



Diunggah : 29 Maret 2023

Diterima : 12 April 2023

Dipublikasi : 31 Juli 2023

EXPLORING THE ROLE OF INVESTMENT IN DRIVING ECONOMIC GROWTH: A CASE STUDY OF THE BANGKA BELITUNG ISLANDS

M.Faisal Akbar¹⁾, Hamsani²⁾, Agung Rizki Putra³⁾, M. Afdal Samsuddin⁴⁾, Ayu Wulandari⁵⁾ and Firman Rahmadoni⁶⁾

akbarf755@gmail.com; hamsani@ubb.ac.id; agungrizkiputra@ubb.ac.id;
afdalm7@gmail.com; firmanrahmadoni02@gmail.com

^{1,2,3,4}Bangka Belitung University, ⁵Bappeda dan Litbang Kota Pangkalpinang

Abstract

The economic growth of a region is significantly influenced by various factors, among which investment and consumption are considered pivotal. Despite the considerable focus on these aspects in existing literature, there is a noticeable gap in understanding their impact, particularly in the context of Indonesia's Bangka Belitung Islands. This research aims to fill this gap by empirically investigating the multiplier effect of investment on economic growth in this region. By employing the Random Effect Model (REM) on logarithmically transformed data, the study attempts to offer nuanced insights into the relationship between consumption, investment, labor, and economic growth. The findings and their implications are expected to guide policy decisions and stimulate balanced and inclusive economic growth across Indonesia. The findings diverge from certain previous studies that found no significant relationship between investment and economic growth, particularly in regions outside Java. These discrepancies could be attributed to variations in data sources, temporal spans, and methodologies employed across these studies. Additionally, the research underscores the critical role of infrastructure in regional economic growth, echoing the emphasis found in the extant literature. In conclusion, the study reinforces the importance of Consumption and Investment in driving economic growth in the Bangka Belitung Islands. It further urges policymakers to prioritize balanced investment and infrastructure development, especially in regions beyond Java, to encourage more equitable economic growth across Indonesia.

Keywords: *Economic Growth; Multiplier Effect; Investment; Labor*



INTRODUCTION

Various progress and developments have been achieved and have succeeded in improving the Indonesian economy in general and the Bangka Belitung Islands in particular (Swaramarinda & Indriani, 2021). One indicator of this success can be seen from the average economic growth of the Bangka Belitung Islands which reached 4.13% per year in the study period. The average economic growth figure shows that the development performance of the Bangka Belitung Islands is quite high. This is inseparable from the participation of the community, government, economic actors, and also foreign parties.

The Bangka Belitung Islands is an archipelago located in the eastern part of Sumatra, Indonesia, consisting of two main islands, Bangka and Belitung, as well as numerous smaller islands. The region is known for its abundant natural resources, including tin, silica, and kaolin, which have played a significant role in shaping its economy. The region has also experienced growth in its tourism, agriculture, and fishery sectors in recent years.

Over the past few decades, the Bangka Belitung Islands have experienced steady economic growth, driven by various factors such as the exploitation of its natural resources, the expansion of its tourism industry, and improvements in infrastructure (Smith & Rahmadi, 2019). However, the region still faces challenges in terms of poverty reduction, income inequality, and sustainable development (Valeriani, 2017). It is crucial to examine the role of investment in driving the region's economic growth to address these issues and devise effective policies.

Economic growth refers to the augmentation of a community's economic activities, specifically, the increase in the production of goods and services. One method of assessing a region's economic health is through the Gross Regional Domestic Product (GRDP) (Nujum & Rahman, 2019). To accurately gauge economic growth, we use the constant price-based GRDP, also known as real GDP. This ensures that the growth rate reflects genuine growth resulting from increased production. Achieving equilibrium in an economy is a key objective when striving to enhance a country's economy. This balance can be attained via the interaction of various economic variables.

Chang (2007) and Mosey (2016) conducted comparative studies on tourism development in various countries, utilizing government expenditure as a variable and employing panel cointegration and panel causality analysis. Similarly, research by Manalu (2004), Alfirman et al. (2006), Jiranyakul (2007), and Danawati et al. (2016) employed path analysis to demonstrate the significant impact of tourism development on economic growth. Ardahaey (2011) extended this analysis by including factors such as tourism prices, tourism businesses, and taxes, which also exhibited significant effects.

Margherita (2013) conducted research that not only considered investment and labor variables but also incorporated infrastructure variables, revealing a positive contribution to the economy. Additionally, Ajala (2008) investigated tourism development by focusing on labor and

income generated from the tourism sector. The study concluded that labor and income not only benefitted business owners but also had a substantial multiplier effect on the national economy, positively impacting all regions.

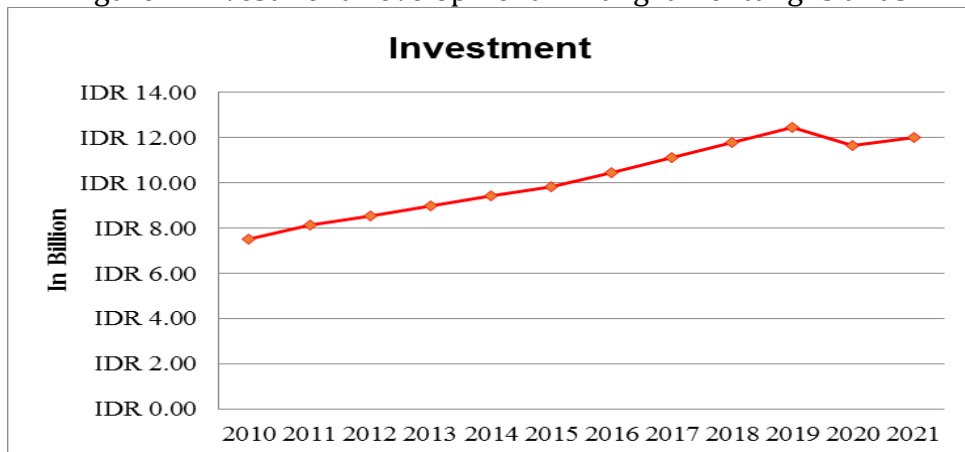
This research aims to explore the role of investment in driving economic growth in the Bangka Belitung Islands and to determine the relative importance of consumption and labor in this process. The findings of this research will contribute to the existing literature on the determinants of economic growth, particularly in the context of the Bangka Belitung Islands. Furthermore, the study will provide valuable insights for policymakers and stakeholders, helping them devise effective strategies to promote sustainable development in the region.

In accordance with data provided by BPS-Statistics Indonesia, the Indonesian economy sustained a positive trajectory in the third quarter of 2021, notwithstanding a deceleration due to the emergence of the highly infectious Delta variant of the coronavirus (Bank Indonesia, 2021). Household consumption is one of the instruments that have an effect on increasing economic growth in a region. When consumption increases, it will automatically increase the demand for goods and services, increased demand will increase the production of goods and services, when production increases, income will increase, labor supply will increase, unemployment will also decrease, which will eventually encourage an increase in the economy and welfare in an area.

In addition to household consumption, investment has a higher output or production value and can further increase people's income. If the accumulation and acceleration of this investment value is realized adequately, it is certain that the regional economy will continue to develop rapidly with a high growth rate (Padli et al., 2020).

Investment, as defined by Sutawijaya (2010), involves the acquisition of capital goods and the enhancement of production processes, with the objective of bolstering the capacity to produce goods and services essential for the economy. Therefore, investment is an important part in an economy because investment has a direct relationship to economic activity in the present and in the future. By investing, it means that production capacity also increases which in turn will increase output and in the end will increase people's income. The following is the development of investment in the Bangka Belitung Islands.

Figure 1. Investment Development in Bangka Belitung Islands



Source: BPS Kep. Bangka Belitung, 2022

From Figure 1 above is the development of investment value in the Bangka Belitung Islands from 2010 to 2021. The investment value has increased every year, until 2020 it has decreased, caused by the covid-19 pandemic that attacks not only the Bangka Belitung Islands but other countries around the world. The highest increase occurred in 2019 of 12.49 billion rupiah and decreased in 2020 to 11.63 billion rupiah due to the covid-19 pandemic, investment in the Bangka Belitung Islands was also affected due to reduced human activities.

This research will focus on the Bangka Belitung Islands, analyzing the relationship between consumption, investment, labor, and economic growth in the region. While the study will provide valuable insights into the role of investment in driving economic growth, it is important to acknowledge that other factors, such as government policies, international trade, and technological advancements, may also influence economic growth. Additionally, the study will primarily rely on secondary data sources, which may have limitations in terms of accuracy and comprehensiveness.

THEORY BASE

Mankiw (2003) posits that in a bi-sectoral economy, the total economic expenditure comprises two integral components: 1) consumption by households, and 2) investment. This relationship can be expressed through the following equation:

$$Y = C + I \dots\dots\dots(1)$$

Where:

Y = National income

C = Household consumption

I = Investment

Investment

According to Schumpeter, entrepreneurs have an important role in realizing economic growth, he stated that entrepreneurs will continue to make innovations that require new investments. In certain situations, the

business group will innovate in order to increase profits. To innovate, entrepreneurs will seek capital to innovate by borrowing capital and making new investments. Schumpeter said that investment is divided into two groups, namely autonomous investment and affected investment. With investment, the country's economic activity will increase and will have an impact on the level of people's income which also increases, when people's income increases, public consumption also increases. From these community activities, it will move companies to create more goods and invest (Sukirno, 2016).

Ambo (2018) highlights that developing nations are typically characterized by a scarcity of capital, inadequate supply, sluggish economic growth, and technological underdevelopment. These traits are often evident in high average production costs and low labor productivity, stemming from an unskilled workforce and rudimentary capital machinery. As such, investment emerges as a critical financing resource necessary to bolster development in these nations.

This reduction in unemployment is caused by the absorption of the labor force in investment projects. All forms of investment for expenditures or expenditures and capital goods that create and automatically increase the purchase of inputs to be used in production activities that expand job opportunities for people in an area and will result in improvement in income. The business world makes investment driven by consideration of long-term and short-term profit expectations that are influenced by technological advances, Investment is directly related to income, this is because investment is related to profit, and some investments are financed internally from the company's profits, both profits are also increased and resulted in an increase in investment. (Ambo,2018).

Equilibrium Output in a 2 Sector Economy

Investment triggers a ripple effect that contributes to enhancing welfare, evidenced by a rise in income. This suggests that as income grows, the consumption of goods and services follows suit. An uptick in demand for goods and services, in turn, boosts employment opportunities, subsequently driving down the unemployment rate. Consider the following diagram for a clearer understanding:

Mathematically it can be formulated as follows:

$$Y = C + I \dots\dots\dots (2)$$

$$Y = C_0 + BY + I \dots\dots\dots (3)$$

$$Y = \frac{1}{((1-b)(C_0+I))} \dots\dots\dots (4)$$

$$Y - bY = C_0 + I \dots\dots\dots (5)$$

$$Y(1 - b) = C_0 + I \dots\dots\dots (6)$$

$$Y = \frac{C_0+I}{1-b} = \frac{C_0}{1-b} + \frac{1}{1-b} I \dots\dots\dots (7)$$

$\frac{1}{1-b} > 1$ shows that the investment has a positive multiplier effect. Investments made by both the government and the private sector will increase the economy more than the value invested.

Household Consumption

Keynes introduced a concept related to consumption termed the Absolute Income Hypothesis. The representation of the consumption function in accordance with Keynes' model is expressed as follows:

$$C = a + bY_d \quad (8)$$

Where :

A = autonomous consumption

B = Marginal Propensity to Consume (MPC) refers to the proportionate increase in consumption relative to the corresponding increase in income.

Y_d = disposable income

According to the Keynesian consumption function equation, there are three essential characteristics of household consumption within the framework of the Absolute Income Hypothesis: 1. The consumption rate of a household during a particular period is determined by the disposable income acquired within that same timeframe. 2. As per Keynes' consumption theory, an upsurge in disposable income will result in a rise in consumption, but the growth in consumption will be less pronounced than the growth in income. 3. Despite the lack of income, consumption persists among individuals (Tapparan, 2020).

Economic Growth

Economic growth is characterized as the expansion of economic activities leading to an increase in the production of goods and services within a community, and subsequently, an enhancement in societal well-being (Sukirno, 2016). Thus, economic growth serves as a barometer for the progress of an economy. From one period to another, a nation's capacity to produce goods and services is expected to improve. This enhancement in capacity is primarily due to the augmentation of production factors, both quantitatively and qualitatively. Investment contributes to the growth of capital goods, and technology advances concurrently. Economic growth is also linked to a rise in "output per capita" (Menajang, 2019).

In this context, it is crucial to take into account two factors: total output and population. Only by considering these two elements can we elucidate the evolution of output per capita. Furthermore, the third aspect pertains to the long-term perspective of economic growth, that is, over an extended period, the output per capita displays a consistent tendency to increase (Boediono, 2014).

Ricardo suggested that economic growth is driven by factors such as land resources, human capital, capital accumulation, and technological advancement. Ultimately, growth will cease (as Adam Smith concluded) and reach a steady state, albeit delayed by capital accumulation and technological progress. In this regard, David Ricardo emphasizes the income distribution

among economic participants when elucidating the growth mechanism (Menajang, 2019).

RESEARCH METHODOLOGY

This study utilizes a quantitative research approach to investigate the impact of investment on the economic growth of the Bangka Belitung Islands, along with the significance of consumption and labor in this equation. The research design allows for an in-depth examination of the connections between dependent and independent variables via a range of data analysis methodologies.

The primary objective of this study is to examine the ripple effect of investment on economic growth in the district cities of Bangka Belitung Province. The research employs a descriptive quantitative methodology. Descriptive research entails gathering data and then testing hypotheses pertaining to the subject matter. Quantitative data refers to research data that are numerical, statistical, and analyzable. Quantitative data is often dubbed the scientific method due to its measurable, rational, objective, and empirical qualities (Akbar, et al., 2022).

The study encompasses seven districts/cities in Bangka Belitung Province, namely Pangkal Pinang, East Belitung, Belitung, Central Bangka, Bangka, West Bangka, South Bangka. The data utilized in this research is secondary in nature, sourced from a variety of secondary outlets relevant to the research objective. The data is primarily derived from the BPS of Bangka Belitung Province and other literature pertinent to this study. The data analysis technique deployed in this research is multiple linear regression using panel data. The panel data in this study amalgamates cross-sectional and time series data, with research data spanning the period from 2010 to 2021 in Bangka Belitung Province.

Panel Data Analysis

Panel data analysis is a statistical method used when observations are collected over multiple time periods for the same individuals or entities. It combines cross-sectional data (data collected at one specific point in time across several individuals or entities) and time series data (data collected over several time periods for one individual or entity), providing a multidimensional dataset.

Panel data analysis allows for the control of variables that change over time but not across entities, and for the control of variables that don't change over time but vary between entities. This ability to control for variables that are not easily observed or measured is a key advantage of panel data analysis and can result in more accurate results. (Nuryanto, 2018). There are several advantages of panel data, namely:

1. It engages multiple individuals concurrently, thereby enhancing heterogeneity.
2. The data procured is more informative, diverse, and exhibits less collinearity, as panel data merges cross-sectional and time series data.

3. It serves as a dynamic change study by repeating cross-sectional data (series). In addition to these benefits, panel data can also identify and quantify effects more effectively, an aspect not achievable using solely cross-sectional or time series methods.

To effectively analyze unbalanced panel data, researchers must employ appropriate statistical techniques that can accommodate the varying number of observations for each cross-sectional unit. These techniques may include generalized least squares (GLS), random effects models, or fixed effects models with dummy variables. When selecting the appropriate method, researchers must carefully consider the nature of the missing data, potential biases in the data, and the assumptions underlying each technique.

In the context of this study on the Bangka Belitung Islands, using unbalanced panel data can be beneficial if data on economic growth, consumption, investment, and labor is not consistently available for the entire study period. By employing suitable statistical techniques to handle the unbalanced data, researchers can still gain valuable insights into the relationships between the variables and draw meaningful conclusions.

This table illustrates the sequence of tests and model selection criteria for the analysis of the relationship between economic growth, consumption, investment, and labor in the Bangka Belitung Islands.

Table 1. The Sequence of Tests and Model Selection Criteria in Panel Regression

Step	Test/Model	Decision Criteria	Outcome
1	Pooled OLS Model	Estimate the model as a baseline	
2	Chow Test	If null hypothesis is rejected, proceed to step 3	Pooled OLS or proceed to step 3
3	Fixed Effects & Random Effects	Estimate both fixed effects and random effects models	
4	Hausman Test	If null hypothesis is rejected, use fixed effects; otherwise, use random effects	Fixed Effects or Random Effects model
5	Final Model Selection	Choose the most appropriate model based on Chow Test and Hausman Test results	Final selected model

Source : Gujarati, 2012

Model (Subsection)

The panel data estimation equation can be written as follows:

$$PDRB_{it} = \alpha + \beta_1 KRT_{1it} + \beta_2 INV_{2it} + \beta_3 LBR_{3it} + e_{it} \dots \dots \dots (9)$$

- Where :
- PDRB_{it} : Economic Growth Rate
 - KRT_{it} : Household consumption
 - INV_{it} : Investment (Fixed Capital Establishment)
 - LBR_{it} : Labor Force

- i : Cross section data (seven regencies/cities in the Province of the Bangka Belitung Islands)
- t : Time series data (Years 2010-2019)
- α : *Intercept or constant*
- e_{it} : *Error term*
- $\beta_1, \beta_2,$: Independent variable regression coefficient

Operational variables are used to explain the terms used in research, so that misunderstandings about the problems to be discussed in the research can be avoided. Operational definitions used in this study include:

Table 2. Definition of Variable Operational and Variable Measurement

Number	Variabel Name	Concept	Measurement	Scale
1	Economic Growth Rate	Economic growth represents the annual variations in the extent of economic activity. The rate of economic growth is determined by comparing the national income across different years, calculated using constant prices (Sukirno, 2016).	Percent	Nominal
2.	Household consumption	The term "consumption," adapted from the English language into Indonesian, refers to the expenses incurred by households on final goods and services with the objective of satisfying the needs of the purchasers. Expenditure on essentials such as food, clothing, and other basic necessities falls under the category of consumption expenditure (Sukirno, 2016).	Rupiah	Nominal
3.	Investment (Fixed Capital Establishment)	Gross Fixed Capital Formation (GFCF) refers to the spending allocated for capital goods that possess a lifespan exceeding one year and are not classified as consumer goods. GFCF encompasses residential and non-residential structures, infrastructures like roads and airports, in addition to machinery and equipment (BPS, 2022).	Rupiah	Nominal
4.	Labor Force	Labor will be measured using data on the labor force in the Bangka Belitung Islands. It represents the availability and utilization of	Person	Nominal

Number	Variabel Name	Concept	Measurement	Scale
		human resources in the region. The labor force participation rate and the unemployment rate will also be considered to provide a comprehensive understanding of the labor market dynamics.		

Source: Data Processed, 2023

RESULT AND DISCUSSION

This research employs panel data regression analysis to illustrate the estimated influence of consumption and investment on the Gross Regional Domestic Product (GRDP) at constant prices across the districts/cities in the Province of the Bangka Belitung Islands. The assessment uses yearly data from 2011 to 2021, amounting to 77 observations in total. Prior to conducting the panel data estimation, suitable models were selected, namely, the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The most suitable and optimal model is determined through a series of tests including the Chow test, Hausman test, and Lagrange Multiplier test.

Following a series of tests to determine the best model, which included the Chow test, Hausman test, and Lagrange Multiplier test, it was concluded that the Random Effect Model (REM) provides the most accurate estimation. The estimated results from the Random Effect Model are as follows:

Table 3. Random Effect Model (REM) Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.089034	0.952283	-6.394145	0.0000
Consumption	0.199361	0.040047	4.978237	0.0000
Investment	0.570600	0.055371	10.30506	0.0000
Labor	0.004321	0.037595	0.114935	0.9088

Source : Data Processed, 2023

Model Fit Statistics:

- R-squared: 0.890652
- Adjusted R-squared: 0.886159
- S.E. of regression: 0.042457
- F-statistic: 198.1984
- Prob(F-statistic): 0.000000
- Durbin-Watson stat: 0.541488

Source: Processed Data, 2023

The results showed that consumption and investment were able to explain changes in GRDP of 89.06 percent, while the remaining 10.94 percent was explained by models outside of this study. Here's an explanation of the model:

$$GRDP = -6.089034 + 0.199361 \text{ Log}(Kons) + 0.570600 \text{ Log}(Inve) + 0.004321 \text{ Log}(TK) \dots\dots\dots(10)$$

The Random Effect Model (REM) estimation outcomes in Table 2 offer a comprehensive evaluation of how Consumption, Investment, and Labor affect Economic Growth in the Bangka Belitung Islands. Since all data is in logarithmic form, the coefficients denote elasticities and can be understood as percentage alterations.

The constant component (C) is -6.089034 with a standard deviation of 0.952283. The t-statistic of -6.394145 is statistically significant at the 0.01 level ($p < 0.01$), signifying a considerable negative intercept when all independent variables are kept static. Consumption displays a coefficient of 0.199361 with a standard deviation of 0.040047. The t-statistic for Consumption is 4.978237, significant at the 0.01 level ($p < 0.01$). This infers that a 1% augmentation in Consumption corresponds with roughly a 0.20% surge in Economic Growth, given that all other variables remain unvaried.

Investment has a coefficient of 0.570600 with a standard deviation of 0.055371. The t-statistic for Investment is 10.30506, highly significant at the 0.01 level ($p < 0.01$). This implies that a 1% boost in Investment corresponds with an approximately 0.57% rise in Economic Growth, given that all other variables remain unchanged. This highlights the potent positive influence of Investment on Economic Growth. In contrast, Labor has a coefficient of 0.004321 with a standard deviation of 0.037595. The t-statistic for Labor is 0.114935, which is not statistically significant ($p = 0.9088$), indicating that variations in Labor do not significantly affect Economic Growth in this model.

The R-squared value of the model is 0.890652, suggesting that 89.07% of the variability in Economic Growth can be attributed to the independent variables (Consumption, Investment, and Labor). The adjusted R-squared value is marginally lower at 0.886159, taking into account the number of predictors in the model. The F-statistic is 198.1984 with a very low p-value, signifying that the overall model is highly statistically significant.

Research into economic development across different regions in Indonesia revealed no significant impact from domestic and foreign investment variables, as well as infrastructure (represented by the length of roads), on regional economic growth. This situation can be explained by the insubstantial volume and value of investment in regions outside the Java provinces, which are inadequate to propel regional economic growth. Conversely, investments within the Java provinces are substantial enough to boost regional economic growth. The shortage of investment in regions beyond Java is compounded by insufficient infrastructure, such as power supply, roads, bridges, ports, and airports. Infrastructure advancement has been predominantly focused in the Java region (Yuliadi, 2020). This study is

in accordance with research (Maharani & Isnowati, 2014; Maisaroh & Risyanto, 2018; Rahman et al., 2016), which suggests that labor positively impacts GRDP. This supports the classical theory that posits labor as a key input variable in production, alongside capital.

Studies akin to those by Mankiw et al. (1992) and Ferreira (2000) also found no significant link between investment and economic growth. Additionally, road infrastructure did not significantly influence regional economic growth due to the insufficient quality and extent of roads in the regions, which are ineffective in supporting regional economic growth.

When compared to the findings of this research, both the current study and the referenced literature underscore the important role of investment in fueling regional economic growth, particularly in the Java provinces. However, while the current study shows a positive correlation between investment and economic growth, some of the referenced research indicates no significant correlation under certain circumstances. It's important to consider possible discrepancies in data sources, time frames, and research methods when making direct comparisons between the findings of this study and those of the referenced literature.

The analysis conducted in this research, as well as the insights from the cited studies, emphasize the significance of investment and infrastructure in bolstering regional economic growth. In view of these findings, it is recommended that policymakers prioritize the promotion of investment and the development of infrastructure in regions beyond Java in order to foster more balanced and equitable economic growth throughout Indonesia.

In summary, this research reinforces the importance of Consumption and Investment in driving economic growth in the Bangka Belitung Islands. However, the divergent findings in the literature underline the need for a nuanced understanding of the role of Investment, Infrastructure, and Labor in influencing economic growth in different regional contexts within Indonesia. Given these findings, it is recommended that policymakers devise strategies that promote balanced investment and enhance infrastructure, particularly in regions outside of Java, to achieve equitable economic growth across the nation.

CONCLUSION

In conclusion, this study has provided empirical evidence on the significant role of consumption and investment in driving the economic growth of the Bangka Belitung Islands. Our analysis using the Random Effects Model (REM) revealed that both consumption and investment have a positive and statistically significant impact on economic growth. However, labor, as an independent variable, did not demonstrate a significant influence on economic growth in our model. These findings offer valuable insights for policymakers, suggesting that strategic efforts to stimulate consumption and investment could be instrumental in fostering economic growth in the region.

The results also underscore the importance of investment in stimulating regional economic growth, a finding that is consistent with previous research conducted in other regions of Indonesia, particularly the

Java provinces. Therefore, our study adds to the existing body of knowledge by reinforcing the pivotal role of investment in driving regional economic growth and providing a specific case study of the Bangka Belitung Islands.

However, this study is not without limitations. Firstly, it primarily focuses on the Bangka Belitung Islands, which may limit the generalizability of the findings to other regions in Indonesia or other countries with different economic contexts. Secondly, the model only includes consumption, investment, and labor as independent variables, while there could be other potential factors impacting economic growth that were not considered in this analysis. Future research could incorporate additional variables such as education, technology, and government policies to gain a more comprehensive understanding of economic growth determinants. Lastly, the study assumes a linear relationship between the variables, which may not fully capture the complexities and potential nonlinear relationships in real-world scenarios.

Despite these limitations, the study provides meaningful insights into the multiplier effect of investment and consumption on economic growth in the Bangka Belitung Islands, thereby contributing valuable knowledge to the field of regional economic development. Future research could build on these findings by exploring the impact of other potential factors on economic growth and expanding the analysis to include other regions.

Conflicts of Interest: the researcher declares that this research was made purely for academic purposes without any element of interest that would harm a particular party and the academic results can be accounted for

ACKNOWLEDGMENTS

This research was funded by the University of Bangka Belitung in collaboration with BAPPEDA Kota Pangkalpinang. The author would like to thank all parties involved in the preparation of this research.

REFERENCES

- Ajala (2008). Employment and Income Potentiality of Tourism Development in Amhara Region Ethiopia. *Ethiopian Journal of Environmental Studies and Management* Vol.1 No.2 June. 2008.
- Alfirman, Luky dan Edy Sutriyono.2005. Analisis Hubungan Pengeluaran Pemerintah dan Produk Domestik Bruto dengan Menggunakan Pendekatan Granger Causality dan Vector Autoregression. *Jurnal KeuanganPublik*.
- Ambo, I. (2018). Peranan Investasi dalam Menunjang Pembangunan Perekonomian di Indonesia. *Maleo Law Journal*, 2(2), 104-115
- Akbar, Muhammad Faisal, Samsuddin, M. A., & Putra, A. R. (2022). EKONOMETRIKA Struktur Data, Regresi, Vector Autoregression & Vector Error Correction Model. In *Angewandte Chemie International Edition*, 6(11), 951–952. (1st ed.). Dewa Publishing.
- Maharani, K., & Isnowati, S. (2014). *Kajian Investasi, Pengeluaran*

- Pemerintah, Tenaga Kerja Dan Keterbukaan Ekonomi Terhadap Pertumbuhan Ekonomi Di Propinsi Jawa Tengah. *Jurnal Bisnis Dan Ekonomi*, 21(1), 62-72.
- Maisaroh, M., & Risyanto, H. (2018). Pengaruh Investasi, Pengeluaran Pemerintah Dan Tenaga Kerja Terhadap Pdrb Provinsi Banten. *EkBis: Jurnal Ekonomi Dan Bisnis*, 1(2), 206. <https://doi.org/10.14421/ekbis.2017.1.2.1049>
- Rahman, A. J., Soelistyo, A., & Hadi, S. (2016). Pengaruh Investasi, Pengeluaran Pemerintah Dan Tenaga Kerja Terhadap Pdrb Kabupaten/Kota Di Propinsi Banten Tahun 2010-2014. *Jurnal Ekonomi Pembangunan*, 14(1), 112. <https://doi.org/10.22219/jep.v14i1.3890>
- Yuliadi, I. (2020). Determinants of Regional Economic Growth in Indonesia. *Jurnal Ekonomi & Studi Pembangunan*, 21(1). <https://doi.org/10.18196/jesp.21.1.5035>
- Bank Indonesia. (2021). Indonesia Economy Expands 3.51% in Q3/2021. Retrieved from https://www.bi.go.id/en/publikasi/ruang-media/news-release/Pages/sp_2329121.aspx
- Boediono. (2014). Seri Sinopsis Pengantar Ilmu Ekonomi No. 2: Ekonomi Makro (Keempat) [Synopsis Series of Introduction to Economics No. 2: Macroeconomics (Fourth)]. BPFE-Yogyakarta.
- BPS. (2022). *Pembentukan Modal Tetap Bruto*. BPS Bangka Belitung. [https://www.bps.go.id/istilah/index.html?Istilah_page=28&Istilah_sort=deskripsi_ind.desc#:~:text=Pembentukan Modal Tetap Bruto \(PMTB,bandara%2C serta mesin dan peralatan.](https://www.bps.go.id/istilah/index.html?Istilah_page=28&Istilah_sort=deskripsi_ind.desc#:~:text=Pembentukan Modal Tetap Bruto (PMTB,bandara%2C serta mesin dan peralatan.)
- Danawati. 2016. Pengaruh Pengeluaran Pemerintah dan Investasi Terhadap Kesempatan Kerja, Pertumbuhan Ekonomi serta Ketimpangan Pendapatan Kabupaten/Kota di Provinsi Bali. *E-Jurnal Ekonomi dan Bisnis Universitas Udayana* 5.7 (2016): 2123- 2160
- Ferreira, A. (2000). Convergence in Brazil Recent Trends and Long Run Prospects. *Applied Economics*, 32(4), 479-489. <https://doi.org/10.1080/000368400322642>
- Gujarati, Damodar N., dan Dawn C. Porter, 2012. *Dasar-Dasar Ekonometrika*, Edisi Lima, Buku Dua. Penerbit Salemba Empat. Jakarta
- Jiranyakul, K. 2007. "The Relation between Government Expenditures and Economic Growth in Thailand." National Institute of Development Administration, Working Paper, Munich Personal RePEc Archive Paper.
- Maharani, K., & Isnowati, S. (2014). Kajian Investasi, Pengeluaran Pemerintah, Tenaga Kerja Dan Keterbukaan Ekonomi Terhadap Pertumbuhan Ekonomi Di Propinsi Jawa Tengah. *Jurnal Bisnis Dan Ekonomi*, 21(1), 62-72.
- Maisaroh, M., & Risyanto, H. (2018). Pengaruh Investasi, Pengeluaran Pemerintah Dan Tenaga Kerja Terhadap Pdrb Provinsi Banten. *EkBis: Jurnal Ekonomi Dan Bisnis*, 1(2), 206. <https://doi.org/10.14421/ekbis.2017.1.2.1049>
- Mankiw, N. G. (2003). *Teori Makro Ekonomi* (4th ed.). Erlangga.
- Mankiw, N. G., Romer, D., & Weil, D. N. (1992). A Contribution to the Empirics of

- Manalu, Maria Christina. (2004). Analisis Pengaruh Pengeluaran Pemerintah terhadap Pertumbuhan Ekonomi Indonesia. USU Institutional Repository.
- Margherita, Pedrana M. 2013. Ilmu Pengetahuan Regional *Jurnal Inquiry*, Vol. V, (1).
- Menajang, H., 2019. Pengaruh Investasi Dan Tenaga Kerja Terhadap Pertumbuhan Ekonomi Kota Manado. *Jurnal Pembangunan Ekonomi Dan Keuangan Daerah*, 16(4). *Economic Growth. The Quarterly Journal of Economics*, 407-437.
- Mossey (2016), Pengaruh Investasi Swasta dan Pengeluaran Pemerintah Terhadap Pertumbuhan Ekonomi di Kabupaten Minahasa Utara 2004-2013. *Jurnal Berkala Ilmiah Efisiensi* Volume 16 No. 01 Tahun 2016
- Nujum, S., & Rahman, Z. (2019). Pengaruh Investasi Dan Inflasi Terhadap Pertumbuhan Ekonomi Di Kota Makassar. *Jurnal Economic Resource*, 1(2), 117–129. <https://doi.org/10.33096/jer.v1i2.158>
- Padli, P., Hailuddin, H., & Wahyunadi, W. (2020). Pengaruh Pengeluaran Konsumsi Rumah Tangga, Investasi Swasta dan Belanja langsung Pemerintah Daerah Terhadap Pertumbuhan Ekonomi di Kabupaten Lombok Timur Tahun 2001-2017. *Jurnal Ilmiah Akuntansi Dan Keuangan*, 9(1), 19–29. <https://doi.org/10.32639/jiak.v9i1.356>
- Rahman, A. J., Soelistyo, A., & Hadi, S. (2016). Pengaruh Investasi, Pengeluaran Pemerintah Dan Tenaga Kerja Terhadap Pdrb Kabupaten/Kota Di Propinsi Banten Tahun 2010-2014. *Jurnal Ekonomi Pembangunan*, 14(1), 112. <https://doi.org/10.22219/jep.v14i1.3890>
- Sukirno, S. (2016). *Makroekonomi Teori Pengantar [Introduction to Macroeconomic Theory]* (3rd ed.). Rajawali Pers.
- Sutawijaya, A. (2010). Pengaruh Ekspor Dan Investasi Terhadap Pertumbuhan Ekonomi Indonesia Tahun 1980-2006. *Jurnal Organisasi Dan Manajemen*, 6(1), 14–27.
- Swaramarinda, D. R., & Indriani, S. (2021). Pengaruh Pengeluaran Konsumsi Dan Investasi Pemerintah Terhadap Pertumbuhan Ekonomi Di Indonesia. *Jurnal Manajemen Kompeten*, 4(1), 63. <https://doi.org/10.51877/mnjm.v4i1.192>
- Tapparan, S. R. (2020). Analisis Pengaruh Pengeluaran Konsumsi Rumah Tangga Dan Pengeluaran Pemerintah Terhadap Pertumbuhan Ekonomi Tana Toraja. *Journal Ekonomika Lidikti*, 4(2), 12–18. <http://journal.lidikti9.id/Ekonomika>
- Valeriani, D., Susetyo, D., Robiani, B., & Suhel. (2017). Tourism and economic growth of Bangka Belitung Islands Province, Indonesia. *IOSR Journal of Economics and Finance*, 8(4), 54-59.
- Yudisthira, I. M., & Budhiasa, I. G. S. (2011). Analisis Pengaruh Konsumsi, Investasi, dan Inflasi Terhadap Produk Domestik Bruto di Indonesia Tahun 2000-2012. *E-Jurnal EP Unud*, 43–68.