variable > 0.05 means that there is no heteroscedasticity symptom.

Hypothesis testing

Panel Data Regression Analysis

The Panel Data Regression Equation used by the researcher aims to estimate the dependent variable if the independent variable is increased or decreased. The following are the results of the Fixed Effect Model (FEM) panel data regression conducted by researchers.



Table 4. FEM Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.300137	0.710812	3.235928	0.0015
X1	0.462493	0.057966	7.978710	0.0000
X2	0.094792	0.033679	2.814588	0.0056
X3	0.000361	0.011811	0.030581	0.9756

Source: Output Eviews 10

Based on the results of data processing, the following results are obtained:

$$Y = 2.300137 + 0.462493 \text{ Logs } (X1) + 0.094792 \text{ Logs } (X2) + 0.000361 (X3)$$

Based on the regression equation, it can be concluded as follows: If the Provincial Minimum Wage, Investment, and Labor Force Participation Rate are constant at 0 then Y (Economic Growth) is 2.300137. If X1 (Provincial Minimum Wage) increases by 1%, then Y (Economic Growth) will increase by 0.462493%. If X2 (Investment) increases by 1% then Y (Economic Growth) will increase by 0.094792%. If X3 (Labor Force Participation Rate) increases by 1% then Y (Economic Growth) will increase by 0.000361%.

T test

The probability value of the Provincial Minimum Wage and Investment < 0.05 indicates that the test is significant. While the probability value of the Labor Force Participation Rate variable > 0.05 this indicates that the test is not significant.

F test

Table 5. F Test Results

R-squared	0.824993	Mean dependent var	5.417714
Adjusted R-squared	0.777729	S.D. dependent var	0.681950
S.E. of regression	0.321510	Akaike info criterion	0.757903
Sum squared resid	14.16150	Schwarz criterion	1.445114
Log likelihood	-28.31655	Hannan-Quinn criter.	1.036656
F-statistic	17.45478	Durbin-Watson stat	1.821472
Prob(F-statistic)	0.000000		

Source: Output Eviews 10

F-count probability value $0.000000 < 0.05$. Calculated with a 95% confidence level, $\alpha = 0.05$. This means that the three independent variables simultaneously affect the dependent variable. F-count value (17.45478) $>$ F-table (2.66). This shows that the test model is feasible to be used in this study.

Coefficient of Determination

R-squared value 0.824993. it means that the independent variable is able to explain the dependent variable by 82.49% and the remaining 17.51% is influenced by other factors. While the Adjusted R-squared value is 0.365631, which means that the dependent variable, namely economic growth, can be explained by the independent variables, namely the provincial minimum wage, investment, and the labor force participation rate of 77.77%, while the remaining 22.23% is influenced by other factors outside the model.

DISCUSSION

Provincial Minimum Wage on Economic Growth in Central Java

The results of hypothesis testing using the panel data method between the provincial minimum wage on economic growth in Central Java shown in Table 4.7 have a positive effect.



Based on the results of the t test, it produces a t count of 7.978710 which is greater than the t-table of 1.65381 and has a probability value of 0.0000 which is smaller than the alpha significant level which is determined at 0.05, which means that the provincial minimum wage has a significant effect on economic growth in Central Java, it is acceptable, because statistically proven. A positive value in t-count means that the influence of the provincial minimum wage on economic growth is unidirectional, meaning that if the provincial minimum wage increases, then economic growth will increase.

The provincial minimum wage has an important role in economic growth. The results of this study are supported by the efficiency-wage theory where minimum wage workers can increase income which will make workers more nutritious and healthier so as to increase productivity at work Agusalim (2020). For producers, the minimum wage will provide a disincentive to continue producing by reducing labor turnover. By paying higher wages, companies can motivate more workers to be more productive, so companies can operate more efficiently. Sumarsono (2003) said that changes in the wage level of course also affect economic growth in an area. This is because if the wage level in an area increases, the consumption level of the population will also increase. Conversely, if the wage level in an area is low, the consumption level of the population will also be low. If the consumption of the population is low, it will certainly affect the economic growth in the area.

This research is in line with the research of Umayanti & Utama (2020) which says that the minimum wage has a positive and significant effect on economic growth and an increase in the minimum wage will increase economic growth. In addition, it is also supported by research by Wijaya & Soelistianingsih (2014) which states that the minimum wage is able to increase economic growth, as a result of the minimum wage being able to encourage increased consumption and demand for goods and services.

Investment in Economic Growth in Central Java

The results of hypothesis testing using the panel data method between investment and economic growth in Central Java shown in Table 4.7 have a positive effect. Based on the results of the t test, it produces a t count of 2.814588 which is greater than t-table of 1.65381 and has a probability value of 0.0056 which is smaller than the alpha significant level determined of 0.05, which means that investment has a significant effect on economic growth in Central Java, it is acceptable, because statistically proven. A positive value on t-count means that the effect of investment on economic growth is unidirectional, meaning that if investment increases, economic growth will increase.

Investment partially has a positive effect on economic growth in Central Java. The benefits of investment, both Domestic Investment (PMDN) and Foreign Investment (PMA) will increase economic growth. The greater the income saved, the investment also increases, this indicates an increase in investment or capital formation. An increase in investment or capital formation has an impact on increasing the production of goods and services in the economy. This increase in the production of goods and services leads to an increase in economic growth. On the other hand, if there is a decrease in investment, economic growth will also decrease because a decrease in investment indicates a decline in investment or capital formation. A decrease in investment or capital formation will result in a decrease in the production of



goods and services. A decrease in the production of goods and services will cause a decrease in economic growth.

The results of this study are supported by the theory of the neo-classical economic growth model which states that an increase in investment in an area is positively related to economic growth because investment or the availability of capital can change and this change leads to economic growth. This research is in line with research by Pambudy & Syairozi (2019) and Sudirman & Alhudhori (2018) which states that investment has a significant effect with a positive relationship on economic growth, because investment activities affect economic activities and employment opportunities so as to increase national income which in turn improves people's welfare. .

Labor Force Participation Rate on Economic Growth in Central Java

The results of hypothesis testing using the panel data method between the level of labor force participation on economic growth in Central Java shown in Table 4.7 have a positive effect. Based on the results of the t-test, the t-count is 0.030581 which is smaller than the t-table of 1.65381 and has a probability value of 0.9756, which is greater than the alpha significant level determined at 0.05, which means that the labor force participation rate has no significant effect on economic growth in Central Java. A positive value on t-count means that the influence of the labor force participation rate on economic growth is in the same direction, meaning that if the labor force participation rate increases, it will increase economic growth.

Active labor is absolutely necessary in the development activities of a region, because labor is the driving force and implementer of the economic development. Quality human resources and the desire to do business are the main capital for the creation of active development of the economy. The more active workers who participate in economic activities, the more productive people will be, it will produce high output so that it affects economic growth. Likewise for per capita income, an increase in active workers who work means an increase in per capita income and consumption levels. The higher the level of need for consumption, so that either directly or indirectly, it affects economic growth.

The results of this study are supported by the Solow-Swan theory, that economic growth depends on and increases the supply of production factors such as: population, labor, and capital accumulation, as well as coupled with the level of technological progress (Arsyad, 2010). Meanwhile, Todaro (2000) revealed that population growth and the growth of the Labor Force (AK) are traditionally one of the factors that can have a positive impact on economic growth, because a larger number of workers will increase the level of production. This research is in line with research conducted by Puspasari (2019) and Mirah (2020) which state that the participation rate of a certain educated workforce has a significant influence both in the long term and in the short term. And also this research is in line with research conducted by Prawira (2017) that the active participation of the whole community which is the level of labor force participation can increase regional economic growth.

CONCLUSION

Based on the results of research conducted by researchers regarding the effect of the provincial minimum wage, investment and labor force participation on economic growth in



Central Java in 2015 – 2019. Produced several conclusions based on the results of tests conducted using the t test, it can be concluded that partially:

1. The minimum wage has a positive and significant effect on economic growth in Central Java.
2. Investment has a positive and significant impact on economic growth in Central Java.
3. The labor force participation rate has a positive but not significant effect on economic growth in Central Java.
4. Simultaneously the provincial minimum wage, investment and labor force participation rate have a positive and significant impact on economic growth in Central Java.

From these results it can be said that economic growth is strongly influenced by the variables of the provincial minimum wage, investment and labor force participation.

BIBLIOGRAPHY

- Agusalim, L. (2020). *Upah dan Produktivitas Tenaga Kerja: Studi Empiris di Indonesia* (pp. 1–19).
- Arsyad, L. (2010). *Ekonomi Pembangunan*. Yogyakarta: UPP STIM YKPN.
- Asyhadie, Z., & Kusuma, R. (2019). *Hukum Ketenagakerjaan Dalam teori dan Praktik di Indonesia*. Jakarta : Prenamedia Group.
- BPS. (2021). *Provinsi Jawa Tengah Dalam Angka 2021*.
- Hasibuan, R. R. A., Kartika, A., Suwito, F. A., & Agustin, L. (2022). Pengaruh Produk Domestik Regional Bruto (PDRB) terhadap Tingkat Kemiskinan Kota Medan. In *Reslaj : Religion Education Social Laa Roiba Journal* (Vol. 4, Issue 3, pp. 683–693). <https://doi.org/10.47467/reslaj.v4i3.887>
- Kementrian Tenaga Kerja. (1999). Peraturan Menteri Tenaga Kerja Republik Indonesia. In *Upah Minimum* (Issue 106, p. 12). <https://ppid.sumbarprov.go.id/home/details/5257-peraturan-menteri-tenaga-kerja-r-i-nomor-per-04-men-1993-tentang-jaminan-kecelakaan-kerja.html>
- Mirah, M. R., Kindangen, P., & Rorong, I. P. F. (2020). Pengaruh Tingkat Partisipasi Angkatan Kerja terhadap Pertumbuhan Ekonomi dan Kemiskinan di Provinsi Sulawesi Utara. In *Pembangunan Ekonomi dan Keuangan Daerah* (Vol. 21, Issue 1, pp. 85–100). <https://doi.org/https://doi.org/10.35794/jpekd.32815.21.1.2020>
- Pambudy, A. P., & Syairozi, M. I. (2019). Analisis Peran Belanja Modal Dan Investasi Swasta Terhadap Pertumbuhan Ekonomi Serta Dampaknya Pada Kesejahteraan Masyarakat. In *Jurnal Ekonomi dan Bisnis* (Vol. 20, Issue 1, p. 26). <https://doi.org/10.30659/ekobis.20.1.26-39>
- Prawira, yodi sunardi, Rimate, V. A., & Siwu, hanly f. D. (2017). Pengaruh Pendapatan Asli Daerah (PAD), Dana Bolaang Mongondow Timur. In *Jurnal Berkala Ilmiah Efisiensi* (Vol. 17, Issue 01, pp. 79–86). <https://doi.org/https://ejournal.unsrat.ac.id/index.php/jbie/article/view/14743>
- Puspasari, S. (2019). Pengaruh Partisipasi Angkatan Kerja Terdidik Terhadap Pertumbuhan Ekonomi di Indonesia: Perspektif Modal Manusia. *Jurnal Ilmu Administrasi: Media Pengembangan Ilmu Dan Praktek Administrasi*, 16(2), 194–209. <https://doi.org/10.31113/jia.v16i2.500>
- Samuelson, P. A., & Nordhaus, W. D. (2004). *Ilmu Makroekonomi*. Jakarta : PT Media Global Edukasi.



- Sholeh, M. (2007). Permintaan dan Penawaran tenaga Kerja Serta Upah : Teori Serta Beberapa Potretnya di Indonesia. In *Jurnal Ekonomi & Pendidikan* (Vol. 4, Issue 1, pp. 76–88). <https://media.neliti.com/media/publications/17245-ID-upaya-pengembangan-profesionalisme-guru-di-indonesia.pdf>
- Sudirman, S., & Alhudhori, M. (2018). Pengaruh Konsumsi Rumah Tangga, Investasi Terhadap Pertumbuhan Ekonomi Di Provinsi Jambi. In *EKONOMIS : Journal of Economics and Business* (Vol. 2, Issue 1, p. 81). <https://doi.org/10.33087/ekonomis.v2i1.33>
- Sugiyono. (2016). *Metode Penelitian Kuantitatif, Kualitatif, dan R & D*. Bandung : Alfabeta.
- Sukirno, S. (2004). *Pengantar Teori Makro Ekonomi, Edisi Ketiga*. Jakarta : PT Raja Grafindo Persada.
- Sulistiawati, R. (2012). Pengaruh Upah Minimum Terhadap Penyerapan Tenaga Kerja dan Kesejahteraan Masyarakat di Provinsi di Indonesia. In *Jurnal Eksos* (Vol. 8, pp. 195–211).
- Sumarsono, S. (2003). *Ekonomi Manajemen Sumber Daya Manusia dan Ketenagakerjaan*. Yogyakarta : Graha Ilmu.
- Syafitri, A., & Ariusni, A. (2019). Pengaruh Kinerja Keuangan Daerah, Tingkat Partisipasi Angkatan Kerja, Dan Inflasi Terhadap Pertumbuhan Ekonomi Di Sumatera Barat. In *Jurnal Kajian Ekonomi dan Pembangunan* (Vol. 1, Issue 2, p. 351). <https://doi.org/10.24036/jkep.v1i2.6177>
- Tambunan, T. T. . (2014). *Perekonomian Indonesia*. Bogor : Ghalia Indonesia.
- Tarigan, R. (2012). *Ekonomi Regional Teori dan Aplikasi*. Jakarta : Bumi Aksara.
- Today, P. M. (2000). *Pembangunan Ekonomi di Dunia Ketiga, Edisi Keenam Jilid 1*. Jakarta : Erlangga.
- Umayanti, N. L. M. S. A., & Utama, M. S. (2020). Pengaruh Tenaga Kerja, Tingkat Upah dan Penanaman Modal terhadap PDRB Provinsi Bali. In *E-Jurnal EP Unud* (Vol. 9, Issue 1, pp. 291–319).
- Wijaya, A. H., & Soelistianingsih, L. (2014). Implikasi Upah Minimum Provinsi Terhadap Produk Domestik Regional Bruto. In *Jurnal Ekonomi*. <http://lib.ui.ac.id/detail.jsp?id=20386493>
- Yuliani, I. (2019). *Pengaruh Belanja dan Investasi Terhadap Kemandirian dan Pertumbuhan Ekonomi Daerah*. Ponorogo: Uwais Inspirasi Indonesia.