The Determinants of Economic Growth in the Central Sulawesi Region of Indonesia

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ABSTRACT

Regional economic growth is an essential indicator of development performance that reflects the effectiveness of regional economic policies. This study examines the determinants of economic growth in Central Sulawesi Province across 13 municipalities and regencies during the period 2014–2024, focusing on population, labor force, investment, consumption per capita, and capital expenditure. The analysis employs a quantitative approach using panel data regression to assess both the joint and individual effects of these variables on regional economic growth. The empirical results indicate that, collectively, population, labor force, investment, consumption per capita, and capital expenditure significantly influence economic growth across the observed regions. In terms of individual effects, population and labor force are found to have negative and positive coefficients, respectively. However, both are statistically insignificant, indicating no meaningful direct impact on economic growth. Investment shows a positive and statistically significant effect, confirming its important role as a key driver of regional economic expansion. Conversely, consumption per capita has a statistically significant negative effect, suggesting that higher consumption levels are associated with lower economic growth in the region. Meanwhile, capital expenditure does not exhibit a statistically significant effect, implying that its current contribution to economic growth remains limited within the study period.

Keywords: *Capital Expenditure, Consumption Per Capita, Economic Growth, Investment, Labor Force, Population.*

INTRODUCTION

Regional development is an integral part of national development aimed at enhancing community welfare in a sustainable manner. One of the primary objectives of national development is to improve economic performance to create employment opportunities and ensure a decent standard of living for all citizens (Hidayat et al., 2021). To achieve this goal, regions are required to possess autonomous financial capacity to reduce dependency on the central government. In this context, economic growth becomes a crucial indicator of successful regional development, as it reflects the ability of regions to manage resources and support inclusive, sustainable development.

Economic growth, defined as the increase in a region's output of goods and services over time, constitutes a core component of regional economic development. Economic development is multidimensional, encompassing changes in economic and social structures, poverty alleviation, inequality reduction, and unemployment reduction within the framework of sustainable growth. At the macroeconomic level, economic growth is measured through increases in real income represented by Gross Regional Domestic Product (GRDP). Kurniawan and Ramadhan (2025) demonstrate that increased community economic activities play a critical role in driving economic growth and

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positively correlate with improved socio-economic conditions, including poverty mitigation.

The success of regional economic development is also reflected in GRDP growth, which represents community economic activities and the region's capacity to manage its resources. Population size and regional fiscal capacity are closely related to local government expenditure patterns, including capital expenditure for infrastructure and public services (Atmoko & Khairudin, 2022). High economic growth not only enhances production and community purchasing power but also supports regional socio-economic stability. Conversely, economic growth that is not balanced with population growth can increase unemployment, negatively impacting the quality of life, including education, health, and Human Development Index (HDI) outcomes.

Central Sulawesi Province exemplifies a region with substantial economic potential, covering an area of 61,841.29 km² and comprising 12 regencies and 1 city, with agroclimatic conditions favorable for agriculture, plantations, and other natural resource-based activities. According to the provincial statistics office, economic growth in Central Sulawesi fluctuated between 2020 and 2024, reaching 9.89 percent in 2024, above the national average of 5.03 percent. Nevertheless, most regencies and cities still recorded growth below the national average; Buol, Tolitoli, and Sigi recorded 3.31 percent, 3.32 percent, and 3.50 percent, respectively. These disparities indicate regional development gaps and differences in resource management, labor quality, economic structure, and the capacity to leverage capital, technology, and human resources (Ghani et al., 2015).

The government's role, particularly through public expenditure, is critical in stimulating economic growth. Endogenous growth theory emphasizes the importance of investment in physical and human capital for long-term economic expansion, in contrast to neoclassical theory, which assumes that government does not directly influence growth. In Indonesia, strategic fiscal policy via government expenditure can stimulate local economic activity, maintain community purchasing power, and enhance regional economic performance (Wardana & Firmansyah, 2025). However, previous studies report inconsistent findings: some indicate a positive impact of government expenditure on GRDP and per capita income, although heterogeneous across regions and expenditure types, while others report insignificant effects, particularly in underdeveloped or post-pandemic regions (Pulungan et al., 2024; Lakat et al., 2025). Moreover, most studies focus on Java and urban areas, leaving eastern regions such as Central Sulawesi relatively underexplored (Akhmad et al., 2025). The integration of socio-economic variables such as HDI, human capital quality, and infrastructure into economic growth models is also limited, although these variables have been shown to affect the effectiveness of regional fiscal policies (Pangestika et al., 2025).

This research gap underscores the need for empirical studies examining the relationship between government expenditure, economic growth, and human development, particularly at the regency/city level in Central Sulawesi using post-pandemic panel data (Sosvilla-Rivero et al., 2025). The novelty of this study lies in integrating government expenditure, economic growth, and HDI in the context of an under-researched eastern Indonesian region, providing relevant empirical evidence for formulating more effective, inclusive, and sustainable regional development policies.

Accordingly, this study aims to analyze factors influencing economic growth in Central Sulawesi Province, focusing on the role of government expenditure and its relationship with human development at the regency/city level, to inform the design of more effective and sustainable regional development strategies.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

The Effect of Population and Labor Force on Economic Growth

Economic theory positions the population as a key driver of economic growth due to its dual role as labor supply and market demand. However, empirical studies show that its impact is conditional, requiring supporting factors such as human capital quality, employment opportunities, and adequate infrastructure. Purnamasari (2024) finds that

population has a positive and significant effect on economic growth when combined with education and labor variables, while Ridwan (2025) similarly shows that population and education jointly contribute to economic growth. In contrast, Prasetya (2023) highlights that population effects are not always significant without supporting economic structures. Furthermore, Haq et al. (2023) demonstrate that population exerts a stronger effect when combined with government capital expenditure, while Elmonshid and Sayed (2024) confirm that population growth enhances long-term output when accompanied by improvements in productivity and labor quality.

Availability of productive labor is one of the main factors driving production activities and economic sector expansion in a region. An increased labor force absorbed in economic activities can expand production capacity, increase community income, and accelerate regional output growth. Research by Amin (2025) shows that the labor force contributes significantly to Jambi Province's economic growth through increased service sector and MSME activities. Regional analyses of labor's impact on economic growth yield divergent conclusions. In the Special Region of Yogyakarta, Prayogo and Rosalia (2025) established a significant positive effect. This finding is echoed for Jambi City by Prihatini (2025), who further specifies that an increased labor force spurs growth when paired with enhanced human resource quality. Conversely, Lestari (2025) A study on Kendari City determined the influence of the labor force to be positive yet statistically insignificant, pointing to the moderating role of unique local characteristics in absorbing labor productively.

H1: Population has a positive effect on economic growth.
H2: The labor force has a positive effect on economic growth.

The Effect of Investment and Consumption Per Capita on Economic Growth

Investment is a key driver of economic growth as it increases capital accumulation, expands production capacity, creates employment, and enhances regional competitiveness. Tarigan et al. (2025) show that both foreign and domestic investment significantly influence economic growth across multiple regions. Simangunsong and Barika (2025) similarly find that combined foreign and domestic investment contributes positively to economic growth during the 2021–2023 period. Manullang et al. (2024) emphasize that public and private investment play a crucial role in driving growth, particularly under effective fiscal management, while Zaharani and Nasir (2025) report that investment in strategic sectors such as water and sanitation has a positive impact on economic performance. In addition, Arkum et al. (2025) highlight that investment in the primary sector not only promotes economic growth but also improves social welfare, reflected in higher HDI and lower unemployment rates.

Per capita consumption is a key component of aggregate demand and a major driver of economic growth in macroeconomic theory, as household consumption represents the largest share of GDP under the expenditure approach. Arkum et al. (2025) explain that higher per capita consumption increases aggregate demand, output expansion, and investment stimulation. Prawoto (2025) further highlights that consumption is linked to long-term output growth, showing a persistent relationship between consumption dynamics and economic development. Empirical studies by Kim (2017) show that consumption-driven growth tends to create a more sustainable economic structure compared to reliance on investment or exports alone. Consistent with the Keynesian framework, Alper (2018) and Andayani and Setiawati (2025) confirm that household consumption significantly contributes to GDP growth based on panel data and consumption-GDP relationship models.

H3: Investment has a positive effect on economic growth.
H4: Consumption per capita has a positive effect on economic growth.

The Effect of Capital Expenditure on Economic Growth

In macroeconomic studies and economic growth theory, government capital expenditure, particularly in infrastructure, education, health, and other economic facilities, is considered a crucial instrument for enhancing long-term productivity. This perspective emphasizes that government investment plays a fundamental role in strengthening both physical capital and human capital, which together act as primary drivers of sustainable economic growth (Bykova et al., 2024). By improving infrastructure and public services, capital expenditure increases efficiency in production processes, reduces transaction costs, and enhances the quality of human resources, all of which contribute to long-term economic expansion. From a Keynesian viewpoint, government spending is also seen as an important tool to stimulate aggregate demand while simultaneously building productive capacity in the economy.

Supporting Keynesian theoretical predictions, recent empirical studies consistently demonstrate a strong positive relationship between government capital expenditure and economic growth. Kirana (2024) finds a significant positive effect on regional growth, indicating that increased government investment can directly enhance economic performance. Similarly, Ramadhani et al. (2025), through a panel study of ASEAN-5 countries, show that government expenditure, including fixed capital formation, has a positive and significant impact on economic growth across countries. However, Simamora et al. (2024) highlight that the magnitude and dynamics of this influence are not uniform, as they vary depending on regional characteristics, institutional quality, and development conditions.

H5: Capital expenditure has a positive effect on economic growth.

The Simultaneous Effect on Economic Growth

The simultaneous influence of population, labor force, investment, per capita consumption, and capital expenditure on economic growth has been extensively examined within the framework of development economics. Economic growth is a multidimensional phenomenon that arises from the interaction of various macroeconomic determinants rather than a single variable. Population growth contributes to the expansion of market size and potential labor supply, while the labor force plays a critical role in enhancing productivity and supporting production activities (Swastika, 2024). Furthermore, investment is recognized as a key driver of capital formation, technological advancement, and increased production capacity, all of which are essential for sustained economic growth (Manullang et al., 2024). Per capita consumption, on the other hand, reflects aggregate demand, which stimulates economic activity and encourages firms to expand output (Afrizal et al., 2021).

In addition, government capital expenditure plays a vital role in fostering economic growth through the provision of infrastructure and public services that enhance economic efficiency and productivity. Investment in infrastructure and human development not only reduces transaction costs but also creates a conducive environment for private sector investment. Empirical evidence indicates that these variables, when analyzed simultaneously, exert a significant and complementary effect on economic growth, as they collectively strengthen the structural foundations of the economy (Ramadhani et al., 2025).

H6: Population, labor force, investment, per capita consumption, and capital expenditure have a significant simultaneous effect on economic growth.

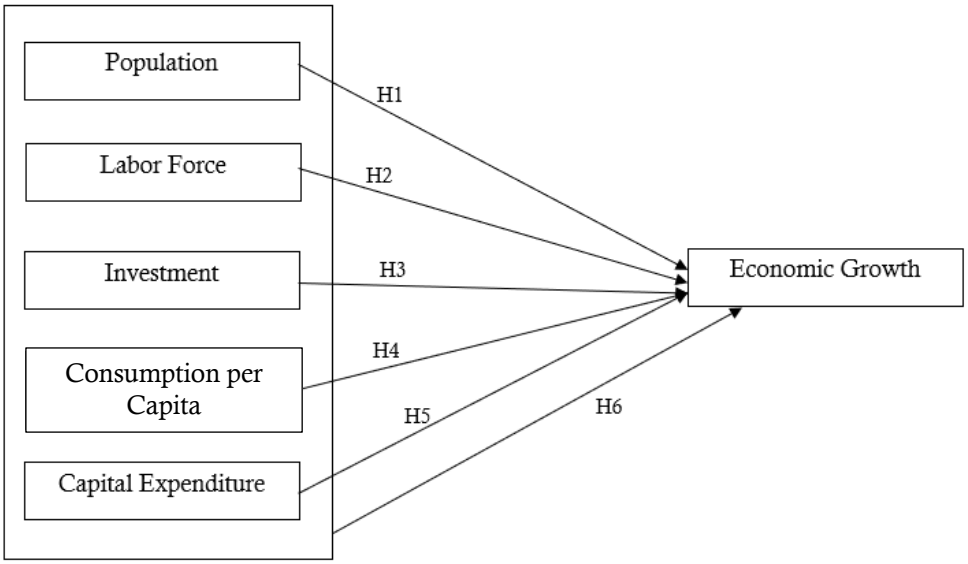

Figure 1. Conceptual Framework

Figure 1 presents a conceptual research model illustrating the determinants of economic growth. The model shows that population, labor force, investment, and per capita consumption are expected to have direct effects on economic growth. In addition, capital expenditure is hypothesized to influence economic growth through two separate pathways, indicating its multidimensional role in shaping economic performance. The framework suggests that economic growth is driven by a combination of demographic conditions, labor market dynamics, investment activity, consumption behavior, and government fiscal spending, each contributing to regional economic development.

RESEARCH METHODS

The study adopts a quantitative research design aimed at analyzing the determinants of regional economic performance through panel data regression. This approach combines cross-sectional and time-series data, allowing the same observational units to be examined across multiple periods, thereby producing more comprehensive and efficient estimates. Panel data analysis is particularly advantageous because it captures both individual heterogeneity and temporal dynamics within a unified framework. The research covers 13 regencies/cities observed over a 10-year period (2014–2024), forming a balanced panel dataset.

In terms of measurement, the dependent variable is Gross Regional Domestic Product (GRDP), while the independent variables include population (X_1), labor force (X_2), investment (X_3), consumption per capita (X_4), and capital expenditure (X_5). These variables are operationalized within a panel regression model expressed as $Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \mu_{it}$, where i represents the cross-sectional unit and t denotes time. This specification enables simultaneous analysis of variations across regions and over time, which is a key characteristic of panel data modeling. The population of the study consists of all regencies/cities within the observed region, while the sample includes 13 units selected based on data availability. The unit of analysis is annual regional data, and the data collection technique relies on secondary data obtained from official statistical sources.

Regarding the data analysis technique, the study employs panel data regression using the Ordinary Least Squares (OLS) method as the initial estimation approach. Three alternative models are considered, namely the Pooled Least Squares (Common Effect), Fixed Effect Model (FEM), and Random Effect Model (REM). The pooled model treats the data as a single dataset without accounting for heterogeneity, whereas the fixed-effects model controls for time-invariant individual characteristics that may correlate with the

explanatory variables. In contrast, the random effect model assumes that individual-specific effects are random and uncorrelated with the independent variables. These distinctions are essential in determining the most appropriate model for panel data estimation.

Model selection is conducted through a structured testing procedure. The Chow test is applied to determine whether the common effect or fixed effect model is more appropriate. If the fixed effect model is preferred, the Hausman test is subsequently used to choose between the fixed effect and random effect models based on the correlation assumptions between individual effects and regressors. Furthermore, statistical tests such as the coefficient of determination (R^2), F-test, and t-test are employed to evaluate model fit, simultaneous effects, and partial effects of independent variables. The analysis is carried out using EViews (Econometric Views) version 12.0, which facilitates panel-data estimation, model-selection testing, and comprehensive statistical analysis.

RESULTS

Before presenting the empirical results, this section provides a brief overview of the statistical analysis used to examine the relationships among the variables in the study. The analysis aims to test the extent to which the selected determinants are associated with economic growth based on the proposed conceptual framework. The results are presented in the following tables, which summarize the estimated coefficients, significance levels, and model fit indicators. These findings serve as the basis for interpreting the influence of each variable on economic growth and for evaluating the hypotheses developed in the study.

Table 1. Chow Test Estimation Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	13.882	(12.121)	0.0000
Cross-section Chi-square	125.91	12	0.0000

According to the Chow Test estimation presented in Table 1, the null hypothesis supporting a Pooled Least Squares (PLS) specification is rejected. This decision is based on a Cross-section F-statistic of 13.882 (p = 0.0000) and a Cross-section Chi-square of 125.91 (p = 0.0000), where both probabilities fall below the 0.05 significance level. The rejection of H0 provides statistical evidence that the intercepts differ significantly across the various regencies/cities included in the model, indicating the presence of unobserved heterogeneity that cannot be captured under a pooled approach. This implies that each cross-sectional unit has distinct individual characteristics that influence the dependent variable, thereby justifying the use of a model that accounts for individual effects. The results strongly support the preference for a fixed effects or random effects specification over the PLS model in order to obtain more reliable and unbiased estimations.

Table 2. Hausman Test Estimation Results

Test Summary	Value
Test	Random vs Fixed
Chi-Sq. Statistic	18.332
Chi-Sq. d.f.	5
Prob.	0.0026

The Hausman Test results in Table 2 provide a Chi-Square Statistic of 18.332 with 5 degrees of freedom and a probability of 0.0026. Because this p-value is less than 0.05, the test rejects the null hypothesis in favor of the random effects model as efficient and consistent. This rejection implies a statistically significant divergence in the coefficients estimated by the fixed effects and random effects models.

Table 3. Panel Data Regression Estimation Results

Variable	Coefficient	Std.	t-statistic	Prob.	Description
Constant	522001.42	117320.3	4.449	0.0000	-
Population	-0.00021	0.00052	-0.403	0.6870	Not Significant
Labor Force	0.00019	0.00021	0.881	0.3800	Not Significant
Investment	1.98	0.289	6.858	0.0000	Significant
Consumption Per Capita	-2966.11	592.77	-5.005	0.0000	Significant
Capital Expenditure	0.00021	0.00092	0.226	0.8210	Not Significant

Table 3 presents the panel data regression results examining the effects of population, labor force, investment, per capita consumption, and capital expenditure on regional economic output. The estimation results indicate that the constant term is positive, reflecting the existence of a baseline level of economic activity even in the absence of changes in the explanatory variables. Among the independent variables, investment shows a positive and statistically significant effect ($p < 0.01$), implying that increases in investment consistently contribute to higher regional economic growth. This finding underscores the importance of capital formation as a key engine of economic performance across regions. In contrast, consumption per capita exhibits a statistically significant negative effect ($p < 0.01$), suggesting that higher levels of consumption are associated with lower economic growth within the model, which may reflect a trade-off between consumption and savings or productive investment.

Meanwhile, population, labor force, and capital expenditure are found to be statistically insignificant, indicating that their direct impacts on regional economic output are not clearly distinguishable within the model specification and dataset used. This may imply that these variables exert their influence indirectly or are overshadowed by stronger determinants such as investment. The insignificance of capital expenditure is particularly noteworthy, as it suggests that government spending alone may not be sufficient to drive measurable economic growth without efficient allocation or complementary private sector activity. Taken together, the results highlight that investment plays the most dominant role in explaining variations in regional economic performance, while the other variables show limited direct statistical influence in this empirical model.

Table 4. Fixed Effect (Cross)

Regional	Fixed Effects
Banggai Kepulauan	2,536,002,000,000
Banggai	12,733,210,000,000
Morowali	-38,440,370,000,000
Poso	3,731,737,000,000
Donggala	7,466,808,000,000
Toli-Toli	5,254,072,000,000
Buol	3,691,453,000,000
Parigi Moutong	11,184,170,000,000
Tojo Una-Una	3,575,022,000,000
Sigi	5,788,397,000,000
Banggai Laut	1,482,868,000,000
Morowali Utara	-2,718,957,000,000
Kota Palu	14,495,540,000,000

Table 4 presents the cross-sectional fixed effects for each regency/city, capturing the unique, time-invariant characteristics of the regions that influence the dependent variable, likely GRDP or regional economic output. Positive fixed effect values, such as Kota Palu (14.50 trillion) and Banggai (12.73 trillion), indicate that these regions inherently contribute above the baseline to economic performance, reflecting higher productivity or better resource management. Conversely, negative values, such as Morowali (-38.44 trillion) and Morowali Utara (-2.72 trillion), suggest these regions have underlying structural disadvantages or lower inherent output relative to the reference level. The fixed effects reveal significant heterogeneity across Central Sulawesi's regencies and cities,

emphasizing that regional-specific factors substantially affect economic outcomes beyond the observable explanatory variables.

Table 5. Fixed Effects Regression Results

Statistic	Value
Effects Specification	Cross-section fixed (dummy variables)
R-squared	0.9422
Adjusted R-squared	0.9340
Mean dependent variable	18,812.96
S.D. dependent variable	28,090.88
S.E. of regression	15,330.68
Sum squared residuals	7.05×10^9
Log likelihood	-436.5084
Akaike information criterion	22.32542
Schwarz criterion	22.74764
Hannan-Quinn criterion	22.47808
F-statistic	127.236
Prob(F-statistic)	0.000000
Durbin-Watson	1.9554

Table 5 presents the overall goodness-of-fit and diagnostic statistics for the cross-sectional fixed effects model. The model exhibits a high explanatory power, with an R-squared of 0.9422 and an adjusted R-squared of 0.9340, indicating that a substantial proportion of the variance in the dependent variable is accounted for by the included predictors and fixed effects. The F-statistic of 127.236 with a significance level of 0.0000 indicates that, collectively, the included explanatory variables population, labor force, investment, per capita consumption, and capital expenditure have a statistically significant effect on economic growth. This result confirms that the model is meaningful and that the predictors jointly contribute to explaining variations in regional economic performance. The Durbin-Watson statistic of 1.9554 suggests that autocorrelation is not a serious concern in the residuals. The Akaike Information Criterion (22.32542), Schwarz Criterion (22.74764), and Hannan-Quinn Criterion (22.47808) provide measures for model evaluation and parsimony. These indicators demonstrate that the cross-sectional fixed effects model is robust and reliable for capturing regional heterogeneity and analyzing variations in economic performance across the regencies and city of Central Sulawesi.

DISCUSSION

The empirical findings indicate that population does not have a significant effect on economic growth. This suggests that population increases have not directly translated into higher regional output, implying that demographic expansion alone is insufficient to drive regional economic acceleration. From the perspective of the Neo-Classical Solow-Swan growth model, population growth contributes positively only when accompanied by improvements in labor productivity, capital accumulation, and technological progress. Without these supporting factors, population growth may instead reduce output per capita due to diminishing returns to capital. These findings are consistent with prior studies by Setyowati et al. (2024) and are further supported by Alemu and Zegeye (2024), Habibullah (2024), and Cao et al. (2024), which emphasize that demographic contributions depend heavily on human capital quality. In Central Sulawesi, limited quality employment, unequal population distribution, and the dominance of low-productivity sectors explain the weak role of population in driving economic growth (Mehmood et al., 2021; Albanesi & Kim, 2021).

Similarly, the labor force variable is found to have no significant effect on economic growth, indicating that increases in labor supply have not been accompanied by improvements in productivity or regional output. According to the Harrod-Domar growth model, economic growth is primarily determined by savings and investment, with capital accumulation as the main driver, while labor is assumed to be abundant. Consequently,

an increase in the labor force without sufficient investment and productive capital does not lead to meaningful economic expansion. This condition reflects the structure of the Central Sulawesi economy, where a large proportion of the workforce is concentrated in low-productivity sectors. These findings are consistent with previous studies by Razak et al. (2020), Samsuddin (2025), Rahmawati et al. (2025), Maulana et al. (2025), and Elfrian and Putri (2025), which highlight that labor contributes significantly to economic growth only when supported by investment, financial sector development, and technological advancement.

In contrast, investment has a significant positive effect on economic growth, confirming its role as a key driver of regional economic performance. This finding aligns with endogenous growth theory, which emphasizes that economic growth can be generated internally through investment in physical and human capital, as well as technology. Investment enhances productivity, encourages innovation, and expands production capacity, thereby contributing to sustainable economic growth. Empirical evidence from Central Sulawesi is consistent with prior studies by Du et al. (2022), Jalles et al. (2024), Taufik and Markhamah (2024), Pratiwi and Saputro (2024), and Smith (2025), which demonstrate that investment generates employment, strengthens economic structures, and produces multiplier effects on output. Therefore, strengthening investment through improved infrastructure, fiscal incentives, and a conducive business environment is essential for sustaining regional economic development.

On the other hand, consumption per capita has a significant negative effect on economic growth, indicating that consumption patterns are largely non-productive. Within the Harrod-Domar framework, excessive consumption reduces savings, thereby limiting capital formation and slowing economic growth. This finding is supported by previous studies by Adelowokan (2021), Afrizal et al. (2021), Ahmed and Nawaz (2024), Muslih et al. (2025), and Huang et al. (2025), which emphasize the importance of balancing consumption and investment. In Central Sulawesi, consumption is largely directed toward basic and consumptive goods, often sourced from outside the region, thereby reducing local economic multiplier effects and weakening capital accumulation.

Capital expenditure has no significant effect on economic growth, indicating that government spending has not been effectively translated into increased productivity or output. Although endogenous growth theory highlights the importance of public investment in infrastructure and human capital, its impact depends on the quality of allocation and the efficiency of implementation. Empirical evidence from Paudel (2023), Ali and Hidayat (2024), Drama et al. (2025), Haryati et al. (2025), and Sosvilla-Rivero et al. (2025) shows that ineffective planning, delays in project implementation, and weak linkage with productive sectors reduce the effectiveness of capital expenditure.

The simultaneous test results indicate that all independent variables jointly exert a statistically significant effect on economic growth, as evidenced by the high F-statistic and probability value below 0.05. This finding confirms that the regression model possesses strong explanatory power and is statistically meaningful. In line with previous studies, a significant simultaneous effect that provides a better fit than a model without predictors, and the independent variables collectively explain variations in the dependent variable.

CONCLUSION

This study finds that investment is the primary driver of economic growth in the 13 regencies/cities of Central Sulawesi, whereas consumption per capita exerts a negative effect on regional output. Population, labor force, and capital expenditure do not show significant individual impacts, indicating that demographic growth, labor supply, and government spending alone are insufficient to stimulate growth without accompanying productivity improvements, efficient resource allocation, and strategic investment. The results of the simultaneous hypothesis test confirm that, collectively, these variables significantly influence economic growth, highlighting the importance of integrated policy interventions that combine investment promotion, consumption management, and targeted public expenditure to enhance regional economic performance. These findings

provide empirical support for endogenous growth theory and the Harrod-Domar model, emphasizing the central role of capital formation and investment-driven growth.

The study's implications suggest that policymakers should prioritize investment in productive sectors, improve the efficiency of public spending, and promote consumption patterns that reinforce local capital accumulation. Limitations include the focus on only 13 regencies/cities over a ten-year period, which may restrict the generalizability of results, as well as the exclusion of variables such as technological innovation, human capital quality, and financial sector development. Future research should incorporate these dimensions, apply dynamic panel modeling, and conduct sector-specific analyses to provide a more nuanced understanding of growth drivers. Longitudinal studies evaluating policy interventions and their regional multiplier effects could offer practical insights for sustainable economic planning in Central Sulawesi and comparable contexts.

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REFERENCES

[1] Adelowokan, O. A. (2021). Fiscal policy, private consumption, and economic growth among the economic community of West African States. *Jurnal Ekonomi & Studi Pembangunan, 22*(2), 289–300.

[2] Afrizal, A., Mayesti, I., & Irmanelly, I. (2021). Analisis konsumsi rumah tangga, struktur ekonomi, dan pertumbuhan ekonomi Indonesia periode 2000–2019. *Journal Development, 9*(1), 22–29.

[3] Ahmed, M. A., & Nawaz, N. (2024). A new theory of economic growth: Why countries' per capita income converge or diverge. *Modern Economy and Management, 3*(3), 1–7.

[4] Akhmad, A., Abidin, Z., H. M., M., & Amir, A. (2025). The factors influencing economic growth of South Sulawesi Province, Indonesia. *International Journal of Scientific Research and Management (IJSRM), 13*(11), 9954–9963.

[5] Albanesi, S., & Kim, J. (2021). Effects of the COVID-19 recession on the US labor market: Occupation, family, and gender. *Journal of Economic Perspectives, 35*(3), 3–24.

[6] Alemu, T. A., & Zegeye, M. B. (2024). Empirical investigation on the dynamics effects of population and economic growth in Ethiopia: An application of the VEC model. *Cogent Social Sciences, 10*(1), 1-12.

[7] Ali, M. M., & Hidayat, M. S. (2024). Analisis dampak penggunaan modal pemerintah daerah terhadap pertumbuhan ekonomi Provinsi Sulawesi Tengah. *Paraduta: Jurnal Ekonomi dan Ilmu-Ilmu Sosial, 2*(1), 22–30.

[8] Alper, A. (2018). The relationship of economic growth with consumption, investment, unemployment rates, saving rates and portfolio investments in developing countries. *Gaziantep University Journal of Social Sciences, 17*(3), 980–987.

[9] Amin, K. (2025). Analisis pengaruh angkatan kerja, UMKM, dan sektor jasa terhadap pertumbuhan ekonomi di Provinsi Jambi. *Edu Sosial Jurnal Pendidikan Ilmu Pengetahuan Sosial, 5*(2), 150–158.

[10] Andayani, S. V., & Setiawati, R. I. (2025). Analysis of the effect of household consumption, domestic investment, regional expenditure, and labor on economic growth in five regencies/cities in West Java. *Journal of Regional Economics and Development, 3*(1), 1–15.

[11] Arkum, D., Amar, H., & Kuncoro, M. (2025). Influence of investment on economic growth, human development, poverty and unemployment in Bangka Belitung Island Province in the 2018–2023 period. *Jurnal Bina Praja, 17*(1), 43–60.

[12] Atmoko, C. A., & Khairudin, K. (2022). Dampak pendapatan daerah dan belanja modal terhadap kinerja keuangan pemerintah daerah. *Jurnal Ilmiah Akuntansi Kesatuan, 10*(2), 291–296.

[13] Bykova, V., Khasanova, M., & Polonkoeva, F. (2024). The role of human capital in economic development: An analysis of factors contributing to economic growth. *Reliability: Theory & Applications*, *19*(SI 6 (81)), 1676-1682.

[14] Cao, Z., Li, Z., & Zhou, K. (2024). Does the inter-provincial floating population affect regional economic development in China? An empirical analysis. *Sustainability, 16*(1), 112-125.
[15] Drama, B. G. H., Soro, K., & Senou, M. M. (2025). Sectoral allocation of public investment: Optimizing efficiency in education and health systems in developing economies. *Social Sciences & Humanities Open, 12*(1), 22-34.
[16] Du, X., Zhang, H., & Han, Y. (2022). How does new infrastructure investment affect economic growth quality? Empirical evidence from China. *Sustainability, 14*(6), 654-667.
[17] Elfrian, A., & Putri, N. T. (2025). Analysis of the impact of digitalization and labor force participation rate on gross regional domestic product in Indonesia. *Golden Ratio of Social Science and Education, 5*(1), 73–79.
[18] Elmonshid, L. B. E., & Sayed, O. A. (2024). The relationship between entrepreneurship and sustainable development in Saudi Arabia: A comprehensive perspective. *Economies, 12*(8), 801-812.
[19] Ghani, M. A., Sirojuzilam, S., Badaruddin, B., & Rujiman, R. (2015). The influence of corporate social responsibility towards the development of rural communities: Case studies in North Sumatera, Republic of Indonesia. *International Journal of Regional Development, 2*(2), 12–26.
[20] Habibullah, H. (2024). The effect of population and macroeconomic indicators on economic growth in OIC countries. *Jurnal Ekonomi, 13*(3), 858–869.
[21] Haq, F. A., Wati, L. N., & Istianda, M. (2023). The role of capital expenditure allocation in mediating regional financial performance on regional economic growth Aceh Province. *Journal of Social Entrepreneurship Theory and Practice*, *2*(1), 27-40.
[22] Haryati, D. C., Nurpiji, N., Masitoh, G., Saputra, W., & Subarkah, T. (2025). Analisis efisiensi belanja modal terhadap pertumbuhan ekonomi daerah di Indonesia: Pendekatan data panel. *Gemilang: Jurnal Manajemen dan Akuntansi, 5*(3), 139–153.
[23] Hidayat, B. A., Yuliana, E., Wicaksono, B., Matara, K., Wulandari, S. N., Amri, N. H., & Saksono, H. (2021). Objectives of sustainable development and analysis of people's economy improvement. In *International Conference on Sustainable Innovation Track Humanities Education and Social Sciences (ICSIHESS 2021)* (pp. 182-186). Paris: Atlantis Press.
[24] Huang, W., Bangaan Abdullah, M. H. S., & Yaacob, M. H. (2025). The nexus of spending and saving decisions: A systematic literature review and bibliometric analysis. *International Journal of Consumer Studies, 49*(4), 400-412.
[25] Jalles, J. T., Park, D., & Qureshi, I. (2024). Public and private investment as catalysts for growth: An analysis of emerging markets and developing economies with a focus on Asia. *Journal of International Money and Finance, 148*(1), 1-10.
[26] Kim, H. (2017). The effect of consumption on economic growth in Asia. *Journal of Global Economics, 5*(3), 301-311.
[27] Kirana, G. (2024). Analisis pengaruh belanja modal, penyertaan modal, dan pertumbuhan penduduk terhadap pertumbuhan ekonomi. *Journal of Development Economic and Social Studies, 3*(4), 1115–1125.
[28] Kurniawan, D., & Ramadhan, M. S. (2025). The influence of economic growth, education, and macroeconomic factors on regional poverty reduction. *Jurnal Ilmiah Manajemen Kesatuan, 13*(4), 2471–2484.
[29] Lakat, J. S., Kumenaung, A. G., Lengkong, V. P. K., & Gamaliel, H. (2025). The relationship between government expenditure and regional economic growth: Evidence from Indonesia. *Klabat Accounting Review, 6*(1), 24–35.
[30] Lestari, P. A. (2025). The impact of government expenditure and labor force on regional economic growth: Evidence from Kendari, Indonesia. *Sinergi International Journal of Economics, 3*(2), 119–131.
[31] Manullang, R. R., Sirait, E., Syofya, H., Azkia, M., & Harsono, I. (2024). The effect of investment on Indonesia's economic growth with government expenditures as a moderating variable. *Jurnal Ilmiah Edunomika, 8*(2), 212-224.
[32] Maulana, H., Syahnur, S., & Abrar, M. (2025). Economic growth in Indonesia: The influence of fiscal decentralization, investment, labor, and human development index. *Grimsa Journal of Business and Economics Studies, 2*(2), 126–139.
[33] Mehmood, R., Ullah, Z., & Lal, I. (2021). Human capital, urbanization and dynamics of economic growth and development. *Journal of Human, Earth, and Future, 2*(4), 382–394.
[34] Muslih, M., Redjeki, S., Firmansyah, G., & Larasati, A. (2025). Analisis multi-dimensi dampak ekonomi, perilaku konsumsi, dan risiko sosial penggunaan paylater di Indonesia. *Jurnal Impresi Indonesia, 4*(10), 3858–3866.
[35] Pangestika, M. D., Talakua, J. F. D., Widyawati, R. F., & Septiani, R. E. (2025). The effectiveness of economic growth on regional expenditure in Central Java Province. *Efficient: Indonesian Journal of Development Economics, 8*(2), 171–182.
[36] Paudel, R. C. (2023). Capital expenditure and economic growth: A disaggregated analysis for Nepal. *Cogent Economics & Finance, 11*(1), 12-24.
[37] Prasetya, Z. T. A. T. (2023). Analisis pengaruh jumlah penduduk, tenaga kerja, dan infrastruktur listrik terhadap pertumbuhan ekonomi di Pulau Jawa. *Jurnal Ilmu Ekonomi JIE, 7*(4), 550–559.
[38] Pratiwi, N. I., & Saputro, I. H. (2024). The influence of foreign investment and domestic investment on economic growth. *Bulletin of Fintech and Digital Economy, 5*(1), 1–11.

[39] Prawoto, N. (2025). Macroeconomic determinants of per capita consumption in Indonesia: Evidence from 1990–2023 using an ECM framework. *Riwayat: Educational Journal of History and Humanities, 8*(2), 1489–1499.

[40] Prayogo, M. D., & Rosalia, A. C. T. (2025). Pengaruh investasi, tenaga kerja, jumlah penduduk, dan rata-rata lama sekolah terhadap pertumbuhan ekonomi Yogyakarta 2014–2024. *JDEP (Jurnal Dinamika Ekonomi Pembangunan), 8*(2), 161–173.

[41] Prihatini, P. (2025). Analisis pengaruh indeks pembangunan manusia dan angkatan kerja terhadap pertumbuhan ekonomi Kota Jambi. *Edu Sosial, 5*(2), 67–75.

[42] Pulungan, R. W., Rahmanta, R., & Sembiring, S. A. (2024). Impact of government expenditure on education, social protection, public services, infrastructure, community empowerment, investment, and HDI on economic growth in Indonesia's 3T regions. *International Journal of Social Science, Education, Communication and Economics (SINOMICS Journal), 3*(3), 725–738.

[43] Purnamasari, E. N. I. (2024). Analisis pengaruh jumlah penduduk, jumlah pengangguran, dan tingkat pendidikan terhadap pertumbuhan ekonomi di Pulau Jawa. *Jurnal Ilmu Ekonomi JIE, 8*(1), 123–133.

[44] Rahmawati, J. D., Ramayanti, F., Lestari, D. I., & Nengsih, T. A. (2025). Pengaruh tingkat partisipasi angkatan kerja dan investasi penanaman modal dalam negeri terhadap produk domestik regional bruto di 11 provinsi dalam periode 2021–2023. *Jurnal Ekonomi Journal of Economic, 16*(1), 40–46.

[45] Ramadhani, I. N., Sari, D. D. P., & Subardin, M. (2025). The effect of government expenditure, fixed capital investment, and labor on economic growth in ASEAN-5 countries. *Efficient: Indonesian Journal of Development Economics, 8*(3), 294–305.

[46] Razak, A. R., Soedarmono, W., & Yudhi, W. S. A. (2020). Banking, labor force, and regional economic growth: Evidence from Indonesia. *Jurnal Keuangan dan Perbankan, 24*(2), 156–163.

[47] Ridwan, M. (2025). Analisis pengaruh jumlah penduduk dan tingkat pendidikan terhadap pertumbuhan ekonomi di Provinsi Jambi. *Edu Sosial, 5*(2), 59–66.

[48] Samsuddin, M. A. (2025). Pengaruh partisipasi angkatan kerja (PAK) dan tingkat pengangguran terbuka (TPT) terhadap PDRB di Provinsi Sumatera Utara. *Jurnal Ilmu Ekonomi dan Bisnis, 2*(2), 31–38.

[49] Setyowati, I. Y., Malik, N., & Suliswanto, M. S. W. (2024). Enhancing human development quality in Indonesia: Socio-economic and technological capabilities. *Etikonomi, 23*(1), 93–108.

[50] Simamora, S. E., Marbun, D. P. S. B., Zahra, F. H., Asnidar, A., & Ridha, A. (2024). Pengaruh pendapatan asli daerah dan belanja modal terhadap pertumbuhan ekonomi dan kesejahteraan masyarakat di Provinsi Sumatera Utara. *Jurnal Riset Ekonomi dan Akuntansi, 2*(4), 394–416.

[51] Simangunsong, N. A., & Barika, B. (2025). Analisis investasi dalam pertumbuhan ekonomi di Indonesia. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA), 9*(1), 952–964.

[52] Smith, C. (2025). Innovation and investment: Catalysts for long-term economic expansion. *Journal of Economics and Economic Education Research, 26*(S3), 1–3.

[53] Sosvilla-Rivero, S., Ramos-Herrera, M. del C., & Rubio-Guerrero, J. J. (2025). Public expenditure and economic growth: Further evidence for the European Union. *Economies, 13*(3), 60-76.

[54] Swastika, I. G. M. Y. (2024). Pengaruh tenaga kerja dan pertumbuhan penduduk terhadap pertumbuhan ekonomi di Indonesia tahun 2017–2022. *Warmadewa Economic Development Journal (WEDJ), 7*(1), 1–9.

[55] Tarigan, K. S. P., Simanungkalit, J., Sagala, T. O., & Veronica, Y. (2025). Analisis investasi terhadap pertumbuhan ekonomi. *Jurnal Publikasi Ekonomi dan Akuntansi, 5*(2), 415–422.

[56] Taufik, I., & Markhamah, S. (2024). The effect of infrastructure development on economic growth in ASEAN countries: Dynamic panel data analysis. *Nusantara Economics and Entrepreneurships Journals, 2*(1), 85–92.

[57] Wardana, M. F. K., & Firmansyah, A. (2025). Strengthening regional revenue through governance and strategic local spending synergy. *Riset: Jurnal Aplikasi Ekonomi Akuntansi dan Bisnis, 7*(1), 78–92.

[58] Zaharani, A. Z., & Nasir, M. (2025). Pengaruh investasi dan inflasi terhadap pertumbuhan ekonomi Indonesia. *Jurnal Transformasi Administrasi, 15*(1), 1–14.