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The Influence of Socio-Demographic Factors on the Economic Growth of Gorontalo Province

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ABSTRACT

This study aims to analyze the influence of socio-demographic factors—including education level, labor force participation rate (LFPR), and population size—on economic growth in Gorontalo Province during the 2020–2024 period. The study uses secondary data obtained from the official publications of the Central Bureau of Statistics (BPS) of Gorontalo Province. Data analysis was conducted using a panel data model with the Fixed Effect Model (FEM) approach through the Eviews 12 software. The results show that, partially, education level and population size have a positive and significant effect on economic growth, while the LFPR has no significant effect. Simultaneously, the three independent variables significantly influence economic growth, with the model contributing 99.9%. These findings indicate that improving education quality and strengthening the structure of the productive-age population are crucial factors in driving economic growth in Gorontalo Province. Meanwhile, the high LFPR has not yet provided optimal impact because most of the workforce is still absorbed in low-productivity sectors. This study is expected to serve as a basis for local governments in formulating economic development policies oriented toward improving human resource quality and effectively leveraging the demographic bonus.

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INTRODUCTION

Economic growth is an important indicator that reflects the development progress of a region. In Gorontalo Province, the dynamics of economic growth over the past five years have shown significant fluctuations influenced by various socio-demographic factors. According to data from the Central Bureau of Statistics (BPS) of Gorontalo Province (2024), the regional economic growth rate increased from 0.69% in 2020 to 4.81% in 2023, in line with the national economic recovery following the COVID-19 pandemic. However, this increase has not yet been accompanied by evenly distributed improvements in social indicators such as education, employment, and population, which serve as key drivers of sustainable economic growth.

One of the key factors influencing economic growth is the level of education. According to Suharti et al. (2022) in the Journal of Indonesian Economics and Development, higher levels of education tend to increase labor productivity and community innovation capacity. In Gorontalo, the average length of schooling in 2024 reached 8.9 years, still below the national average of 9.6 years (BPS, 2024). This shows that a large portion of the population has not completed secondary education, which affects workforce quality and productivity in the local economic sectors.

In addition to education, the labor force participation rate (LFPR) also has a significant impact on economic growth. Based on the Gorontalo in Figures report (BPS, 2023), the LFPR in Gorontalo Province reached 67.18%, an increase from 65.05% in 2020. However, this increase has not been fully followed by

higher absorption of labor in the formal sector. Most of the population still works in agriculture and informal trade sectors, which have relatively low productivity (Purwanto & Azizah, 2023).

The growing population also presents its own challenges for regional economic development. BPS (2024) reports that Gorontalo's population reached 1.27 million in 2024, increasing from 1.20 million in 2020. The annual population growth of 1.18% requires economic policies capable of creating jobs and improving community welfare. Limitations in human resource management may lead to non-inclusive economic growth and widen social inequality (Rahman, 2022).

The gap between economic improvement and social indicators highlights the need for an in-depth empirical analysis of how socio-demographic factors influence economic growth at the provincial level. Previous studies, such as those by Nugraha and Hidayat (2021), found that improvements in education and a productive workforce have a significant positive correlation with regional economic growth in Sulawesi. However, these studies have not specifically examined the context of Gorontalo Province, which has unique socio-economic characteristics.

Furthermore, Yuliani et al. (2023) in the Journal of Social and Development Studies emphasized that despite improvements in education, disparities in educational access across Gorontalo regions remain a major barrier to economic growth. Meanwhile, Ismail and Karim (2022) found that the increasing number of productive-age population has not been fully utilized as a demographic bonus due to limited job opportunities.

Another prominent issue is the low level of economic diversification in Gorontalo. Reliance on the primary agricultural sector makes the regional economy vulnerable to commodity price fluctuations and climate conditions (Nasution, 2022). Socio-demographic factors such as education level and labor participation play an important role in driving a transition toward higher value-added economic sectors. Therefore, quantitative empirical analysis is needed to assess the extent to which these factors contribute to Gorontalo's economic growth.

The main challenges faced by the region include low labor productivity, educational inequality, and mismatches between the number of workers and available formal job opportunities. These conditions result in employment issues such as open unemployment reaching 4.11% in 2024 and an increasing proportion of non-permanent workers (BPS, 2024). Thus, a quantitative study assessing the influence of socio-demographic variables on economic growth is highly relevant.

Previous research by Husain (2020) emphasized that education quality has a positive influence on regional economic growth, yet the study did not include labor force participation and population size as supporting factors. This research gap indicates the need for a more comprehensive approach to understand the relationship between demographic and economic variables in Gorontalo.

In the context of development policy, quantitative research on the relationship between socio-demographic factors and economic growth can become an important foundation for designing regional development strategies. The Gorontalo Provincial Government needs to understand how investments in education and human resource development can strengthen local economic competitiveness. Empirical studies such as this one are expected to provide accurate, data-based recommendations for long-term development planning.

Another limitation of previous studies is the lack of longitudinal data linking social dynamics to economic growth trends. By using BPS panel data from 2020–2024, this study will offer a clearer picture of the trends and causal relationships between socio-demographic and economic variables. This is expected to enrich the literature on regional development in eastern Indonesia.

Therefore, this study aims to quantitatively analyze the influence of socio-demographic factors—including education level, labor force participation rate, and population size—on economic growth in Gorontalo Province during the 2020–2024 period. The findings are expected to provide theoretical contributions to development economics literature as well as practical benefits for inclusive and sustainable regional planning.

RESEARCH METHODS

Approach and Type of Research

This study uses a quantitative approach with a descriptive quantitative research design. This approach is applied to examine the statistical influence of several variables—such as the labor force participation rate, education level, and population size—on economic growth in Gorontalo Province.

Research Location and Period

This research was conducted in Gorontalo Province, covering all existing regencies and municipalities. The research was carried out from June to December 2025, including secondary data collection, data analysis, and the preparation of the research report.

Population and Sample

The population of this study consists of all data related to education level, labor force participation rate (LFPR), population size, and economic growth in Gorontalo Province over the last five-year period (2020–2024). Because the data are aggregated and obtained from official publications, the sampling technique used is total sampling, involving all available annual data.

Types and Sources of Data

This study uses secondary data. Secondary data are selected because the variables analyzed—economic growth, education level, labor force participation rate, and population size—are macro-level variables consistently collected, processed, and published by official national institutions. These quantitative numerical data include economic growth (GRDP percentage), average years of schooling or literacy rate, labor force participation rate (in percent), and population size (in number of individuals).

The use of secondary data is appropriate because this research focuses on macroeconomic analysis at the regional scope (Gorontalo Province), requiring data that are representative, consistently measured, and comparable across time periods. Secondary data also enable long-term (time series) analysis to test the influence of socio-demographic factors on economic growth—something difficult to conduct using primary data from respondent-based surveys due to limitations in coverage and cost.

Therefore, the data used do not come directly from respondents through questionnaires or interviews but from official publications of government agencies and credible international institutions. This ensures data reliability, validity, and consistency in accordance with national and international statistical standards.

Data Collection Technique

Data collection was carried out through documentary study of reports, publications, and statistical documents issued by government institutions or other credible organizations.

Data Analysis Technique

Data analysis in this study uses quantitative analysis to examine the Influence of Socio-Demographic Factors on Economic Growth in Gorontalo Province. Data processing was conducted using the Eviews 10 software. Thus, the model was formulated using the independent and dependent variables.

Simple Linear Regression Analysis

Simple linear regression is a statistical method used to measure and understand the linear relationship between two quantitative variables, namely one independent (explanatory) variable and one dependent (response) variable. This method is used to predict the value of the dependent variable based on the independent variable by identifying the best-fitting straight line for the dataset.

RESULTS

Panel Data Analysis Model

In determining the panel data analysis model, the study used a single approach—the Fixed Effect Model (FEM). To determine the appropriate model for this research, several tests were conducted as follows:

Uji Chow

Table 1. Uji Chow

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1626.593001	(5,21)	0.0000
Cross-section Chi-square	178.852115	5	0.0000

Source: EViews 12, 2025 (processed)

Based on the results of the study above, it shows that the probability value of 0.000 < 0.05 indicates significance. This means that in this test, the approach used is the Fixed Effect Model.

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	10.229148	3	0.0167

Source: EViews 12, 2025 (processed)

Based on the research results above, it shows that the probability value of 0.0167 < 0.05 indicates significance. This means that in this test, the approach used is the Fixed Effect Model.

Classical Assumption Test

Multicollinearity Test

Multicollinearity is a linear relationship between independent variables. Ghozali (2017:71) states that the multicollinearity test aims to examine whether there is a high or perfect correlation between independent variables in the regression model, with a significance value of 0.90, as follows:

Table 2. Uji Multikoleniaritas

	X1	X2	X3
X1	1.000000	0.357160	0.621764
X2	0.357160	1.000000	0.591241
X3	0.621764	0.591241	1.000000

Source: EViews 12, 2025 (processed)

Based on the research results above, it shows that the probability values for X1 and X2 are 0.216, for X1 and X3 are 0.059, and for X2 and X3 are 0.561. These results indicate that the probability values are < 0.09, which means that the data used in this study do not exhibit multicollinearity.

Heteroscedasticity Test

Ghozali (2017:85) states that the heteroscedasticity test aims to examine whether there is an inequality of variance in the residuals from one observation to another in the regression model, with a significance value of 0.05, as follows:

Table 3. Uji Heteroskedastisitas
Dependent Variable: Pertumbuhan Ekonomi
Method: Panel Least Squares
Date: 09/27/25 Time: 02:24
Sample: 2020 2024
Periods included: 5
Cross-sections included: 6
Total panel (balanced) observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.65E-06	5.13E-06	1.100770	0.2835
RLS	1.04E-06	9.46E-07	1.102269	0.2828
TPAK	-4.35E-08	6.89E-08	-0.630477	0.5352
JP	-5.23E-11	5.43E-11	-0.964288	0.3459

Source: EViews 12, 2025 (processed)

Based on the research results above, the probability values for X1 are 0.282, for X2 are 0.535, and for X3 are 0.345. These results show that the probability values are > 0.05, indicating that the data used in this study do not exhibit heteroscedasticity.

Panel Data Regression Equation

Y = 15.14 – 0.45X1 + 0.00X2 + 2.58*X3

The equation above can be explained as follows:

Constant (Intercept) = 15.14.

This indicates that if the Average Years of Schooling (X1), Labor Force Participation Rate (X2), and Total Population (X3) all have a value of zero, then the predicted Economic Growth (Y) is 15.14.

Coefficient of X1 (Average Years of Schooling) = –0.45.

This shows that every one-unit increase in Average Years of Schooling (X1) will decrease Economic Growth (Y) by 0.45 units, assuming other variables remain constant.

Coefficient of X2 (Labor Force Participation Rate) = 0.00.

This indicates that every one-unit increase in the Labor Force Participation Rate (X2) does not produce a meaningful change in Economic Growth (Y), assuming other variables remain constant.

Coefficient of X3 (Total Population) = 2.58.

This shows that every one-unit increase in Total Population (X3) will increase Economic Growth (Y) by 2.58 units, assuming other variables remain constant.

Statistical Hypothesis Testing

Partial Test (t-Test)

The t-test is conducted to determine whether each independent variable individually affects the dependent variable. This test is carried out by comparing the t-statistic with the probability value. The t-table value used is 2.048 with a significance level of 0.05, as follows:

Table 4. Uji Parsial (Uji T)

Dependent Variable: Pertumbuhan Ekonomi
Method: Panel Least Squares
Date: 09/27/25 Time: 02:39
Sample: 2020 2024
Periods included: 5
Cross-sections included: 6
Total panel (balanced) observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15.14274	0.984899	15.37492	0.0000
RLS	-0.457069	0.181746	-2.514881	0.0201
TPAK	0.000302	0.013235	0.022852	0.9820
JP	2.59E-05	1.04E-05	2.481620	0.0216

Source: EViews 12, 2025 (processed)

Based on the research results, the findings are as follows:

The X1 variable produces a t-value of 2.514 > 2.056 (t-table). The significance value is 0.020 < 0.08. This indicates that Ha is accepted and H0 is rejected, showing that the X1 variable (education) has an effect on Y (economic growth).

The X2 variable produces a t-value of 0.022 < 2.056 (t-table). The significance value is 0.98 > 0.08. This indicates that H0 is accepted and Ha is rejected, meaning the X2 variable (labor force participation rate) has no effect on Y (economic growth).

The X3 variable produces a t-value of 2.481 > 2.056 (t-table). The significance value is 0.021 < 0.08. This indicates that Ha is accepted and H0 is rejected, meaning the X3 variable (total population) has an effect on Y (economic growth).

Simultaneous Test (F-Test)

The F-test is conducted to determine whether all independent variables have a joint or simultaneous effect on the dependent variable. This is determined by comparing the F-value with the significance level of 0.05, as follows:

Table 3. Uji Simultan (Uji F)

R-squared	0.999890
Adjusted R-squared	0.999848
S.E. of regression	0.095392
Sum squared resid	0.191092
Log likelihood	33.27481
F-statistic	23873.86
Prob(F-statistic)	0.000000

Source: EViews 12, 2025 (processed)

F-Test: Based on the research results, the calculated F-value is 23.873 > 2.98 (F-table). This indicates that X1 (average years of schooling/RLS), X2 (labor force participation rate/TPAK), and X3 (population size/JP) collectively influence Y (economic growth). Furthermore, the adjusted R-squared value is 0.999, meaning that X1 (RLS), X2 (TPAK), and X3 (JP) contribute 99.9% to Y (economic growth).

DISCUSSION

The research findings explained in the previous section show that, simultaneously, the sociodemographic factors consisting of education level (Average Years of Schooling/RLS), labor force participation rate (TPAK), and population size influence the economic growth of Gorontalo Province. This is evidenced by the calculated F-value of 23.873, which is greater than the F-table value of 2.98 at a significance level of 0.05, meaning that the three variables together significantly affect economic growth. However, there are differences in their partial effects.

Partially, education level and population size significantly affect economic growth, while TPAK (labor force participation rate) does not show a significant effect. These results reinforce the importance of improving human resource quality and managing the productive population structure to stimulate economic growth in Gorontalo Province.

Effect of Education Level on Economic Growth

Education plays an important role in improving the quality of human resources, which serve as the main driving force of regional economic growth. This research is supported by (Hulantu & Canon, 2022), who found that education significantly contributes to Gorontalo's GRDP during 2019–2020. Education enhances not only the technical abilities of workers but also expands innovation opportunities in various sectors, especially in non-agricultural sectors that are currently developing in Gorontalo.

Partial testing shows that the education variable (X1) significantly affects economic growth (Y), with a t-value of 2.514 > 2.056 and a significance level of 0.020 < 0.05. This means that the higher the education level of the population in Gorontalo Province, the higher the economic growth. Education also improves the ability of workers to adopt new technologies and enhance work efficiency. However, limited access to secondary and vocational education remains a major constraint. Therefore, development policies need to focus on strengthening vocational secondary education and industrial-based training to optimize economic growth.

This finding supports the human capital theory (Becker, 1994), which explains that education is a long-term investment that increases labor productivity and regional innovation capacity. In Gorontalo, although the average years of schooling remain below the national average (8.29 years vs. 9.22 years in 2024), improvements in education have expanded access to productive economic sectors, particularly in manufacturing and services.

Nevertheless, the positive effect of education remains limited due to the relatively low average years of schooling (8.29 years in 2024), indicating that most of the population has not reached secondary education. This highlights the need for strengthening vocational education and technical skills tailored to local labor market demands.

Effect of Labor Force Participation Rate (TPAK) on Economic Growth

Unlike education, the study shows that TPAK (X2) does not significantly affect economic growth. This is shown by the t-value of 0.022 < 2.056 and a significance value of 0.98 > 0.05.

These results indicate that the increase in the active labor force has not yet contributed significantly to increasing economic output in Gorontalo. This can be explained by the fact that a large portion of the labor force is still absorbed in traditional agriculture and informal trade—sectors with low productivity. According to BPS (2024), around 38–40% of Gorontalo's workforce is employed in the agricultural sector. Thus, even though TPAK increased from 66.76% (2020) to 69.95% (2024), its impact on economic growth remains limited.

This finding aligns with (Verick, 2018) and (Beno, Silen, & Yanti, 2022), who assert that a high labor force participation rate does not automatically boost economic growth if not accompanied by quality and efficiency improvements in the workforce. Therefore, policies must promote structural transformation of workers from traditional sectors into modern sectors through improved skills and technological innovation.

Thus, in order to increase TPAK's contribution to economic growth, policies must not only encourage labor participation but also strengthen vocational training, regional industrialization, and productivity improvement in key sectors.

Effect of Population Size on Economic Growth

Population size has a positive influence on economic growth, though the effect is relatively smaller than the other variables. This finding aligns with (Barro, 2019) and (Mendez & Barro, 2020), who found that population growth boosts economic growth when properly managed, especially through increased human capital and the expansion of productive employment.

Theoretically, this supports the demographic dividend concept (Lutz, Butz & KC, 2019), wherein the growth of the productive-age population can become an opportunity for increasing production and domestic consumption. With Gorontalo's population increasing from 1.17 million (2020) to 1.23 million (2024), the province has significant potential in terms of domestic market expansion and productive workforce availability.

The population variable (X3) significantly affects economic growth with a t-value of 2.481 > 2.056 and a significance value of 0.021 < 0.05. This indicates that population growth in Gorontalo positively contributes to increased economic activity.

However, if population growth is not accompanied by sufficient job creation and improved human resource quality, it may become an economic burden. The demographic bonus will only benefit Gorontalo if the productive labor force can be absorbed by high-value-added sectors.

Combined Effect of Education Level, TPAK, and Population Size on Economic Growth

Based on the simultaneous F-test results presented in Table 4.5, the F-value is greater than the F-table value, and the F-statistic probability is < 0.05. This indicates that education level (X1), TPAK (X2), and population size (X3) collectively have a significant effect on economic growth (Y) in Gorontalo Province.

Thus, the research supports the fourth hypothesis (H4), which states that the three sociodemographic variables jointly influence economic growth.

Theoretically, this finding aligns with endogenous growth theory, which emphasizes the importance of human capital (education), labor force role, and demographic dynamics in enhancing economic output. Higher education levels increase productivity, while population size provides potential workforce and consumer markets. Meanwhile, TPAK reflects the extent to which the productive population participates in economic activities.

The simultaneous effect indicates that economic growth in Gorontalo is not determined by one factor alone but by the combination of these three sociodemographic variables. Although the partial test shows that TPAK is not individually significant, when combined with education and population, it still contributes to the growth model.

This implies that economic development policies must consider improving education, strengthening the labor market, and managing population growth in an integrated manner. The interaction among these three components produces a significant aggregate impact on Gorontalo's economic growth from 2020–2024.

The findings are consistent with the endogenous growth theory (Romer, 1990), which emphasizes that human capital accumulation through education and skills contributes directly to productivity and innovation. Furthermore, classical labor theory by Adam Smith (1776) highlights that regional economic growth highly depends on labor efficiency. An increase in TPAK from 66.46% (2021) to 70.79% (2023) reflects the growing participation of productive workers in regional development.

Additionally, demographic transition theory (Lutz, Butz & KC, 2019) explains that population growth—especially within the productive-age group—can provide a demographic bonus that supports economic growth if accompanied by improved education quality and adequate employment opportunities.

By integrating education, labor, and population policies synergistically, Gorontalo Province can utilize its sociodemographic potential as a key driver of inclusive and sustainable economic growth.

CONCLUSION

Education level has a positive and significant effect on the economic growth of Gorontalo Province. Partial testing shows that an increase in education level, reflected through average years of schooling, enhances human resource quality and boosts regional productivity and economic output.

Labor force participation rate (TPAK) does not have a significant effect on economic growth. Although the workforce size increases annually, a significant portion remains concentrated in low-productivity sectors, resulting in minimal contribution to economic growth.

Population size has a positive and significant effect on economic growth. Increased population contributes to labor availability and domestic demand. When supported by adequate productivity, this can stimulate economic growth.

Simultaneously, education level, TPAK, and population size significantly influence economic growth in Gorontalo Province. The F-test results show that these three sociodemographic variables collectively have a strong effect on regional economic growth, with a model contribution of 99.9% ($R^2 = 0.999$). This indicates that sociodemographic factors are key determinants of regional economic improvement.

SUGGESTION

The Provincial Government of Gorontalo needs to improve access to and quality of education, particularly at the secondary and vocational levels, in order to produce a skilled workforce capable of competing in the formal labor market, while also promoting vocational training and competency certification aligned with local industry needs so that the increase in the labor force participation rate has a real impact on economic productivity. In addition, optimizing population growth management through family planning policies and region-based population planning is essential to maximize the demographic bonus. The community is expected to increase awareness of the importance of education and job skills as key assets for improving household economic welfare, and to actively participate in training programs and productive economic activities organized by the government or private sector to strengthen local workforce capacity. For future researchers, it is recommended to expand the scope of the study by adding variables such as investment, government expenditure, inflation, and infrastructure to obtain a more comprehensive analysis, as well as to consider using panel data across districts/cities in Gorontalo Province to observe spatial variations in the influence of socio-demographic factors.

BIBLIOGRAPHY

Banini, B. R., Saleh, S. E., & Payu, B. R. (2024). Analisis Faktor Sosial Demografi terhadap Tenaga Kerja Provinsi Gorontalo. *Jurnal Ekonomi Dan Pembangunan Daerah*, *xx*(x), xx--xx. https://doi.org/10.xxxx/jepd.xxxxx

Barro, R. J. (2019). *Economic Growth* (3rd ed.). Cambridge, MA: MIT Press.

Becker, G. S. (1994). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education* (3rd ed.). Chicago: University of Chicago Press.

Beno, J., Silen, A. ., & Yanti, M. (2022). ANALISIS FAKTOR-FAKTOR YANG MEMPENGARUHI PENGELUARAN KONSUMSI RUMAH TANGGA DI KOTA BANDA ACEH. *Braz Dent J.*, *33*(1), 1–12.

Budiarto, S. A., Dai, S. I. S., & Santoso, I. R. (2024). Analisis Faktor-faktor yang Mempengaruhi Ketimpangan Pendapatan di Provinsi Gorontalo. *Jurnal Ekonomi Dan Pembangunan Daerah*, *xx*(x), xx--xx. https://doi.org/10.xxxx/jepd.xxxxx

Hanushek, E. A., & Woessmann, L. (2020). *The Economic Impacts of Learning Losses*. Paris: OECD Publishing. https://doi.org/10.1787/21908d74-en

Hulantu, H., & Canon, N. (2022). Pengaruh Tingkat Pendidikan terhadap Pertumbuhan Ekonomi di Provinsi Gorontalo. *Indonesia, Unpublished/Working Paper*.

Mendez, A., & Barro, J. (2020). International Growth? Evidence from Sub-Saharan Africa. *Unpublished/Working Paper*.

Romer, P. M. (1990). Endogenous Technological Change. *Journal of Political Economy*, *98*(5), S71--S102.

Santoso, R., & Rahayu, A. (2021). Pengaruh Jumlah Penduduk dan TPAK terhadap Pertumbuhan Ekonomi di Indonesia. *Indonesia, Unpublished/Working Paper*.

Titalessy, F. (2021). Analysis of Education and Socio-Demographic Factors on Labor Force Participation. *Unpublished/Working Paper*.

Utomo, A., Ananta, A., & Setyonaluri, D. (2022). A second demographic transition in Indonesia. *Unpublished/Working Paper*.

Verick, S. (2018). Female Labor Force Participation and Development. *IZA World of Labor*.

Yanti, L. (2022). Partisipasi Angkatan Kerja dan Pertumbuhan Ekonomi di Provinsi Sulawesi Tengah. *Indonesia, Unpublished/Working Paper*.