1-19

by seungjae. shin

Submission date: 24-Apr-2026 01:42PM (UTC+0900)
Submission ID: 2939113463
File name: ekonika_socio.docx (6.95M)
Word count: 4506
Character count: 28396

Ekonika : Jurnal Ekonomi Universitas Kadiri
Volume X No. X Tahun XXXX

ISSN (*Online*) 2581-2157
ISSN (*Print*)

Available at :
http://ojs.unik-kediri.ac.id/index.php/ekonika

Socio-Demographic and Employment Dynamics on Indonesia's Economic Growth

Author details, author contribution, and acknowledgment are written separately in the different files (Title Page). You are not allowed to write author details here.

Article History:
Submitted :
Revised :
Received :

Keywords:
economic growth; demographic dynamics; labor market; panel data; regional development

ABSTRACT

This study investigates labor and socio-demographic factors that contribute to regional economic growth in Indonesian provinces between 2020 and 2024. Using a regression analysis of a panel, we assess how several indicators, such as the population growth rate (PGR), proportion of working-age population (WAP), average years of schooling (AYS), labor force participation rate (LFPR), and formal employment (FE), shape regional GDP per capita. We adopted a Fixed Effect Model based on tests from Chow and Hausman. We find a significant negative impact from PGR, whereas significant positive contributions are from AYS and LFPR. However, there is no meaningful difference from zero for WAP and FE. The findings demonstrate a beneficial role of human capital and labor participation in regional broad-based growth.

Kata-kata kunci:
pertumbuhan ekonomi; dinamika demografi; pasar tenaga kerja; data panel; pengembangan regional

ABSTRAK

Penelitian ini menganalisis pengaruh variabel sosial-demografi dan ketenagakerjaan terhadap pertumbuhan ekonomi antarprovinsi di Indonesia pada periode 2020–2024. Dengan menggunakan regresi data panel, penelitian ini mengevaluasi pengaruh laju pertumbuhan penduduk (LPP), proporsi usia produktif (UP), rata-rata lama sekolah (RLS), tingkat partisipasi angkatan kerja (TPAK), dan tenaga kerja formal (TKF) terhadap PDRB per kapita. Model Fixed Effect dipilih berdasarkan uji Chow dan Hausman. Hasil menunjukkan bahwa LPP berpengaruh negatif signifikan, sementara RLS dan TPAK berpengaruh positif signifikan. Sebaliknya, UP dan TKF tidak signifikan secara statistik. Temuan ini menegaskan pentingnya penguatan modal manusia dan partisipasi kerja dalam mendorong pertumbuhan ekonomi daerah secara merata.

ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

INTRODUCTION

Economic growth is among the major indicators applied in assessing whether there is successful development in a region or a country. However, such growth does not always reflect success in equitable development or improvements in people's quality of life. Indonesia, as a large archipelagic nation with diverse geographical, social, and economic characteristics, faces significant challenges in achieving inclusive and balanced development. Although national economic growth reached 5.05% in 2023 (World Bank, 2023), regional inequalities remain stark (Suparman & Muzakir, 2023; Rahman & Nugroho, 2023; Putri & Santoso, 2023). 18 Data from the Central Statistics Agency (BPS) shows that GRDP per capita remains uneven: Kalimantan leads with approximately IDR 85 million, followed by Java at IDR 78 million, Sumatra at IDR 63 million, and Sulampua (Sulawesi, Maluku, Papua) trailing at around IDR 49 million. These figures reveal that economic growth does not necessarily align with equitable development—and may even deepen socio-economic divides between regions. Furthermore, in the context of regional development disparities and urban economic concentration, UN-Habitat (2022) emphasizes that unplanned urban growth without sustainable development strategies can exacerbate social and economic inequalities across regions.

These divergences in growth are directly linked to structural factors, particularly employment conditions and socio-demographics. 26 Human Capital Theory highlights that investing in education and workforce skills is essential for enhancing regional productivity and driving economic progress. Poorly developed human resources can slow down the pace of development, even when macroeconomic indicators show positive trends. Recent research further supports the idea that the quality of education—not just the number of years spent in school—is critical in shaping the cognitive abilities of the workforce and boosting long-term productivity (Andini & Hakim, 2024). In this context, the

ISSN (*Online*) 2581-2157
Jurnal Ekonika vol X (X) 20XX ISSN (*Print*) 2502-9304

average length of schooling serves as a useful proxy for explaining variations in per capita GRDP across provinces.

Beyond education, the age composition of the population also plays a crucial role in shaping economic growth. According to the demographic dividend theory, an increase in the share of the working-age population can help lower the dependency ratio, boost labor force participation, and enhance savings and investment. However, this dividend doesn't occur automatically—it relies heavily on the preparedness of the education system, the availability of health services, and the labor market's ability to absorb new workers. Therefore, a higher proportion of working-age individuals can drive economic growth, but only if supported by strong human capital and sufficient employment opportunities.

Labor participation is equally essential. The labor participation theory highlights that when more people are engaged in the workforce, it boosts the effective labor input within the production process. Recent studies even introduce the concept of a "gender bonus"—an added boost to economic growth that occurs when female labor force participation rises significantly, especially in areas that have managed to dismantle structural barriers in the labor market. As such, the labor force participation rate (LFPR) stands out as a key indicator for understanding regional differences in economic growth.

Indonesia's labor market remains heavily dominated by informal employment, where workers often experience low productivity and limited access to social protection. From the standpoint of institutional theory and structural transformation, formalizing the workforce can enhance resource allocation, ensure contract stability, and improve long-term productivity. However, the benefits of formalization for economic growth are closely tied to the quality of the formal jobs themselves. If these jobs fail to significantly boost productivity, their overall contribution to GRDP will remain minimal.

Jurnal Ekonika vol X (X) 20XX
ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

Another important demographic factor is the population growth rate (PGR). PGR has a dual impact on the economy. On one hand, rapid population growth can strain per capita income if the expanding labor force isn't productively absorbed. On the other hand, if population growth is supported by sufficient access to education and job opportunities, it can become a driving force for economic progress. Therefore, it's essential to empirically examine how the interaction between PGR, employment variables, and the quality of human resources shapes development outcomes.

In addition, the study period (2020–2024) coincides with the COVID-19 pandemic and the subsequent recovery phase, which significantly affected regional economic performance. The pandemic disrupted labor markets, reduced economic activity, and increased unemployment, particularly in regions heavily dependent on informal sectors. This condition may influence the relationship between socio-demographic variables and economic growth, as labor absorption and productivity experienced structural shocks during this period.

Furthermore, infrastructure disparities across regions remain a crucial determinant of economic growth. Limited access to transportation, digital connectivity, and public services—especially in Eastern Indonesia—can constrain the ability of the labor force to contribute productively. In this context, the role of informal employment becomes increasingly important, as it often acts as a buffer during economic shocks, despite its relatively low productivity.

Most existing studies in Indonesia have examined economic growth and human development in isolation. For instance, Agustin (2021) explores the impact of GRDP on labor absorption but does not account for demographic variables. Septiani (2020) applies panel data to study economic growth, yet omits key factors such as labor force participation and the quality of education. Similarly, Saleh et al. (2022) focus primarily on demographic dynamics at the provincial level without extending the analysis to the national scale. These

ISSN (*Online*) 2581-2157
Jurnal Ekonika vol X (X) 20XX ISSN (*Print*) 2502-9304

examples highlight a clear research gap in integrating socio-demographic and labor factors into a unified and comprehensive analytical framework.

The innovation of this study lies in its simultaneous integration of socio-demographic indicators (PGR, WAP, AYS) and employment indicators (LFPR, FE) within an interprovincial panel data analysis covering the 2020–2024 period. By using a panel model, the research enables both cross-time and cross-regional comparisons while accounting for unobserved heterogeneity—resulting in more precise and reliable estimates. The selection of the final estimation model was guided by a series of statistical tests (Chow, Hausman, and Lagrange Multiplier) to ensure the validity and robustness of the findings.

Theoretically, this study contributes to regional development theory by integrating socio-demographic and employment factors to explain economic growth. Practically, it offers a foundation for formulating evidence-based development policies, focusing on controlling population growth, enhancing the quality of education, increasing labor force participation, and steering the labor market toward meaningful formalization. In doing so, the study aims to present a more comprehensive view of Indonesia's economic development within a framework that promotes both sustainability and social justice.

LITERATURE REVIEW

Research on the links between socio-demographic factors, employment, and economic growth is grounded in several core theories. Human Capital Theory argues that education, skills, and investments in health represent key forms of human capital that directly enhance labor productivity and competitiveness (Becker, 1993; Hanushek & Woessmann, 2020). It's not just the duration of schooling that matters—but the quality of education, which shapes cognitive abilities and innovation, both of which have long-lasting effects on economic growth.

Jurnal Ekonika vol X (X) 20XX
ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

Recent empirical studies have further emphasized the importance of integrating demographic and labor variables in explaining economic growth. For instance, Kotschy and Bloom (2023) highlight that the demographic dividend can only be realized when supported by strong institutional capacity and labor market flexibility. Similarly, Torm and Oehme (2024) show that labor formalization contributes to economic growth only when accompanied by productivity improvements. Meanwhile, Melo et al. (2024) underline the importance of policy alignment in education, labor markets, and population control to optimize growth outcomes. These recent findings reinforce the argument that the interaction between socio-demographic and employment factors is complex and context-dependent.

Lewis (1954) underscores the importance of structural transformation from the informal to the formal sector to drive productivity gains. This is especially relevant in Indonesia, where informal labor dominates and is often linked to low productivity and limited access to social protections. While formalization can improve economic efficiency, its actual impact depends greatly on the quality of formal jobs being created (Pratama & Wulandari, 2024; Torm & Oehme, 2024; Gutiérrez & Rodríguez-Lesmes, 2023; Siregar & Dewi, 2022). Rossi (2020) also reinforces the critical role of human capital quality, emphasizing that investments in education and skills are fundamental drivers of macroeconomic progress.

The demographic dividend theory suggests that a higher share of the working-age population can lower the dependency ratio and boost economic output. However, realizing this dividend isn't automatic—its success hinges on the readiness of systems in education, healthcare, and the labor market to effectively absorb the growing workforce (Widodo & Arifin, 2022; Robertson, 2022; Kotschy & Bloom, 2023). A study by Melo et al. (2024) underscores the need for well-designed population and labor policies to harness this potential and avoid the risk of it becoming a demographic burden instead.

Jurnal Ekonika vol X (X) 20XX
ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

Labor force participation is another critical factor. Active workforce engagement in the labor market fuels regional output growth (Baerlocher et al., 2021). Additionally, recent literature highlights the possibility of a "gender bonus"—an economic boost that occurs when female labor participation rises, particularly in areas that have effectively dismantled structural barriers in the labor market.

Population growth (PGR) can have a two-sided impact on the economy. When infrastructure and employment opportunities are lacking, a high PGR tends to reduce per capita GRDP (Owusu, 2021). However, if supported by quality education and sufficient job availability, population growth can instead act as a catalyst for economic development (Andini & Hakim, 2024).

Hence, the literature review reveals that both socio-demographic factors (PGR, WAP, AYS) and employment-related variables (LFPR, FE) are significantly linked to economic growth. However, most prior studies in Indonesia have examined these factors in isolation (Agustin, 2021; Septiani, 2020). What sets this study apart is its innovative approach of integrating all these variables into a unified interprovincial panel data model—offering a more comprehensive understanding of regional development dynamics.

METHODS

This study adopts a quantitative approach using panel data analysis. This method was selected for its ability to combine both time-series and cross-sectional data, enhancing estimation efficiency and accounting for unobserved differences across provinces (Baltagi, 2021). As a result, the analysis is expected to offer more nuanced insights into how socio-demographic and employment factors influence provincial economic growth in Indonesia. The panel data methodology literature also underscores the importance of validating estimation models through various statistical tests, as emphasized by Gujarati & Porter (2009) and Hsiao (2014), to ensure the reliability of the findings.

Jurnal Ekonika vol X (X) 20XX
ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

Population dan Sample

This study encompasses all 34 provinces in Indonesia over a five-year observation period from 2020 to 2024. Since it includes every province, the research is classified as a census. The data utilized are secondary sources, primarily drawn from official datasets provided by the Central Statistics Agency (BPS) and the National Labor Force Survey (Sakernas). Additional insights on employment trends were gathered from the Ministry of Manpower of the Republic of Indonesia (Kementerian Ketenagakerjaan Republik Indonesia, 2024), which offers detailed indicators for both formal and informal labor markets.

Data Collection Techniques

The dataset comprises both dependent and independent variables. The dependent variable is the natural logarithm of gross regional domestic product (GRDP) per capita. The independent variables include the population growth rate (PGR), proportion of the productive-age population (PA), average length of schooling (AYS), labor force participation rate (LFPR), and formal labor force (FE). Data was sourced from annual publications by Statistics Indonesia, the Ministry of Manpower, and official Sakernas reports. To ensure consistency across time and regions, all data underwent thorough cleaning and alignment processes.

Data Analysis Techniques

The data analysis was carried out using panel data regression, employing three modeling approaches: Pooled Ordinary Least Squares (OLS), Fixed Effect Model (FEM), and Random Effect Model (REM). To determine the most suitable model, the Chow test, Hausman test, and Lagrange Multiplier (LM) test were applied. The Fixed Effect Model (FEM) was ultimately chosen, as the test results revealed a significant distinction between the PLS and FEM models and demonstrated FEM's consistency over REM. Additionally, classical assumption

ISSN (*Online*) 2581-2157
Jurnal Ekonika vol X (X) 20XX ISSN (*Print*) 2502-9304

tests were conducted to identify issues such as multicollinearity, heteroscedasticity, autocorrelation, and deviations from normality.

The panel regression model equation used can be written as follows.

$$Y_{it} = \alpha + \beta_1 LPP_{it} + \beta_2 UP_{it} + \beta_3 RLS_{it} + \beta_4 TPAK_{it} + \beta_5 TKF_{it} + e_{it} \quad (1)$$

Description:

Y_{it} = Percapita GRDP of province i in year t (in natural log)
LPP_{it} = Population growth rate
UP_{it} = Proportion of productive age
RLS_{it} = Average length of schooling
$TPAK_{it}$ = Labor force participation rate
TKF_{it} = Formal workforce
e_{it} = error term

Further, this study adopts a general economic calculation approach to evaluate how well development policies optimize their net benefits and costs—an assessment that can be expressed mathematically as follows:

$$w = \sum_{t=1}^{T} AX_t Q_t \quad (2)$$

$$NPV = \sum_{t=1}^{n} \frac{CF_t}{(1+K)^t} - I_0 \quad (3)$$

Equation (2) illustrates the aggregation of economic variables over time using specific multipliers, while Equation (3) outlines the calculation of Net Present Value (NPV), a standard tool in evaluating development investments. By integrating econometric modeling with mathematical analysis, this study aims to present a comprehensive view of how socio-demographic and employment factors influence regional economic growth in Indonesia.

Jurnal Ekonika vol X (X) 20XX
ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

RESULTS AND DISCUSSION

The panel data regression analysis using the Fixed Effect Model (FEM) reveals that out of the five independent variables examined, three significantly influence provincial economic growth in Indonesia. The population growth rate (PGR) has a notably negative impact on the logarithm of per capita GRDP, whereas the average length of schooling (AYS) and the labor force participation rate (LFPR) show significant positive effects. In contrast, the proportion of the working-age population (WAP) and the formal labor force (FE) do not exhibit any statistically significant impact.

Table 1. Fixed Effects Model (FEM) Estimation Results

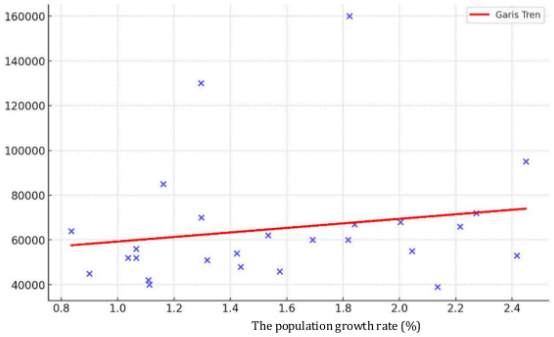
Variable	Coeffisient	*t*-Statistic	Prob.
LPP	-0.0656	-4.42	0.012
UP	0.0698	1.04	0.716
RLS	0.1355	3.38	0.040
TPAK	0.0211	5.34	0.005
TKF	-0.0000009	-0.02	0.983
R^2 (within)	0.5092		

Source: STATA data processing results (2024)

The results indicate that an increase in population growth rate (PGR) actually hinders economic growth. This is largely due to the added pressure on public infrastructure, job availability, and social services when population growth outpaces productivity gains (Owusu, 2021). The data reveals a downward trend—provinces with higher population growth often show lower per capita GRDP. These findings suggest that rapid population expansion strains economic performance, especially when it's not supported by the creation of productive employment opportunities (Rinaldi & Putra, 2025). This interpretation aligns with the regression analysis, which confirms a significantly negative relationship between PGR and economic growth (Owusu, 2021), as illustrated in Figure 1.

Jurnal Ekonika vol X (X) 20XX
ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

Figure 1. Relationship between Population Growth Rate (%) and GRDP per Capita (2020-2024)

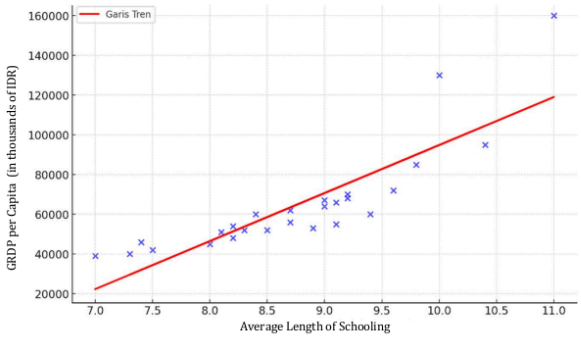


Source: Data processing results, 2024

The strong positive effect of RLS highlights the vital role of education in enhancing the quality of human resources, which in turn supports economic growth (Hanushek & Woessmann, 2020).

The relationship between AYS and GRDP is illustrated in Figure 2 below.

Figure 2. Correlation between Average Length of Schooling (AYS) and GRDP per Capita (2020-2024)



Source: Data processing results, 2024

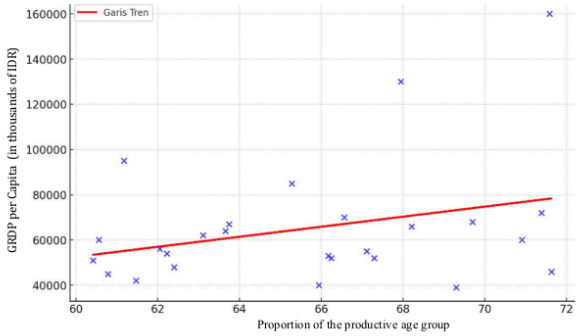
The insignificance of the working-age population (WAP) variable suggests that the demographic dividend in Indonesia has not been fully optimized. Although

Jurnal Ekonika vol X (X) 20XX
ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

theoretically a higher proportion of productive-age population should stimulate economic growth, this effect is highly dependent on the quality of human capital and labor market absorption capacity.

In many provinces, the increase in the working-age population is not matched by adequate employment opportunities, leading to underemployment or employment in low-productivity sectors, particularly in the informal economy. Additionally, disparities in education and skills across regions further limit the ability of this population group to contribute effectively to economic output. Therefore, the lack of significance of WAP indicates that demographic advantages alone are insufficient without structural support in education, labor markets, and regional development policies.

Figure 3. Relationship between the Proportion of the Working-Age Population (%) and GRDP per Capita (2020–2024)

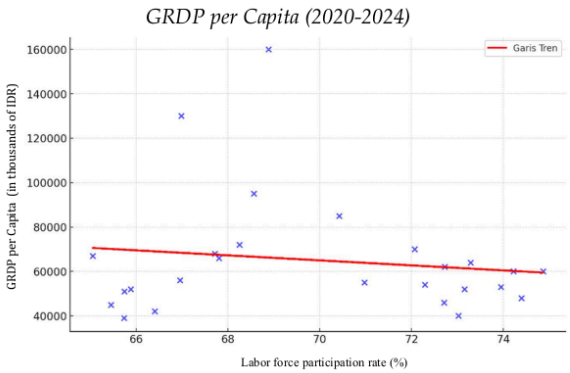


Source: Data processing results, 2024

Conversely, a high labor force participation rate (LFPR) is positively associated with economic growth, reinforcing the idea that greater workforce engagement leads to stronger regional output (Baerlocher et al., 2021).

Figure 4. Relationship between Labor Force Participation Rate (%) and

Jurnal Ekonika vol X (X) 20XX
ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304



Source: Data processing results, 2024

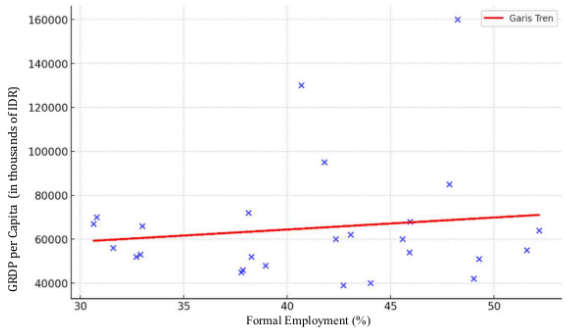
Likewise, the lack of significance in the FE variable suggests that the quality of formal employment in Indonesia remains a pressing concern. Torm & Oehme (2024) argue that formalizing the labor market only leads to meaningful outcomes when it's paired with higher productivity and robust social protection. This view is supported by Gutiérrez & Rodríguez-Lesmes (2023), whose research reveals a substantial productivity gap between formal and informal business sectors in developing countries. As a result, formalization alone does not necessarily drive economic growth unless it is accompanied by improvements in job quality (Figure 5). The insignificance of formal employment (FE) also indicates that the transition from informal to formal sectors has not yet translated into higher productivity. This may be due to the prevalence of low-quality formal jobs, which do not significantly differ in productivity from informal employment. Moreover, rigid labor market structures and limited industrial diversification in some regions may restrict the contribution of formal employment to economic growth. This finding highlights the importance of not only increasing the share of formal employment but also improving job quality, skills, and productivity within the formal sector.

The dominance of the informal sector in Indonesia plays a crucial role in explaining the study's findings. Informal employment often acts as a safety net

Jurnal Ekonika vol X (X) 20XX
ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

during economic shocks, such as the COVID-19 pandemic, but it is generally associated with low productivity and limited access to social protection. As a result, regions with a high share of informal workers may experience slower economic growth despite high labor participation. This condition may also explain why formal employment does not show a significant impact, as the overall labor market structure is still heavily influenced by informality.

Figure 5. Relationship between Formal Employment (%) and GRDP per Capita (2020–2024)



Source: Data processing results, 2024

In general, these findings address the core research question by showing that not all demographic and employment indicators significantly impact economic growth. The study confirms that enhancing the quality of education and boosting labor force participation are more impactful than merely increasing the number of formal jobs. These results align with human capital theory (Becker, 1993) and strengthen the argument that, in development, quality matters more than quantity.

The policy implications of this study highlight the importance of focusing on population growth control, expanding access to quality education, and generating productive employment opportunities. These conclusions align with existing evidence that fiscal decentralization plays a key role in boosting per capita GRDP (Lestari & Hidayat, 2024). This is especially relevant given the

Jurnal Ekonika vol X (X) 20XX
ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

spatial disparities across provinces—particularly in Eastern Indonesia—where the planned relocation of the national capital (IKN) may significantly influence how economic growth is distributed (Yusuf & Saleh, 2025).

CONCLUSION

This research highlights that socio-demographic and employment dynamics play a crucial role in shaping provincial economic growth in Indonesia between 2020 and 2024. The findings reveal that rising population growth negatively impacts per capita GRDP, reflecting the strain that unchecked demographic expansion places on infrastructure, job creation, and public services. On the other hand, education—captured through average years of schooling—emerges as a key growth driver, reinforcing the importance of human capital quality in boosting productivity and long-term development. Additionally, labor force participation proves to be a positive force, demonstrating that broader inclusion in the workforce directly enhances regional economic performance.

On the other hand, the lack of significance in the working-age population share suggests that Indonesia has yet to fully capitalize on its demographic dividend, primarily because of mismatches between the labor supply and the market's ability to absorb it. Likewise, the insignificance of formal employment highlights persistent issues in job quality and productivity gaps between the formal and informal sectors—challenges that continue to constrain the potential advantages of labor market formalization.

Theoretically, this research contributes to the regional development literature by combining demographic and employment factors within a unified panel data framework, providing a more comprehensive understanding of growth disparities across provinces. On a practical level, the findings highlight the urgent need for policy actions focused on: (1) controlling population growth, (2) expanding access to quality education, (3) increasing labor force

Jurnal Ekonika vol X (X) 20XX
ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

participation—especially among women to capture the benefits of the "gender bonus," and (4) enhancing the quality and productivity of formal employment, rather than prioritizing formalization alone.

But this study does come with certain limitations. The analysis is limited to just five core variables and does not directly account for factors like infrastructure, digital transformation, or institutional quality—each of which could influence how demographics impact economic growth. Additionally, the observation window from 2020 to 2024 is relatively short and includes years significantly shaped by the COVID-19 pandemic, which may have skewed longer-term structural trends (Handayani & Saputra, 2024).

Future research should consider expanding its scope by incorporating additional factors such as technological advancement, the regional investment climate, and the quality of governance. It is also important to extend the time frame of analysis to better capture long-term demographic and labor market changes across generations. Doing so will help future studies offer a stronger foundation for crafting inclusive and sustainable development strategies that reflect the diverse realities of Indonesia's provinces. This study also highlights that structural factors such as labor market informality, infrastructure disparities, and external shocks like the COVID-19 pandemic play an important role in shaping regional economic outcomes. Therefore, future research should incorporate these variables to provide a more comprehensive understanding of economic growth dynamics in Indonesia.

BIBLIOGRAPHY

Agustin, W. (2021). Analisis pengaruh PDRB, IPM, dan UMP terhadap penyerapan tenaga kerja di Indonesia (Studi kasus di 10 provinsi tahun 2015–2019) [Skripsi Sarjana, UIN Syarif Hidayatullah Jakarta].

Andini, F., & Hakim, A. (2024). The effect of human development index (HDI), inequality and consumption on poverty levels in all provinces in

ISSN (*Online*) 2581-2157
Jurnal Ekonika vol X (X) 20XX ISSN (*Print*) 2502-9304

Indonesia. Jurnal Ilmu Ekonomi Terapan, 9(2), 145–156. https://doi.org/10.20473/jiet.v9i2.59249

Baerlocher, D., Parente, S. L., & Rios-Neto, E. (2021). Female labor force participation and economic growth: Accounting for the gender bonus. Economics Letters, 200, 109740. https://doi.org/10.1016/j.econlet.2021.109740

Baltagi, B. H. (2021). Econometric analysis of panel data (6th ed.). Wiley.

Becker, G. S. (1993). Human capital: A theoretical and empirical analysis, with special reference to education (3rd ed.). University of Chicago Press.

Gujarati, D. N., & Porter, D. C. (2009). Basic econometrics (5th ed.). McGraw-Hill.

Gutiérrez, L. H., & Rodríguez-Lesmes, P. (2023). Productivity gaps at formal and informal microfirms. World Development, 165, 106205. https://doi.org/10.1016/j.worlddev. 2022.106205

Handayani, L., & Saputra, R. (2024). COVID-19, economic growth, and income inequality: Empirical study in Indonesia. Economic Development Analysis Journal, 13(1), 45–58. https://doi.org/10.15294/edaj.v13i1.3107

Hanushek, E. A., & Woessmann, L. (2020). The economic impacts of learning losses (OECD Education Working Papers No. 225). OECD Publishing. https://doi.org/10.1787/19939019

Hsiao, C. (2014). Analysis of panel data (3rd ed.). Cambridge University Press.

Kementerian Ketenagakerjaan Republik Indonesia. (2024). Profil ketenagakerjaan Indonesia 2023. Kementerian Ketenagakerjaan RI.

Kotschy, R., & Bloom, D. E. (2023). Population aging and economic growth: From demographic dividend to demographic drag? NBER Working Paper No. 31585. https://doi.org/10.3386/w31585

Lestari, D., & Hidayat, T. (2024). Analysis of the impact of fiscal decentralization on per capita GRDP. International Journal of Research and Review, 11(11), 109–118. https://www.ijrrjournal.com/IJRR14.pdf

Lewis, W. A. (1954). Economic development with unlimited supplies of labour. The Manchester School, 22(2), 139–191.

Melo, R. H., Lasulika, C. T., & Saleh, S. E. (2024). Optimalisasi bonus demografi melalui kebijakan kependudukan untuk mendorong pertumbuhan

ISSN (*Online*) 2581-2157
ISSN (*Print*) 2502-9304

ekonomi Indonesia. Geosfera: Jurnal Penelitian Geografi, 3(2). https://doi.org/10.37905/geojpg.v3i2.29538

Owusu, E. (2021). Does human capital tilt the population–economic growth dynamics? Evidence from MENA countries. Social Indicators Research, 155(3), 1029–1058. https://doi.org/10.1007/s11205-021-02867-5

Pratama, R., & Wulandari, N. (2024). Analisis determinan ketimpangan pendapatan di Indonesia. Jurnal Pengembangan Wilayah dan Perencanaan, 9(1), 33–47. https://doi.org/10.19184/jpwp.v9i1.46091

Putri, A., & Santoso, B. (2023). Statistical modeling to analyze factors affecting the middle-income class in Indonesia. Heliyon, 9(10), e21234. https://doi.org/10.1016/j.heliyon.2023.e21234

Rahman, A., & Nugroho, S. (2023). Economic zones and local income inequality: Evidence from Indonesia. Journal of Economic Inequality, 21(4), 765–789. https://doi.org/10.1007/s10888-023-09581-x

Rinaldi, H., & Putra, J. (2025). Panel data regression on GRDP per capita in West Sumatra Province (2020–2023). UJSDS: Universal Journal of Social and Development Studies, 5(2), 201–213. https://doi.org/10.37200/UJSDS.2025.52.0328

Robertson, C. (2022). Demographics and growth: Who booms, when? In The time-travelling economist (pp. 85–106). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-97597-5_5

Rossi, F. (2020). Human capital and macroeconomic development: A review of the evidence. World Bank Research Observer, 35(2), 227–262. https://doi.org/10.1093/wbro/lkaa001

Saleh, S. E., Yusf, M., & Alam. (2022). Analysis of the effect of demographic dividend on economic growth in Gorontalo Province. European Journal of Research Development and Sustainability, 3(1).

Septiani, V. (2020). Analisis pertumbuhan ekonomi Indonesia menggunakan regresi data panel [Skripsi Sarjana, UIN Suska Riau].

Siregar, M., & Dewi, K. (2022). Analysis of factors affecting income inequality in Indonesia from 2016–2022. Journal of International Conference Proceedings, 5(1), 123–135. https://doi.org/10.32535/jicp.v5i1.1666

Suparman, & Muzakir, M. (2023). Regional inequality, human capital, unemployment, and economic growth in Indonesia: Panel regression

ISSN (*Online*) 2581-2157
Jurnal Ekonika vol X (X) 20XX ISSN (*Print*) 2502-9304

approach. Cogent Economics & Finance, 11(2), 2251803. https://doi.org/10.1080/23322039.2023.2251803

Torm, N., & Oehme, M. (2024). Social protection and formalization in low- and middle-income countries: A scoping review of the literature. World Development, 181, 106662. https://doi.org/10.1016/j.worlddev.2024.106662

UN-Habitat. (2022). World cities report 2022: Envisioning the future of cities. United Nations Human Settlements Programme. https://unhabitat.org

Widodo, S., & Arifin, Z. (2022). Income inequality, before and during the COVID-19 pandemic: District/City level in Indonesia. Economics and Business Quarterly Reviews, 2(3), 112–128. https://doi.org/10.31014/aior.1992.02.03.123

World Bank. (2023). World development indicators 2023. The World Bank. https://databank.worldbank.org/source/world-development-indicators

Yusuf, M., & Saleh, S. E. (2025). Analysis of factors affecting GRDP per capita in Eastern Indonesia: A panel and spatial model approach in the context of the planned capital relocation (IKN). Research Journal of Social Sciences and Economics, 14(1), 56–72. https://doi.org/10.13140/RG.2.2.39244.93253

ekonika socio.docx

ORIGINALITY REPORT

18%	15%	13%	10%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Universitas Katolik Widya Mandala Student Paper	8%
2	ipm2kpe.or.id Internet Source	1%
3	ojs.unik-kediri.ac.id Internet Source	1%
4	phd.lib.uni-corvinus.hu Internet Source	1%
5	Pate, Jennifer . "Macroeconomics for Non-Majors", UAGC, 2024 Publication	1%
6	journal.trunojoyo.ac.id Internet Source	1%
7	journal-innovations.com Internet Source	<1%
8	"Demographic Dividend in Central Asia", Corvinus University of Budapest, 2024 Publication	<1%
9	mnje.com Internet Source	<1%
10	www.apec.org Internet Source	<1%
11	competition.binus.ac.id Internet Source	<1%

12	journalaer.ru Internet Source	<1%
13	digilib.uin-suka.ac.id Internet Source	<1%
14	Submitted to Cardiff University Student Paper	<1%
15	ejournal2.undip.ac.id Internet Source	<1%
16	isppi.ukim.edu.mk Internet Source	<1%
17	jos.unsoed.ac.id Internet Source	<1%
18	jurnalfebi.uinsa.ac.id Internet Source	<1%
19	www.eriesjournal.com Internet Source	<1%
20	www.kasbitoric.com Internet Source	<1%
21	www.sciencepg.com Internet Source	<1%
22	Irwan Trinugroho, Evan Lau. "Business Innovation and Development in Emerging Economies", CRC Press, 2019 Publication	<1%
23	Khuzaini, Zakky Zamrudi, Husnul Madihah. "Optimizing Employee Performance and Performance Appraisal Through Job Satisfaction", Ekonika : Jurnal Ekonomi Universitas Kadiri, 2025 Publication	<1%

24	assap.wum.edu.pk Internet Source	<1%
25	jurnal.ahmar.id Internet Source	<1%
26	nzpri.aut.ac.nz Internet Source	<1%
27	portalcris.vdu.lt Internet Source	<1%
28	shirkah.or.id Internet Source	<1%
29	sinomicsjournal.com Internet Source	<1%
30	subeno mhy, Bambang Pramuka, Wiwiek Rabiatul Adawiyah, Abdul Ahmad. "Disrupting the Poverty Trap: Political Budget Cycles and the Interlocking Movement in Decentralized Indonesia", Springer Science and Business Media LLC, 2025 Publication	<1%
31	upo.es Internet Source	<1%
32	Maila D.H. Rahiem. "Towards Resilient Societies: The Synergy of Religion, Education, Health, Science, and Technology", CRC Press, 2025 Publication	<1%
33	Ramesh Chandra Das. "Societal Implications of Fiscal and Monetary Policies - Does Good Governance Matter?", Routledge, 2026 Publication	<1%

Exclude quotes	Off	Exclude matches	Off
Exclude bibliography	On		