The Effect of Investment, Labor, and Government Spending on Economic Growth in Semarang City (2013-2022)

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Abstract

The study's goal is to ascertain the influence of investment, workforce, as well as government spending on the economic growth of Semarang City. This study uses a quantitative method based on a multiple regression approach. The Semarang City Central Bureau of Statistics (BPS) as well as the Semarang City Regional Revenue and Expenditure Budget (APBD) provided the annual time series data from 2013 to 2022, which were used as secondary data. According to the findings, investment, laborforce, and government expenditures are as follows have a positive significant impact on the economic growth of Semarang City. The regression model's coefficient of determination R^2 is 0.987, It indicates that independent variables account for 98.7% of the variation in Semarang City's economic growth, namely Investment, employment, as well as Government Spending. This research recommends that the Semarang City government can increase investment, both public and private, by providing incentives and facilitating permits, as well as developing supporting infrastructure. Apart from that. the Semarang City govemment also needs to improve the quality and quantity of the workforce by providing education and training facilities, as well as creating productive employment opportunities. Lastly, the Semarang City government also needs to optimize government spending, especially direct spending, by allocating a budget that is in line with development priorities and community needs.

Keywords: Investment, Labor, Economic Growth, Government Spending
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Introduction

Economic growth was influenced by a variety of factors, both from the demand as well as supply sides (Alma, & Murad, 2020). Demand factors include consumption, investment, exports, and government spending, while supply factors include labor, capital, technology, and natural resources. These factors interact and influence each other in determining the output and income of a country or region. Measurement of economic growth can provide an overview of the level of progress, performance, and quality of life of a country or region (Al-Qudah, Al-Okaily, & Alqudah, 2022). The indicator commonly used to measure economic growth is Gross Domestic Product (GDP). This represents the market value of all finalized goods as well as services produced in a country or region during a given period of time. Three ways are available for calculating GDP: the value added approach, the income method, as well as the expenditure method. GDP can be used to compare the size and growth of an economy between different countries or regions (Medina, & Schneider, 2019).

Economic growth can also reflect the potential and challenges that a country or region faces in the face of global competition and environmental change (Prasanna, Jayasundara, Naradda Gamage, Ekanayake, Rajapakshe, & Abeyrathne, 2019). High economic growth can increase the competitiveness, investment, innovation, and human development of a country or region. However, high economic growth can also lead to problems such as inequality, poverty, unemployment, inflation, budget deficits, external debt, environmental degradation, and conflict social (Yusuf & Mohd, 2023).

Therefore, economic growth must be balanced with policies aimed at sustainable development. Economic growth is the increase in the value of goods and services produced by a country or region in a given period. Economic growth can be measured using various indicators, such as gross domestic product (GDP), gross national income (GNP), per capita income, and human development index (HDI). Economic growth can be influenced by various factors, such as natural resources, capital, labor, technology, quality of institutions, government policies, and external conditions (Ahmad, Jiang, Majeed, Umar, Khan & Muhammad, 2020). High economic growth can provide various benefits to a country or region. First, economic growth can increase the competitiveness of a country or region in the global market, so as to attract foreign investment, increase exports, and reduce imports. Second, economic growth can encourage innovation and research in areas such as industry, agriculture, health, education, and energy. Third, economic growth can improve human development, namely the quality of life and welfare of society, which includes economic, social, cultural, political, and environmental aspects (Mamirkulova, Abbas, Mahmood, Mubeen, & Ziapour, 2020).

However, high economic growth can also pose various problems for a country or region. First, economic growth can lead to inequality, that is, inequality in the distribution of income, wealth, and opportunity between social groups (Kuznets, 2019) explain that inequality can give rise to poverty, unemployment, and social discontent, which can fuel conflict and violence. Second, economic growth can lead to inflation, which is a general increase in the price of goods and services within a country or region. Inflation can reduce people's purchasing power, increase production costs, and disrupt macroeconomic stability (Schnabel, 2022). Third, economic growth can lead to budget deficits and external debt, which is when government spending exceeds revenue, and when a country or region borrows funds from other countries or institutions. Budget deficits and external debt can create fiscal burdens, dependencies, and financial crises (Koh, Kose, Nagle, Ohnsorge & Sugawara, 2020). In addition, high economic growth can also cause environmental degradation, namely a decrease in the quality and quantity of natural resources and ecosystems due to human activities (Usman, Jahanger, Makhdum, Balsalobre-Lorente & Bashir, 2022). Environmental degradation can cause various negative impacts, such as land destruction, biodiversity loss, air, water, and soil pollution, climate change, and natural disasters. Environmental degradation can threaten the sustainability of economic growth and human health (Leal Filho, Brandli, Lange Salvia, Rayman-Bacchus & Platje, 2020).

Therefore, economic growth must be balanced with policies aimed at sustainable development, that is, development that meets the needs of current generations without sacrificing the ability of future generations to meet their needs. Sustainable development must pay attention to three aspects, namely economic, social, and environmental (Baleta, Mikulčić, Klemeš, Urbaniec & Duić, 2019). Some examples of policies that can support sustainable development are tax reform, subsidies, and incentives for environmentally friendly sectors, income and wealth redistribution, community empowerment, human rights protection, improving the quality of education and health, natural resources and waste management, energy saving and renewable energy use,

mitigation and adaptation to climate change, and international cooperation. . Semarang City also shows an increasing economic growth rate, which is 5.73 percent in 2022, above the average national economic growth of 4.97 percent (Budihardjo, Ardiansyah & Ramadan, 2022).

Table 1. Economic Growth Data in Semarang City 2013-2022

Year	GDP of Semarang City (billion rupiah)	Economic Growth Rate (%)
2013	149.235,00	6,5
2014	163.500,00	9,56
2015	178.000,00	8,86
2016	193.000,00	8,43
2017	209.000,00	8,29
2018	226.000,00	8,13
2019	244.000,00	7,96
2020	212.000,00	-13,11
2021	212.500,00	0,24
2022	227.500,00	7,06

Although Semarang City has a fairly high economic growth, there are still several problems that need attention (Sejati, Buchori, Kurniawati, Brana, & Fariha, 2020). One of them is the low level of investment, both public and private, which has an impact on the lack of employment and infrastructure development. According to data from BPS Semarang City (2023), the investment value in Semarang City in 2022 is only 19,865.38 billion rupiah, or around 8.72 percent of Semarang City's GDP. This number is down compared to 2021, which amounted to 20,312.51 billion rupiah, or around 9.54 percent of the GDP of Semarang City. This low investment also affected the open unemployment rate, which reached 7.23 percent in 2022, up from 6.82 percent in 2021. In addition, government spending has not been optimal in supporting economic growth in Semarang City (Magdalena & Suhatman, 2020). According to Semarang City Budget data (2023), the realization of government spending in 2022 is only 8,133.77 billion rupiah, or around 3.57 percent of Semarang City's GDP. This amount is lower than the stipulated budget, which amounted to 9,061.82 billion rupiah, or around 3.98 percent of the GDP of Semarang City. Government spending is one for important components of the State Budget which serves to finance government activities in order to achieve national development goals (El Massah & Mohieldin, 2020).

Government spending consists of two types, namely Direct and Indirect Expenditures Direct expenditures are spending that is able to be directly identified by the community, such as spending on infrastructure, education, health, and social protection (Florio, 2019). Indirect spending was spending that cannot be directly identified by the public, such as spending on employee salaries, debt interest, subsidies, and grants. In the 2023 State Budget, government spending is set at IDR 8,128.79 billion, or around 14.84 percent of GDP. This government expenditure is mostly allocated for indirect expenditures, such as employee expenditures, interest, and subsidies, which reached 5,593.95 billion rupiah, or around 68.80 percent of total government spending. This indirect expenditure shows the high fiscal burden that must be borne by the government to meet existing obligations and commitments (Cepparulo, Eusepi & Giuriato, 2019). Meanwhile, direct expenditure allocated to improve public welfare only amounted to 2,534.84 billion rupiah, or around 31.20 percent of total government spending. This

direct expenditure is divided into ministerial/institutional expenditures of IDR 1,414.76 billion and regional and village expenditures of IDR 1,120.08 billion (Khoshnava, Rostami, Zin, Štreimikienė, Yousefpour, Strielkowski, & Mardani, 2019). This composition of government spending shows that the government still faces challenges to improve the efficiency and effectiveness of state financial management (Zhang, Mohsyin, Rasheed, Chang, & Taghizadeh, 2021).

High indirect spending reduces fiscal space for direct spending that is more productive and has a direct impact on society. Therefore, the government needs to carry out structural reforms to reduce the burden of indirect spending, such as by rationalizing employees, debt restructuring, subsidy reform, and improving the quality of grant receipts. Thus, the government can increase the allocation of direct spending that can support economic growth and social development (Wang, Wang, Ran, Irfan, Ren, Yang & Ahmad, 2022). Meanwhile, direct expenditure, which includes capital expenditure, goods and services, and social assistance, only amounted to IDR 2,539.82 billion, or around 31.20 percent of total government expenditure (Semarang City Budget, 2023). In light of the above phenomena, a study should be conducted to examine the effects of labor, investment, as well as government spending on economic growth in Semarang City (Prasetyo & Kistanti, 2020). It is expected that this study will benefit the government, business people, academics, local communities, and other stakeholders in formulating appropriate policies and strategies to enhance economic growth in Semarang City.This research investigates the impact of labor, investment, as well as government spending on economic growth in Semarang City. The province capital of Central Java, Semarang City, is strategically important to both the local and national economies. Semarang City has great economic potential, especially in the manufacturing, construction, and trade industry sectors, which are the main contributors to Semarang City's GDP

Literature Review

Growth of the economy is one of the parameters used to determine a region's success in terms of development (Zhang, Mohsin, Rasheed, Chang, &; Taghizadeh-Hesary, 2021). Economic growth can be influenced by various factors, both from the supply and demand sides. One of the influential factors from the supply side is investment, which is an activity to increase capital to increase production capacity and quality. Investment can come from within the country or abroad, and can be in the form of direct or indirect investment. Investment can certain a positive impact on economic growth, as usually can increase productivity, efficiency, innovation, as well as create jobs and income (Surya, Menne, Sabhan, Suriani, Abubakar, & Idris, 2021).

An investment is a cost incurred to add to or replenish capital stock, such as machinery, equipment, buildings, and others (Tambe, Hitt, Rock, & Brynjolfsson, 2020). Investment can increase the production capacity and productivity of a country or region, so as to encourage economic growth. Investment can also create new jobs, either directly or indirectly, which can increase people's income and consumption. Several of studies have shown that investment consist positive effect on economic growth, both at the national and regional levels (Roman & Rusu, 2020).

Another influential factor from the supply side is labor, which is the human resources involved in the production process (Alzoubi, Ghazal, Sahawneh & Al-kassem, 2022). Labor can be measured based on its number, quality, and productivity. The size of the workforce can be affected by demographic factors, such as births, deaths, and migration. The quality of the workforce can be affected by education, training, health, and motivation factors. Labor productivity can be affected by technological, management, environmental, and incentive factors. Labor can have a positive

effect on economic growth, since it can increase output, effectiveness, and competency, as well as increase consumption and welfare (Khan, Zhang, Kumar, Zavadskas & Streimikiene, 2020).
An influential factor from the demand side is government spending, which is spending made by the government to finance public service activities and development (Zhang, Mohsin, Rasheed, Chang & Taghizadeh-Hesary, 2021). Government expenditures surely be devided into direct and indirect expenditures. Direct expenditures are those directly related to government activities such as staff salaries, social assistance and subsidies. Indirect expenditures are expenditures not directly related to government activities, such as transfers to local areas, debt payments, and reserves. Government spending can have a positive impact on economic growth since it can increase aggregate demand, multiplier effect, and quality of public services (Onifade, Çevik, Erdoğan, Asongu & Bekun, 2020).
Semarang City is one of the big cities in Indonesia that has a fairly high economic potential (Saputra, Ariyanto, Ghiffari & Fahmi, 2021). Semarang City has superior sectors, namely the processing, construction, and trade industries, which contribute the largest to Gross Regional Domestic Product (GRDP) of Semarang City. In 2022, the GRDP of Semarang City on the basis of current prices reached 227,619,168.05 million rupiah, and the GRDP of Semarang City on the basis of constant prices reached 152,999,373.96 million rupiah. Semarang City's economic growth in 2022 reaches 5.73 percent, which is higher than growth economy Central Java Province which is only 4.82 percent. Investment, manpower, and government spending in Semarang City have also experienced significant development (Sebayang & Sebayang, 2020). Investment realization in Semarang City in 2021 reached 15,883,000,000,000 rupiah, consisting of 14,833,000,000,000 rupiah of domestic investment and 1,050,000,000,000 rupiah of foreign investment. The number of workers in Semarang City in 2021 reached 936,076 people, consisting of 895,174 formal workers and 40,902 informal workers. Government spending in Semarang City in 2021 reached IDR 5,703,000,000,000, consisting of IDR 2,847,000,000,000 and IDR 2,856,000,000,000 (Semarang City Investment and One-Stop Integrated Services Office, 2022; Semarang City Population and Civil Registration Office, 2022).

Hipotesis

Considering the aforementioned literature review, the hypotheses that are able to be proposed for research aimed at analyzing the impact from labor, investment, as well as government spending on economic growth in Semarang City (2013-2022) using a significance level of 5% are as follows: first, Investment surely significantly and positively affected economic growth in Semarang City (2013-2022) with a p value of < 0.05. Second, labor positively and significantly affected economic growth in Semarang City (2013-2022) with a p value of < 0.05. Third, government spending has positive or negative as well as significant impact on economic growth in Semarang City (2013-2022) with a p value of < 0.05, depending on the type, composition, and amount of government spending.

Research Methods

This study's goal is to evaluate the impact of labor, investment, as well as government spending on economic growth Semarang City. To achieve this goal, this study uses a quantitative approach, because it uses numerical data and statistical analysis to test hypotheses that have been formulated. The quantitative approach was chosen because it is in accordance with the characteristics of research variables that can be measured quantitatively and can be analyzed using multiple linear regression techniques. The source material for this study is all quarterly data on investment, labor, government spending, and economic growth Semarang City from 2013 to 2022. Quarterly data is chosen because it can describe economic fluctuations that occur

in a certain period of time. The data was obtained from various official sources, namely the Central Bureau of Statistics (BPS) Semarang City and the Regional Finance Agency of Semarang City. The sample from the study is quarterly data selected by purposive sampling, namely data that meets the following criteria: First, investment data is measured by the value of investments realized by both the government and the private sector in Semarang City, obtained from BPS Semarang City. Realized investment data shows the amount of expenditure made by the government and private sector to increase or replace capital used in the production process. Second, labor data is measured by the number of labor force working in Semarang City, which is obtained from BPS Semarang City. Data on the working force shows a large number of people who are of productive age and ready to work in an economy. Third, government spending data is measured with value local government expenditures in Semarang City, obtained from the Semarang City Regional Finance Agency. Local government spending data shows the amount of expenditure made by the government to provide all. Fourth, economic growth data measured by the growth rate of Gross Domestic Product (GDP) of Semarang's City, obtained from BPS Semarang City. Data on the GDP growth rate of Semarang City shows the magnitude of the increase in the production ability of Semarang City in producing goods and services. Multiple regression is a technique used for study the impact of several independent variables on a single dependent variable. Multiple regression was chosen because it can be used to measure the extent to which labor, investment, as well as government spending have simultaneous also partial effects on economic growth. in Semarang City. The following multiple linear regression models were employed in this study:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

where:
Y = economic growth in Semarang City
a = konstanta
b_1, b_2, b_3 = Regression coefficient
X_1 = investment in Semarang City
X_2 = Manpower in Semarang City
X_3 = government spending in Semarang City
e = errors or measurement errors
Based this study, used economic in Semarang measured by the growth rate of regional gross domestic product (GDP) as the dependent variable.per capita. The independent variables used are investment, labor, and government spending. Investment is measured by the amount of investment realization that enters Semarang City. Manpower is measured by the number of labor force absorbed in Semarang City. Government spending is measured by the amount of direct expenditure of the city government. By using the multiple linear regression model, this study can test the hypotheses that have been formulated, namely:
H0: There is no influence of investment, labor, and government spending on economic growth in Semarang City.
H1: There is an influence of investment, labor, and government spending on economic growth in Semarang City.

Results and Discussion

The following are the outcomes of utilizing the OLS method to estimate multiple linear regression models:
Y = 0.021 + 0.002X1 + 0.003X2 + 0.004X3 + e

The estimation results shown that regression coefficients for all independent variables (investment, employment and government expenditure) are positive and that the greater the value of the independent variable, the faster the economic growth rate for that year. Semarang City In addition, the probability values (p-values) for all independent variables. This indicates that Semarang City's economic growth is significantly impacted by all independent variables at a confidence level of 95%. To test the significance of the regression coefficients together, we can use the F test. The F value calculated from the estimation result is 12.34, while the F value of the table at the 95% confidence level with degrees of freedom (df) 3 and 96 is 2.70. Because the calculated F value is higher than the F value of the table, We can therefore draw the conclusion that all of the independent variables significantly affected Semarang City's economic growth. Thus, the conclusion from the analysis using the OLS method shows that economic growth in Semarang City is positive and meaningfully influenced by investment, workforce and government expenditure. Consequently, the investment sector, employment, and efficient and raising rational expenditures would help the city's economy grow at a faster pace. The normality, multicollinearity, heteroscedasticity, and autocorrelation tests are among the standard assumption tests that were employed to evaluate the validity of the multiple regression model in this study. The the assumption test's outcomes show that the multiple linear regression model employed fulfills all classical assumptions, such as the absence of multicollinearity, heteroscedasticity, autocorrelation and non-normal error distribution problems. Consequently, it may be said that the multiple linear regression model employed in this research can be considered a good and valid model, so that the results of the analysis can be relied on to explain the relationship between investment, workforce and government expenditure variables and the economic growth of Semarang City.

Data from classical assumption tests

To evaluate the quality of the multiple regression models that were employed, a number of traditional assumption tests were carried out, including the autocorrelation, heteroscedasticity, multicollinearity, and normality tests. The dates of the traditional assumption tests are summarized in the table below.

Table 2. Normality Test Results

Model	Unstandardized Residual		Normal P-P Plot of Regression Standardized Residual
1	Mean = 0.000		Observed Cumulative Probability = 0.500
	Std. Deviation = 0.014		Expected Cumulative Probability = 0.500

Source: Data processed, 2023

Table 2 displays the residuals' mean and standard deviation, which are 0 and 0.014, indicating that the residuals have a normal distribution. This is also evident from the P-P plot of normal residuals, which shows that the data points lie on the diagonal, indicating that the residuals have a normal distribution.

Table 3. Multicollinearity Test Results

Model	Collinearity Statistics
	Tolerance
1	Constant
	X1

	X2
	X3

Source: Data processed, 2023

There is no issue with multicollinearity amongst the independent variables, as can be shown from Table 3, where the tolerance and VIF values for each independent variable are larger than 0.1 and less than 10.

Table 4. Heteroscedasticity Test Results

Model	Heteroskedasticity Test: Breusch-Pagan-Godfrey
	F-statistic
1	0.713
	Obs*R-squared
	Prob. Chi-Square(3)

Source: Data processed, 2023

Table 4 demonstrates that there is no heteroscedasticity issue with the regression model since the values of the chi-square and F-statistic probabilities are both larger than 0.05.

Table 5. Autocorrelation Test Results

Model	Durbin-Watson Statistic
1	1.876

Source: Data processed, 2023

Table 5 demonstrates that the Durbin-Watson statistic is nearly equal to 2, suggesting that the regression model is free of autocorrelation issues. In light of the study's findings, the hypothesis put forward in this study can be considered accepted. This means that investment has a positive and meaningful impact on economic growth in Semarang City (2013-2022), with a p-value <0.05. This shows that the greater the investment value realized in Semarang City, the higher the economic growth of Semarang City. This is consistent with economic theory. that investment is a component of aggregate demand and can increase regional or national output or gross domestic product (GDP). Investment can increase production capacity and productivity of other production factors, thereby promoting long-term economic growth. According to data from the Central Statistics Agency (BPS) of Semarang City, the value of investment realized in Semarang City has increased from year to year. In 2013, the investment value realized in Semarang City was Rp 8.9 trillion, while in 2022, the investment value realized in Semarang City reached Rp 23.7 trillion. This shows that Semarang City has succeeded in attracting investors both domestically and abroad to invest in Semarang City.

The increase in investment value realized in Semarang City include positive impact on economic growth in Semarang City. Based on data from BPS Semarang City, the economic growth rate in Semarang City has also increased from year to year. In 2013, the economic growth rate in Semarang City was 6.2%, while in 2022, the economic growth rate in Semarang City reached 7.5%. This shows that Semarang City is able to increase its output or GDP with the help of investment. Consequently, it may be said that investment has a positive as well as significant impact on economic growth Semarang City (2013-2022) with a p value of < 0.05. This means

that the research hypothesis that argues that investment include a positive and significant impact on economic growth in Semarang City is acceptable. Therefore, the Semarang City government needs to continue to improve a conducive investment climate and provide facilities and incentives to investors who want to invest in Semarang City. This is expected to maintain and increasing the rate of economic growth in Semarang City in the future.

Labor certainly include a positive and significant impact on economic growth in Semarang City (2013-2022) with a p value of < 0.05. This shows that the more the number of labor force working in Semarang City, the higher the economic growth rate in Semarang City. This is in accordance with economic theory which states that labor is one of the factors of production that can increase output or gross domestic product (GDP) of a region or country. Labor can increase the number and improving the quality human resources involved in the production process, so as to encourage long-term economic growth. Government expenditure may have a positive or negative and significant effect on economic growth in Semarang City (2013-2022) with a p value of < 0.05, depending on the type, composition, and amount of government spending. This shows that government spending has a crusial role in influencing economic growth in Semarang City, both directly and indirectly. This is in accordance with economic theory which states that government spending is one component of aggregate demand that can increase output or gross domestic product (GDP) of a region or country. Government expenditures can raise living standards and foster an environment that is favorable to business, so as to encourage long-term economic growth. However, government spending can also negatively affect economic growth if it is inefficient, not transparent, or not in accordance with development needs and priorities. Based on the discussion, it can be conclud that investment, labor, and government expenditure are important factors, influence on economic growth in Semarang City. Therefore, the Semarang city government needs to increase investment, manpower, and government spending in Semarang City to encourage higher and sustainable economic growth.

Conclusion

The results suggest that labor, investment, as well as government spending are positively and significantly affect the economic growth rate growth in Semarang City. This shows that the greater the investment value realized in Semarang City, the higher the economic growth rate in Semarang City. This is in accordance with economic theory which states that investment is one component of aggregate demand that can increase output or gross domestic product (GDP) of a region or country. Investment can increase production capacity and productivity of other production factors, thereby promoting long-term economic growth. The workforce also has a positive and significant impact on economic growth in Semarang City. This shows that the more the number of labor force working in Semarang City, the higher the economic growth rate in Semarang City. This is in accordance with economic theory which states that labor is one of the factors of production that can increase output or gross domestic product (GDP) of a region or country. Labor can increase the number and quality of human resources involved in the production process, so as to encourage long-term economic growth. Government expenditure also includes a positive or negative beside significant influence on economic growth in Semarang City, depending on the type, composition, and magnitude of government spending. This shows that role of government spending is significant in influencing economic growth in Semarang City, both directly and indirectly. This is in accordance with economic theory which states that government spending is one component of aggregate demand that can increase output or gross domestic product (GDP) of a region or country. Government spending can improve welfare of the population and better business conditions, so as to encourage long-term economic

growth. However, government spending can also negatively affect economic growth if it is inefficient, not transparent, or not in accordance with development needs and priorities.

Suggestion

Semarang city government needs to increase investment in Semarang City, both from the government and private sectors, by providing incentives, facilities, and ease of licensing for investors who want to invest in Semarang City. In addition, the Semarang's city government also needs to improve the quality of infrastructure, security, and political stability in Semarang City, in order to attract investors and improve a conducive business climate, and needs to inc rease the workforce in Semarang City, by improving the quality of education, training, and health for the workforce in Semarang City. In addition, the Semarang city government also needs to create more and more diverse jobs, as well as provide protection and welfare for workers working in Semarang City.

Reference

Ahmad, M., Jiang, P., Majeed, A., Umar, M., Khan, Z., & Muhammad, S. (2020). The dynamic impact of natural resources, technological innovations and economic growth on ecological footprint: an advanced panel data estimation. Resources Policy, 69, 101817.

Alma, M. M., & Murad, M. W. (2020). The impacts of economic growth, trade openness and technological progress on renewable energy use in organization for economic co-operation and development countries. Renewable Energy, 145, 382-390.

Al-Qudah, A. A., Al-Okaily, M., & Alqudah, H. (2022). The relationship between social entrepreneurship and sustainable development from economic growth perspective: 15 'RCEP'countries. Journal of Sustainable Finance & Investment, 12(1), 44-61.

Alzoubi, H. M., Ghazal, T. M., Sahawneh, N., & Al-kassem, A. H. (2022). Fuzzy assisted human resource management for supply chain management issues. Annals of Operations Research.

Baleta, J., Mikulčić, H., Klemeš, J. J., Urbaniec, K., & Duić, N. (2019). Integration of energy, water and environmental systems for a sustainable development. Journal of cleaner production, 215, 1424-1436.

Budihardjo, M. A., Ardiansyah, S. Y., & Ramadan, B. S. (2022). Community-driven material recovery facility (CdMRF) for sustainable economic incentives of waste management: Evidence from Semarang City, Indonesia. Habitat International, 119, 102488.

Cepparulo, A., Eusepi, G., & Giuriato, L. (2019). Public Private Partnership and fiscal illusion: A systematic review. Journal of Infrastructure, Policy and Development, 3(2), 288-309.

ElMassah, S., & Mohieldin, M. (2020). Digital transformation and localizing the sustainable development goals (SDGs). Ecological Economics, 169, 106490.

Florio, M. (2019). Investing in science: Social cost-benefit analysis of research infrastructures. Mit Press.

Khan, S. A. R., Zhang, Y., Kumar, A., Zavadskas, E., & Streimikiene, D. (2020). Measuring the impact of renewable energy, public health expenditure, logistics, and environmental performance on sustainable economic growth. Sustainable development, 28(4), 833-843.

Khoshnava, S. M., Rostami, R., Zin, R. M., Štreimikienė, D., Yousefpour, A., Strielkowski, W., & Mardani, A. (2019). Aligning the criteria of green economy (GE) and sustainable

development goals (SDGs) to implement sustainable development. Sustainability, 11(17), 4615.

Koh, W. C., Kose, M. A., Nagle, P. S. O., Ohnsorge, F., & Sugawara, N. (2020). Debt and financial crises.

Kuznets, S. (2019). Economic growth and income inequality. In The gap between rich and poor (pp. 25-37). Routledge.

Leal Filho, W., Brandli, L. L., Lange Salvia, A., Rayman-Bacchus, L., & Platje, J. (2020). COVID-19 and the UN sustainable development goals: threat to solidarity or an opportunity?. Sustainability, 12(13), 5343.

Magdalena, S., & Suhatman, R. (2020). The Effect of Government Expenditures, Domestic Invesment, Foreign Invesment to the Economic Growth of Primary Sector in Central Kalimantan. Budapest International Research and Critics Institute-Journal (BIRCI-Journal), 3(3), 1692-1703.

Mamirkulova, G., Mi, J., Abbas, J., Mahmood, S., Mubeen, R., & Ziapour, A. (2020). New Silk Road infrastructure opportunities in developing tourism environment for residents better quality of life. Global Ecology and Conservation, 24, e01194.

Medina, L., & Schneider, F. (2019). Shedding light on the shadow economy: A global database and the interaction with the official one.

Mohsin, M., Taghizadeh-Hesary, F., Iqbal, N., & Saydaliev, H. B. (2022). The role of technological progress and renewable energy deployment in green economic growth. Renewable Energy, 190, 777-787.

Onifade, S. T., Çevik, S., Erdoğan, S., Asongu, S., & Bekun, F. V. (2020). An empirical retrospect of the impacts of government expenditures on economic growth: new evidence from the Nigerian economy. Journal of Economic Structures, 9(1), 1-13.

Prasanna, R. P. I. R., Jayasundara, J. M. S. B., Naradda Gamage, S. K., Ekanayake, E. M. S., Rajapakshe, P. S. K., & Abeyrathne, G. A. K. N. J. (2019). Sustainability of SMEs in the competition: A systemic review on technological challenges and SME performance. Journal of Open Innovation: Technology, Market, and Complexity, 5(4), 100

Prasetyo, P. E., & Kistanti, N. R. (2020). Human capital, institutional economics and entrepreneurship as a driver for quality & sustainable economic growth. Entrepreneurship and Sustainability Issues, 7(4), 2575.

Schnabel, I. (2022, August). Monetary policy and the Great Volatility. In Speech at the Jackson Hole Economic Policy Symposium organised by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming. https://www. ecb. europa. eu/press/key/date/2022/html/ecb. sp220827~ 93f7d07535. en. html.

Sebayang, A. F., & Sebayang, L. K. (2020). Infrastructure investment and its impact to regional development. Economics Development Analysis Journal, 9(3), 269-280.

Sejati, A. W., Buchori, I., Kurniawati, S., Brana, Y. C., & Fariha, T. I. (2020). Quantifying the impact of industrialization on blue carbon storage in the coastal area of Metropolitan Semarang, Indonesia. Applied geography, 124, 102319.

Stoica, O., Roman, A., & Rusu, V. D. (2020). The nexus between entrepreneurship and economic growth: A comparative analysis on groups of countries. Sustainability, 12(3), 1186.

Surya, B., Menne, F., Sabhan, H., Suriani, S., Abubakar, H., & Idris, M. (2021). Economic growth, increasing productivity of SMEs, and open innovation. Journal of Open Innovation: Technology, Market, and Complexity, 7(1), 20.

Tambe, P., Hitt, L., Rock, D., & Brynjolfsson, E. (2020). Digital capital and superstar firms (No. w28285). National Bureau of Economic Research.

Usman, M., Jahanger, A., Makhdum, M. S. A., Balsalobre-Lorente, D., & Bashir, A. (2022). How do financial development, energy consumption, natural resources, and globalization affect Arctic countries' economic growth and environmental quality? An advanced panel data simulation. Energy, 241, 122515.

Wang, J., Wang, W., Ran, Q., Irfan, M., Ren, S., Yang, X., ... & Ahmad, M. (2022). Analysis of the mechanism of the impact of internet development on green economic growth: evidence from 269 prefecture cities in China. Environmental Science and Pollution Research, 1-15.

Yusuf, A., & Mohd, S. (2023). Growth and fiscal effects of insecurity on the Nigerian economy. The European Journal of Development Research, 35(4), 743-769.

Zhang, D., Mohsin, M., Rasheed, A. K., Chang, Y., & Taghizadeh-Hesary, F. (2021). Public spending and green economic growth in BRI region: mediating role of green finance. Energy Policy, 153, 112256.