

Analysis of the Influence of Urbanization, Per Capita Income and Labor Force on Economic Growth

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ABSTRACT

This study aims to analyze the influence of urbanization, per capita income, and labor force participation rate on economic growth in Bengkulu City. This study uses a quantitative approach with a multiple linear regression method which is used to measure the relationship between independent variables, namely urbanization, per capita income, and the level of labor force participation to the dependent variable, namely economic growth. The data was obtained by the Central Statistics Agency (BPS) of Bengkulu City. The results showed that the variables of per capita income and labor force participation rate had a significant influence on economic growth, respectively in the direction of negative relationships. Meanwhile, urbanization has a positive but not significant influence. The determination coefficient (R-squared) of 85.1% shows that this regression model is able to explain most of the economic growth variables in Bengkulu City. This research is expected to provide insight for policymakers in formulating a more effective local economic development strategy in Bengkulu City

INTRODUCTION

Economic growth is one of the main indicators to measure the welfare and development of a country (Sultan et al., 2023). The economy of a country can be reflected through per capita income but also the number of people in a country. Population is one of the factors for the success of a country's national development, namely through the number and quality of its population. The large population has a direct impact on economic development, namely the provision of labor in the development implementation process (Syifa & Nasution, 2023). As time goes by, the Indonesian population increases in quantity from time to time. According to the theory of Thomas Malthus about the relationship between population growth and economic development. Thomas Malthus stated that the number of populations in a country will increase rapidly according to the series of measurements or geometric level while the food supply will increase according to the series of calculations (Malthus, 1798).

Bengkulu City as the Provincial Capital has great economic potential because it is located on the west coast of Sumatra Island, abundant natural resources and an important role as a regional economic center. However, this potential has not been fully demonstrated at the optimal level of economic growth. Various factors such as urbanization, per capita income, and labor force participation are important issues that need to be studied to understand the condition of economic growth in Bengkulu City. The urbanization phenomenon in Bengkulu provides opportunities for increased economic activity, but at the same time it also poses new challenges. Increasing the population in urban areas requires the availability of adequate jobs, supporting infrastructure, and the quality of labor in accordance with the needs of local industries (Anisa et al., 2024).

Although rising per capita income is a sign of personal well-being, it does not always translate into higher economic development and productivity if it is not supported by investment in key industries. In a similar vein, having a large workforce does not ensure quick economic growth, particularly if the bulk of workers are employed in the unorganized sector or on low-wage jobs. Data from the Gross Regional Domestic Product (GDP) is the primary indicator used to gauge a region's economic growth during a given time period; the higher the GDP, the greater the region's potential (Ningrum & Ahadi, 2022). Sukirno (2010) asserts that economic growth is an activity in which the welfare of the community rises in proportion to the quantity of products and services produced.

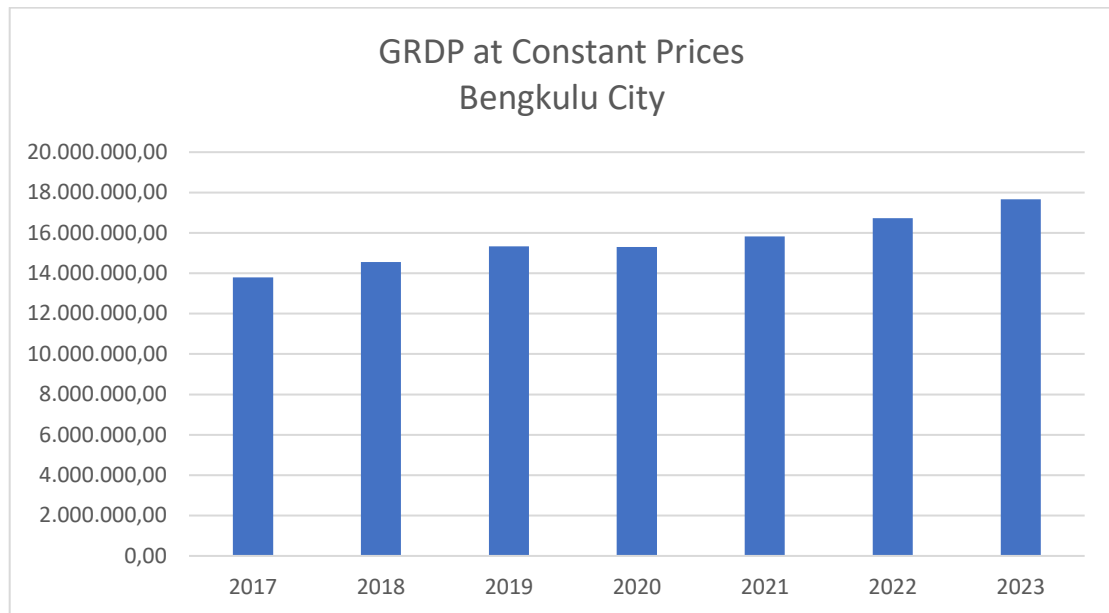


Figure 1. GDP on the Basis of Constant Prices in Bengkulu City

Source: BPS Bengkulu City (2017-2024)

According to the graph above, Bengkulu City's GDP grew at a variable rate between 2017 and 2019 before declining in 2020. The Covid-19 pandemic, which affected practically the entire world and hindered economic growth, is to blame for this. However, things got better in 2021 and 2022.

The city of Bengkulu was chosen as the center of this research because there is still little data and in-depth research on the impact of these factors on economic growth in this region. As a growing city, Bengkulu faces the same challenges as other cities in Indonesia, such as the migration of residents from village to city, disparities and competition for good jobs. On the other hand, Bengkulu also has unique economic and social characteristics compared to other cities in Sumatra, such as Medan or Palembang. Therefore, different studies are needed so that policymakers can identify the best development plan for regional identity.

Most previous studies have focused on factors that affect economic growth in major cities or industrial estates in Indonesia, while similar studies that specifically focus on small cities are still very limited. In Bengkulu City, it has not been well formed in terms of urbanization, per capita income and the number of workers that affect economic growth. This research gap needs to be filled immediately to understand whether the same pattern also occurs in Bengkulu or there are factors in the region that need to be considered in the country's economic situation. This research is expected to be able to fill the gap, make a good contribution to economic policy so that data in Bengkulu becomes more effective.

LITERATURE REVIEW

The Endogenous Growth Theory proposed by Romer (1990) serves as the primary foundation for this study. (Robert Lucas, 1988) This theory highlights that internal factors like labor force participation, per capita income, and

urbanization, as well as external factors like foreign capital investment, are what propel economic growth. Enhancing the caliber of information, innovation, and human resources is crucial for fostering sustainable growth, according to endogenous growth theory. This theory is pertinent to the study's environment since the variables examined represent internal elements of Bengkulu City's local economy, including the role that labor, income, and urbanization play in economic growth.

Urbanization

The term "urbanization" describes the migration of people from rural to urban areas, which eventually results in an increase in the population and economic activity of urban areas (Harahap, 2013). According to the Growth Pole Theory by (Perroux, 1955), urbanization is considered a driving force for economic growth because it can increase demand for goods and services and accelerate infrastructure development. The movement of people to cities brings in new workers who can support industrial, service, and trade activities, thereby increasing economic activity.

The Lewis-Fei-Rannis (LFR) theory in (Mulyadi, 2003) states that migration occurs because of the difference between urban areas and traditional rural areas. Likewise with the theory put forward by Todaro, a person moves from village to city in the hope of getting a higher income. The difference in income between rural and urban areas is the cause of population migration from rural to urban areas. The theory (Harris & Todaro, 1970) about the income gap that affects migration from villages to cities is a natural consequence, therefore migration is the link between population growth and economic growth between regions, the influence of migration on economic growth exists because of behavioral responses to economic opportunities.

Previous studies have shown a positive relationship between urbanization and economic growth. Research conducted by (Hidayat, 2022) reveals that urbanization has an important role in advancing innovation and increasing labor productivity, especially in the industrial and service sectors. The study emphasizes that when urbanization happens sustainably and is backed by sufficient infrastructure, economic growth may be stimulated. Unchecked urbanization can result in a number of socioeconomic issues that hinder economic progress, including traffic, pollution, and housing shortages (Saputra et al., 2024). In the rapidly expanding city of Bengkulu, it is critical to comprehend the relationship between urbanization and economic growth.

Per Capita Income

The primary metric used to assess a region's population's economic well-being is per capita income. Based on the Classical Economic Growth Theory by Adam Smith, an increase in per capita income can drive economic growth through increased consumption and investment. The high per capita income is expected to increase people's purchasing power, which in turn will encourage demand for goods and services, as well as attract investment in various economic sectors (Priyono & Ismail, 2017).

Research from (Muzani & Benardin, 2020) concluded that there is a positive relationship between per capita income and economic growth in Bengkulu Province. The increase in per capita income is expected to have an impact on increasing investment in the productive sector and household consumption. However, in the case of emerging nations, if a gain in per capita income is not accompanied by a rise in productivity and an equal distribution of money, it may not necessarily result in significant economic growth.

Labor Force Participation Rate

The labor force participation rate is the percentage of the population that is actively involved in economic activities, both those who work and those who are looking for work (Adianita et al., 2024). In the Dualistic Labor Market Theory by (Lewis, 1954), a high level of labor force participation is considered one of the driving factors for economic growth, especially if the labor force is absorbed in the productive sector. Thus, the higher the level of labor force participation, the greater the contribution of labor to economic growth through increased production and productivity (Rozmar et al., 2017).

Research by (Mankiw et al., 1992) shows that the level of labor force participation is related to economic growth through labor productivity. In regions with high labor force participation rates, there is an increase in economic output that can boost economic growth. A high level of labor force participation also needs to be supported by the quality of education and skills that are in accordance with the needs of the job market in order to contribute optimally to the economy.

METHODOLOGY

This study uses a quantitative approach with a multiple linear regression analysis method to test the extent of the influence of independent variables of Urbanization, Per Capita Income, and Labor Force Participation Rate on the dependent variable, namely Economic Growth in Bengkulu City. This research data is sourced from the Central Statistics Agency (BPS) of Bengkulu City for the period 1993-2023.

The Regression equation used is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + \varepsilon$$

Information:

- Y : Economic Growth
- α : Constants
- X1: Urbanization
- X2: Income Per Capita
- X3: Labor Force Participation Rate
- ε : Error term

RESEARCH RESULT
Classical Assumption Test
 Normality Test

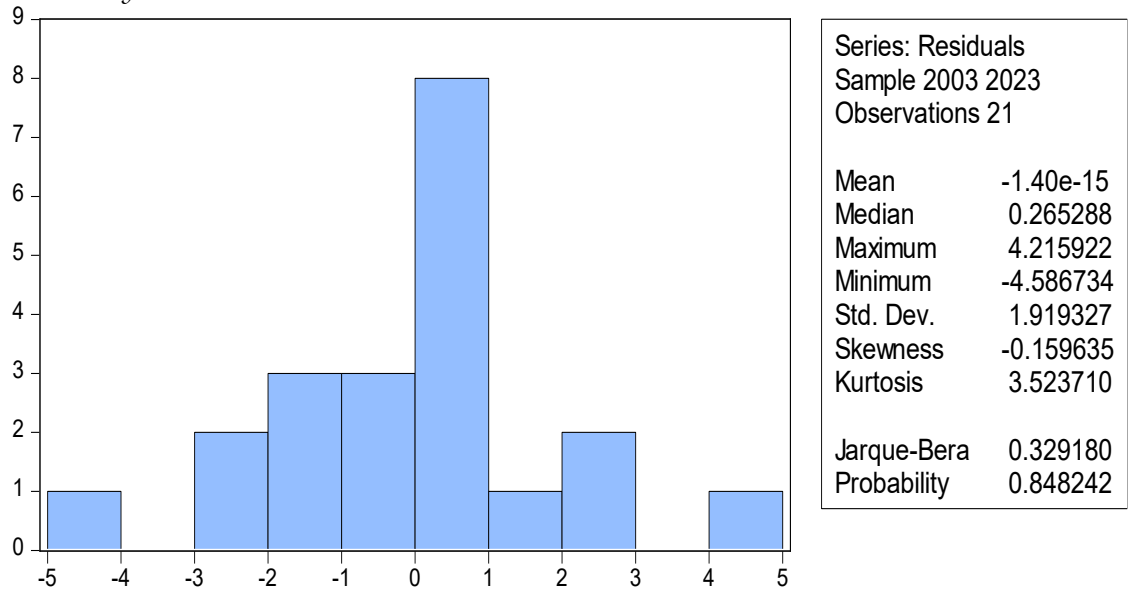


Figure 2. Normality Test
 Source: Eviews-9 Output Data processed

The results of the normality test in the study using Jarque-Bera with a statistical probability value of $0.848242 > 0.05$, it can be concluded that the data used is normally distributed.

Multicollinearity Test

Table 1. Multicollinearity Test

Variable	Uncentere		
	Coefficient d	Centered	
	Variance	VIF	VIF
C	95.75280	806.5662	NA
X1	0.163305	459.8571	1.868639
X2	4.34E-08	9.243553	1.684725
X3	3.83E-07	144.3046	1.660551

Source: Eviews-9 Output Data processed

From the table above, it is known that the value *VIF* The Independent Variable < 10 , then it can be concluded that the assumption of the multicollinearity test has been met.

Heteroscedasticity Test

Table 2. Heteroscedasticity Test

F-statistic	1.116261	Prob. F(3,17)	0.3701
Obs*R-squared	3.455955	Prob. Chi-Square(3)	0.3265
Scaled explained SS	4.516486	Prob. Chi-Square(3)	0.2108

Source: Eviews-9 Output Data processed

The heteroscedasticity test using the Glejser method obtained an Obs*R-Square value of $0.3265 > 0.05$ so that it can be concluded that the research data is free from heteroscedasticity.

Autocorrelation Test

Table 3. Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.039824	Prob. F(2,15)	0.1646
Obs*R-squared	4.490262	Prob. Chi-Square(2)	0.1059

Source: Eviews-9 Output Data processed

Looking at the table above, the value of Prob.Chi-Square is $0.1059 > 0.05$, it can be concluded that it is free from the Autocorrelation test.

Hypothesis Test

Table 4. Hypothesis Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18.21994	9.785336	1.861964	0.0800
X1	0.297125	0.404110	0.735258	0.0722
X2	-0.001412	0.000208	-6.777755	0.0000
X3	-0.001459	0.000619	-2.357401	0.0307
R-squared	0.890988	Mean dependent var		7.520000
Adjusted R-squared	0.874692	S.D. dependent var		3.771073
S.E. of regression	1.578939	Akaike info criterion		3.921027
Sum squared resid	42.38183	Schwarz criterion		4.119983
Log likelihood	-37.17078	Hannan-Quinn criter.		3.964205
F-statistic	32.36171	Durbin-Watson stat		1.426848
Prob(F-statistic)	0.000000			

Source: Eviews-9 Output Data processed

Based on the X1 (Urbanization) Variable Table, the coefficient of 0.297125 shows that every 1% increase in the urbanization rate (X1) is estimated to increase economic growth by 0.297125%, assuming the other variables remain constant. However, a p-value of 0.0722 indicates that the effect of urbanization on economic growth is not statistically significant at the confidence level of 5%. The variable X2 (Income Per Capita) coefficient of -0.001412 indicates that every 1% increase in per capita income (X2) is estimated to decrease economic growth by 0.001412%, assuming the other variables remain constant. A p-value of 0.0000 indicates that this variable is statistically significant at a confidence level of 5%, so it can be concluded that per capita income has a significant and negative influence on economic growth. The variable X3 (Labor Force Participation Rate) coefficient of -0.001459 indicates that every 1% increase in the labor force participation rate (X3) is estimated to decrease economic growth by 0.001459%, assuming the other variables remain constant. A P-value of 0.0307 indicates that this variable is also statistically significant at a confidence level of 5%, so that the labor force participation rate has a significant and negative influence on economic growth.

An R-squared value of 0.890988 indicates that about 89.1% variability in economic growth can be explained by independent variables in the model (urbanization, per capita income, and labor force participation rate). The F-statistic value of 32.36171 with a p-value of 0.000000 shows that the overall regression model is significant at a confidence level of 5%, so that the independent variables together have a significant influence on economic growth.

DISCUSSION

The Effect of Urbanization on Economic Growth

The urbanization coefficient (X1) of 0.97125 indicates a positive influence on economic growth, which means that the higher the urbanization rate, the greater the potential for an increase in economic growth. However, the results of the significance test (p-value of 0.0722) show that the effect of urbanization is not statistically significant at the confidence level of 5%. This could indicate that urbanization alone may not be strong enough to drive economic growth, likely because other aspects, such as infrastructure and labor quality, also play an important role in maximizing the impact of urbanization on economic growth.

The Effect of Per Capita Income on Economic Growth

The results show that per capita income (X2) has a coefficient of -0.001412, which indicates a negative influence on economic growth. A very small P-value (0.0000) indicates that this variable is statistically significant at a confidence level of 5%. This means that the increase in per capita income is actually related to a decrease in economic growth. These findings can be interpreted as an indication that the increase in per capita income may be more consumed or invested in things that do not directly support the productive sectors that drive growth. Another possible factor is that high per capita income may result from increases in sectors that do not have a broad impact on the local economy, such as resource-based industries or the service sector that does not involve a large local workforce.

Effect of Labor Force Participation Rate on Economic Growth

The variable of labor force participation rate (X3) has a coefficient of -0.001459, indicating a significant negative influence (p-value of 0.0307) on economic growth at a confidence level of 5%. This shows that the increase in labor force participation is actually related to a decrease in economic growth. One interpretation for these findings is that even if more people enter the job market, they may participate in low-productivity jobs or informal jobs, which do not drive economic growth significantly. In addition, it can also reflect the mismatch between labor skills and job market needs which results in low overall productivity.

CONCLUSIONS AND RECOMMENDATIONS

Overall, these results show that urbanization, per capita income, and labor force participation rates have an effect on economic growth, although only per capita income and labor force participation rates have a significant effect. Further approaches are needed to understand how urbanization can be better utilized productively, as well as how increased income and labor force participation can be directed to contribute more positively to economic growth. This optimization can be achieved through improving economic policies, improving the quality of education, and developing productive sectors that have a wide impact on the economy.

ADVANCED RESEARCH

For future research, a more advanced analysis is needed to explore the causal mechanisms between urbanization, per capita income, labor force participation, and economic growth by incorporating additional moderating or mediating variables such as infrastructure development, human capital quality, and sectoral employment distribution. Using time-series econometric models like Vector Error Correction Models (VECM) or Structural Equation Modeling (SEM) could provide deeper insights into the dynamic relationships and long-run equilibrium among these variables. Further, spatial analysis may also be integrated to examine regional disparities and inter-city economic linkages in Sumatra. Such studies would offer more comprehensive policy recommendations tailored to the unique socio-economic structure of Bengkulu City.

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