



## The Influence of Gender and Investment on Economic Growth in Sumatra

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### ABSTRACT

This study aims to analyze the impact of gender equality and domestic investment on economic growth in Sumatra from 2017 to 2022. Specifically, it examines the roles of the Gender Development Index (GDI), Gender Empowerment Index (GEI), and Domestic Investment (PMDN) using secondary data sourced from BPS. The research employs panel data regression analysis to identify significant factors influencing economic growth. The results reveal that both GDI and GEI have a positive and significant effect on economic growth, while PMDN also contributes positively. These findings highlight the importance of promoting gender equality and boosting domestic investment to drive economic development. Additionally, the study identifies diverse economic behaviors across provinces, indicating the necessity for tailored regional development strategies. Overall, this research underscores the critical role of gender equality and investment in fostering sustainable economic growth in Sumatra.

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## **INTRODUCTION**

Economic growth is a vital indicator of a nation's developmental achievements, closely linked to the overall welfare and quality of life of its citizens. A robust economic development strategy, along with the efficient utilization of human resources, plays a pivotal role in enhancing the Gross Regional Domestic Product (GRDP) of a specific region. By fostering a conducive environment for economic activities, regions can experience increased productivity, higher income levels, and improved living standards (S. D. Sari & Setyowati, 2022; I. U. Sari & Saputra, 2020). In "A Contribution to the Theory of Economic Growth," Solow identifies capital accumulation, labor, and technological advancement as primary determinants of economic growth (Solow, 1956). In 2000, 189 UN member states set the Millennium Development Goals (MDGs) with eight targets for 2015. After the MDGs period, the Sustainable Development Goals (SDGs) were introduced to extend the effort until 2030. The SDGs include 17 broad objectives aimed at improving societal welfare, such as eradicating poverty, eliminating hunger, ensuring good health, providing quality education, and promoting gender equality (Altuzarra et al., 2021).

The fifth SDG aims to achieve gender equality and empower all women and girls, intersecting with other goals like quality education. This international commitment facilitates women's access to education, labor markets, and political and economic institutions under equal conditions, contributing to economic and societal development. As a UN member, Indonesia commits to achieving gender equality and enhancing human resource quality regardless of gender (Altuzarra et al., 2021). Globally, nations strive to ensure better living standards for their citizens without gender discrimination, ensuring equal rights and justice. The Universal Declaration of Human Rights (1948) asserts, "Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status."

The World Bank (2005) highlights that gender discrimination in human resource accumulation, public service access, and resource utilization can hinder economic growth and improve living standards. Gender equality is essential for all countries, yet disparities persist worldwide. Gender inequality affects health, education, income, and labor market participation, limiting women's capabilities and freedoms and impeding human development. Conversely, empowering women, especially economically, is vital for economic growth, poverty reduction, and sustainable development (Harahap, 2014).

Promoting women's empowerment is crucial for enhancing their quality of life and overall resourcefulness. Research indicates that achieving the highest levels of development necessitates the equal advancement and active participation of women. As women make up half of the global population, their contributions are essential for comprehensive quality progress. The United Nations Development Program (UNDP) introduced the Gender Development Index (GDI) and the Gender Empowerment Measure (GEM) to assess gender

disparities and women's empowerment. These indices are crucial for evaluating gender equity and influencing national economic growth (Salsabila & Hendrawan, 2021).

Statistics Indonesia (BPS) reports that the average GEM in Indonesia from 2017-2022 was 74.58, indicating that women's roles in politics and economics in Sumatra were not significantly prominent. All provinces in Sumatra had GEM averages below the national average, highlighting the need for greater efforts to enhance women's roles amid persistent gender disparities (Mahri et al., 2021). Active participation of women in the economy and decision-making processes can significantly strengthen economic conditions, boost national development achievements, and improve living standards for everyone, including men, women, families, and communities. By ensuring that women have equal opportunities and a voice in important decisions, societies can harness the full potential of their entire population, leading to more robust and inclusive growth (Karyono et al., 2020). The average GDI in Indonesia from 2017-2022 was 91.16, reflecting gradual but insufficient gender development achievements. Only five provinces in Sumatra exceeded the national GDI average, indicating significant gender disparities across most of the region.

Studies reveal that societies with gender discrimination experience slower economic growth and poverty alleviation compared to more gender-equal societies. Gender inequality results in economically inefficient outcomes (Dollar & Gatti, 1999; Klasen, 2000). Increased female labor force participation significantly boosts GDP, while women's success in education and employment reduces household poverty and enhances human capital (Saqib et al., 2016; Zahra et al., 2021; Lusiarista & Arif, 2022).

Yembise (2018) emphasizes that women's roles positively impact economic growth, necessitating joint efforts to enhance female participation in economic growth, productivity, and labor market equity, contributing to sustainable development. Addressing gender disparities to enhance women's economic contributions aligns with broader economic growth strategies, emphasizing the importance of balanced gender roles in education, health, labor, and economics for national growth. Additionally, Solow underscores the importance of capital accumulation alongside labor in economic growth. New investments, such as Domestic Investment (PMDN), are essential for accelerating economic growth, though the rate of growth depends on investment productivity (Todaro, 2000).

## **LITERATURE REVIEW**

### ***Economic Growth Theory***

Prawoto (2019) articulates that economic growth involves long-term issues tied to human resource quality, natural resource availability, and the transformation of output into societal income. Classical economic growth theory by Adam Smith identifies total output and population growth as crucial factors, linked to natural resources, human resources, and capital stock. Neo-classical growth theory by Solow (1956) emphasizes capital accumulation, labor, and technology as key determinants. Solow's model asserts that sustainable

economic growth also requires population growth and technological advancements (Astratama, 2022). Klasen (2000) and Klasen & Lamanna (2009) conclude that gender inequality hampers economic growth by reducing human capital productivity.

### ***Gender Concept***

Gender and sex differ fundamentally. Gender is a social construct that can change based on various factors such as time, culture, religion, and socio-economic conditions, unlike sex, which is biologically determined and immutable (Khuza'i, 2013). Theories addressing gender issues include Nurture Theory, which suggests that gender roles result from social and cultural constructs, often relegating women to subordinate roles. Equilibrium Theory emphasizes partnership and harmony between genders, advocating for balanced consideration in development policies. Lastly, Nature Theory posits that biological differences between sexes are inherent and universal, although some roles, such as workforce participation, can be interchangeable (Khuza'i, 2013).

### ***Gender Development Index***

The Gender Development Index (GDI), developed by UNDP, assesses gender inequality in human development across education, health, and living standards (BPS, 2020). The Gender Development Index (GDI), first introduced in 1995 and updated in 2014, compares the Human Development Index (HDI) achievements of females and males. In Indonesia, the GDI uses life expectancy to measure health, mean and expected years of schooling for education, and adjusted per capita expenditure to assess living standards (KPPPA, 2014). The formula for GDI is  $GDI = (HDI_{female} / HDI_{male}) \times 100$ . A GDI value close to 100 signifies equitable gender development, indicating gender parity, while lower values reveal existing disparities in development between genders.

### ***Gender Empowerment Index***

The Gender Empowerment Measure (GEM), developed by UNDP, evaluates women's participation in a nation's economic and political spheres, reflecting gender equality in these domains (Utami, 2019). GEM focuses on women's economic roles and political involvement, measured by their representation in parliament. This measure highlights women's influence in decision-making processes and legislative matters. A higher GEM score indicates significant female participation in economic and political decisions, while a lower score reveals substantial barriers to gender equality. This index aids policymakers in identifying areas requiring intervention to enhance gender empowerment and promote equal opportunities for women (UNDP).

### ***Sustainable Development Goals***

Adopted by UN member states in 2015, the Sustainable Development Goals (SDGs) aim to tackle complex global issues by 2030. The 17 goals address challenges like poverty, inequality, climate change, and environmental degradation, with a strong focus on gender equality. This goal seeks to

eliminate discrimination against women and girls, ensuring equal access to education, healthcare, decent work, and political and economic opportunities. The SDGs emphasize that gender equality is crucial for sustainable development and societal well-being, requiring global cooperation across governments, businesses, civil society, and academia for effective, inclusive solutions.

### *Domestic Investment*

Domestic Investment (PMDN) refers to investments made by domestic investors to establish, develop, or acquire assets within the country, with the primary goals of enhancing production capacity, generating employment, and stimulating economic growth (Ministry of Investment, 2023). PMDN includes various forms of investment, such as infrastructure development, factory establishment, and portfolio investments involving the purchase of stocks and bonds (Statistics Indonesia, 2023). It also encompasses research and development investments aimed at fostering innovation and improving existing technologies (Bank Indonesia, 2023). By enhancing production capacity and infrastructure, PMDN is pivotal in driving economic growth and national competitiveness (Ministry of Economy, 2023).

## **METHOD**

### *Scope of Research*

This study aims to investigate the impact of the Gender Development Index, open unemployment rate, and domestic investment on economic growth. The dependent variable in this research is economic growth, while the independent variables include the Gender Development Index, Gender Empowerment Index, and domestic investment. The analysis is based on secondary data sourced from BPS for the period 2017-2022, covering ten provinces in Sumatra. This comprehensive data set allows for a detailed examination of the relationships between these variables and their collective influence on economic growth in the region.

### *Operational Definition of Variables and Measurement*

The research variables are defined as follows: Economic growth is quantified by the Gross Regional Domestic Product (GRDP) at constant prices, indicating real economic growth without the influence of price changes, with data provided in billions for Sumatra's ten provinces from 2017-2022. The Gender Development Index (GDI) measures gender disparities in human development across health, education, and living standards, with scores ranging from 0 to 100, expressed as percentages. The Gender Empowerment Index (GEI) is a composite metric assessing women's empowerment across various sectors, also reported as percentages for the years 2017-2022. Domestic Investment (PMDN) refers to investment activities undertaken by Indonesian entities within the country, measured in billions of Rupiah for the same provinces and timeframe.

### ***Classical Assumption Test***

In multiple linear regression analysis, several classical assumptions must be met to ensure the reliability of the regression model. Normality checks whether the residuals of the regression model follow a normal distribution, with the Jarque-Bera test used for this purpose. As per Ansofino (2016), normality is assessed by comparing the Jarque-Bera statistic to the Chi-square table value, where a probability value greater than 0.05 indicates a normal distribution, and a value less than 0.05 indicates a non-normal distribution. Multicollinearity tests whether the independent variables are linearly dependent on each other, with Sugiyanto (2017) stating that Variance Inflation Factor (VIF) values below 10 indicate no multicollinearity. Autocorrelation checks if residuals from one period are correlated with those from another, though Basuki (2017) suggests that autocorrelation is less of a concern in panel data due to its cross-sectional nature. Heteroscedasticity tests whether residuals have a constant variance across observations, with Sugiyanto (2017) recommending the Glejser test for detection. If the Chi-square probability value is less than 0.05, it indicates heteroscedasticity, while a value greater than 0.05 suggests homoscedasticity.

### ***Panel Data Regression***

Panel data regression analysis evaluates how independent variables affect a dependent variable by using both time series and cross-sectional data. The Common Effect Model is the simplest method, combining these data types and applying Ordinary Least Squares (OLS) without differentiating between time or individual-specific effects, assuming uniform intercepts and slopes for all observations (Basuki & Prawoto, 2017). In contrast, the Fixed Effect Model accounts for individual differences by assigning unique intercepts to each entity, using dummy variables to capture these variations while keeping a consistent slope across entities. This approach, also known as the Least Squares Dummy Variable (LSDV) technique, addresses differences such as work culture, managerial practices, and incentives (Basuki & Prawoto, 2017). The Random Effect Model, on the other hand, considers variations by modeling error terms that reflect both time series and cross-sectional dimensions, utilizing Generalized Least Squares (GLS) for estimation (Basuki & Prawoto, 2017).

To choose the most suitable panel data model, three tests are used: the Chow Test, the Hausman Test, and the Lagrange Multiplier Test. The Chow Test helps determine whether to use the Common Effect Model or Fixed Effect Model based on the F-statistic and Chi-square probability values; a probability greater than 0.05 suggests the Common Effect Model, while a value less than 0.05 indicates the Fixed Effect Model (Basuki & Prawoto, 2017). The Hausman Test compares the Fixed Effect Model with the Random Effect Model, with a probability greater than 0.05 favoring the Random Effect Model and less than 0.05 favoring the Fixed Effect Model (Basuki & Prawoto, 2017). The Lagrange Multiplier Test assesses if the Random Effect Model is preferable over the Common Effect Model, where a Breusch-Pagan probability greater than 0.05 supports the Common Effect Model, and a value less than 0.05 indicates the Random Effect Model (Basuki & Prawoto, 2017).

**Hypothesis Testing**

Hypothesis testing in regression analysis involves several key procedures. The t-test evaluates whether each independent variable significantly affects the dependent variable, with the null hypothesis (H0) suggesting no effect. H0 is rejected if the t-value exceeds the critical value, indicating a significant effect (Ghozali, 2016). The F-test assesses whether all independent variables together have a significant impact on the dependent variable, with H0 positing no combined effect. H0 is rejected if the F-value is higher than the critical value, showing that the independent variables collectively influence the dependent variable (Ghozali, 2016). Finally, the Coefficient of Determination (R<sup>2</sup>)\*measures how much of the variance in the dependent variable is explained by the model, with an R<sup>2</sup> value near 1 reflecting strong explanatory power (Ghozali, 2016).

**RESULT**

**Descriptive Statistical Analysis**

Descriptive statistical analysis was employed to outline the research findings from the data collected across ten provinces in Sumatra from 2017 to 2022. Descriptive statistics provide a fundamental overview of each variable's characteristics, including the mean, maximum, minimum, and median values.

Table 1. Descriptive Statistical Analysis

	Obs	Maximum	Minimum	Mean	Std. Deviation
PDRB	50	20.16732	17.55493	18.98712	0.787306
IPG	50	94.72000	88.13000	91.05760	1.919750
IDG	50	75.73000	52.57000	66.56120	5.610121
LNPMDN	50	10.67040	5.692047	8.645592	0.980476

According to Table 1, the analysis of 50 observations revealed that the average Gross Regional Domestic Product (GRDP) in Sumatra was 18.98712 with a standard deviation of 0.787306. Sumatra Utara had the highest GRDP of 20.17 in 2022, while Bengkulu had the lowest at 17.55 in 2017. For the Gender Development Index (GDI), the mean value was 91.05760 with a standard deviation of 1.919750, with Sumatera Barat showing the highest index of 94.72 in 2022, and Jambi the lowest at 88.13 in 2017. The Gender Empowerment Index (GEI) had a mean of 66.56120 and a standard deviation of 5.610121, with Riau recording the highest GEI of 75.73 in 2018, and Bangka Belitung the lowest at 52.57 in 2018. Lastly, Domestic Investment (DI) had a mean of 8.699609 and a standard deviation of 0.969175, with Riau exhibiting the highest DI value of 10.67 in 2022, and Bengkulu the lowest at 5.69 in 2017.

**Panel Data Regression Test Results**

In this study, panel data regression testing involved choosing the best model among the Random Effect Model (REM), Fixed Effect Model (FEM), and Common Effect Model (CEM). The Chow Test favored the FEM over the CEM, with Cross-section F and Chi-Square probabilities both under 0.05, indicating FEM was more suitable. The Hausman Test further supported FEM, as its

Cross-section random probability value was 0.0006, also below 0.05. Due to the consistent preference for the FEM from both tests, the Lagrange Multiplier Test was not conducted.

**Panel Data Model Regression Results**

The Fixed Effect Model (FEM) was identified as the best model based on the testing results. Essential for multiple linear regression with Ordinary Least Squares (OLS), the classic assumption testing was conducted. The FEM estimation results show an R-squared value of 0.9981 and an F-statistic of 1645.028, demonstrating an excellent model fit.

Table 2. Panel Data Model Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.310589	2.840850	2.925388	0.0058
IPG	0.108774	0.031835	3.416783	0.0016
IDG	0.005456	0.003029	1.801380	0.0798
LNPMDN	0.047273	0.011183	4.227089	0.0001
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.998129	Mean dependent var		18.98712
Adjusted R-squared	0.997522	S.D. dependent var		0.787306
S.E. of regression	0.039188	Akaike info criterion		-3.421975
Sum squared resid	0.056822	Schwarz criterion		-2.924849
Log likelihood	98.54937	Hannan-Quinn criter.		-3.232667
F-statistic	1645.028	Durbin-Watson stat		1.702432
Prob(F-statistic)	0.000000			

Based on the estimation results using the fixed effect model, the following regression equation is produced:

$$\begin{aligned}
 \mathbf{PDRB}_{it} &= 8.310589 + 0.108774IPG_{it} + 0.005456IDG_{it} + \\
 &0.047273LNPMDN_{it} \\
 \mathbf{T-Stat} &= (2.925388) (3.416783) (1.801380) (4.227089) \\
 \mathbf{R-Squared} &= 0.998129 \\
 \mathbf{F-Statistik} &= 1645.028
 \end{aligned}$$

**Classical Assumption Test**

To validate the regression model, classic assumption tests were conducted. The normality test, using Jarque-Bera, showed a probability of 0.5613, indicating normally distributed residuals. The heteroscedasticity test, using Breusch-Pagan, had a Probability F-value of 1.0398, suggesting no heteroscedasticity. The multicollinearity test revealed that all Variance Inflation Factors (VIFs) were below 10, confirming no multicollinearity. Thus, the data meet the statistical assumptions for a valid regression model.

**Partial Regression Coefficient Test**

The t-test assessed the impact of each independent variable on the dependent variable. For the Gender Development Index (IPG), the t-statistic of 3.4168, with a probability of 0.0016, indicates a significant effect on economic growth in Sumatra. The Gender Empowerment Index (IDG) has a t-statistic of 1.8014 and a probability of 0.0798, showing significance at the 10% level but not at the 5% level. The Domestic Investment (PMDN) variable, with a t-statistic of 4.2271 and a probability of 0.0001, demonstrates a significant impact on economic growth in Sumatra.

Table 3. t-test result

Variable	t-statistic	t-tabel	Prob.	Conclusion
IPG	3.416783	1.679	0.0016	Significant
IDG	1.801380	1.679	0.0798	Significant*
LNPMDN	4.227089	1.679	0.0001	Significant

**Simultaneous Regression Coefficient Test**

The F-test assessed the combined effect of the independent variables on the dependent variable. With  $k = 3$ , degrees of freedom  $df1 = 2$  and  $df2 = 57$ , and an alpha level of 0.05, the F-table value is 3.20. The obtained F-statistic of 1645.028 far exceeds this value, indicating that the Gender Development Index, Gender Empowerment Index, and Domestic Investment have a significant combined impact on economic growth in Sumatra from 2017 to 2022.

Table 4. f-test result

DF	$\alpha$	Prob	F-table	F-statistic	Conclusion
(3:46)	5%	0.0058	3.20	1645.028	H0 unsupported

**Coefficient of Determination (R<sup>2</sup>)**

In this study, the coefficient of determination (R<sup>2</sup>) is 0.998129 or 99.8129%. This indicates that the variables Gender Development Index, Gender Empowerment Index, and Domestic Investment collectively explain 99.8129% of the variation in economic growth in Sumatra from 2017 to 2022.

**DISCUSSION**

**Regression Results**

Based on the panel data regression estimation table, the estimated regression equation is as follows:

$$LNPDRBit = 8.310589 + 0.108774IPGit + 0.005456IDGit + 0.0472723LNPMDNit.$$

The constant term of 8.310589 indicates that when the IPG, IDG, and PMDN variables are zero, the PDRB value is 8.310589 percent. The IPG and IDG variables were transformed using a log-linear model, requiring further processing for interpretation, such as dividing by 100 or multiplying the slope coefficients by 0.01 (Gujarati & Porter, 2013). The coefficient for IPG is 0.108774,

suggesting that a 1 percent increase in IPG will lead to a 10.8774 billion increase in PDRB, assuming *ceteris paribus*. The coefficient for IDG is 0.005456, indicating that a 1 percent increase in IDG will result in a 0.5456 billion decrease in PDRB, assuming *ceteris paribus*. The PMDN coefficient is 0.0472723, meaning that a 1 billion (Rp) increase in PMDN will raise PDRB by 0.0472723 billion, assuming *ceteris paribus*. The adjusted R-squared value is 0.997522, showing that 99.7522% of the variation in PDRB is explained by IPG, IDG, and PMDN, with the remaining 0.2478% attributable to other variables.

### ***The Effect of Gender Development Index on Economic Growth in Sumatra Island***

The analysis reveals that the Gender Development Index (GDI) has a positive and significant impact on economic growth in Sumatra from 2017 to 2022, with a regression coefficient of 0.108774 and a probability value of 0.0016 at a 5% significance level according to the Fixed Effects Model (FEM). This suggests that higher GDI levels correlate with increased economic growth. The findings imply that regions with high GDI experience better economic performance, reflecting reduced gender disparity and improved development outcomes for both genders. A higher GDI indicates better health, education, and living standards, which enhances overall social welfare. Equal opportunities for women contribute to poverty reduction, better healthcare access, and improved quality of life, ultimately boosting productivity and innovation. This aligns with Klasen and Lamanna (2009), who argue that gender development significantly influences economic growth by enhancing educational quality and labor market participation. Supporting evidence from Nursini and Syahrul (2022) and C. P. Sari (2021) further confirms that increased GDI fosters economic growth by improving human resource quality and breaking the poverty cycle. Conversely, Salam and Wahab (2023) present contrasting findings, suggesting a negative and insignificant effect of GDI on economic growth in South Sulawesi.

### ***The Effect of Gender Empowerment Index on Economic Growth in Sumatra Island***

The findings show that the Gender Empowerment Index (GEI) positively and significantly affects economic growth in Sumatra from 2017-2022, with a coefficient of 0.005456 and a 10% significance level in the Fixed Effects Model (FEM). This indicates that higher GEI is linked to notable economic improvements, suggesting that regions with greater female participation in economic and political spheres perform better economically. This is consistent with Tembon and Fort (2008), who emphasize the importance of women's economic empowerment for boosting productivity and reducing poverty. Additionally, Hartono et al. (2023) find that the GEI positively and significantly influences economic growth in East Java by integrating women into both formal and informal sectors, including online businesses and small enterprises. Infarizki et al. (2018) further support this view, noting that a higher GEI reflects increased female involvement in economic and political activities, driven by rising educational levels and professional advancement. This growing role of women in

various sectors enhances their contributions to economic growth and national income.

### *The Effect of Domestic Investment on Economic Growth in Sumatra Island*

The analysis shows that Domestic Investment (PMDN) positively and significantly impacts economic growth in Sumatra from 2017-2022, with a coefficient of 0.0472723 and a 5% significance level in the Fixed Effects Model (FEM). This means a 1 billion IDR increase in PMDN leads to a 0.0472723% rise in Gross Regional Domestic Product (PDRB), assuming other factors remain constant. The findings align with Yunita and Sentosa (2019), who also observed a positive and significant impact of PMDN on economic growth in Indonesia, suggesting that higher investment levels boost economic growth due to increased capital formation and a more substantial role of domestic investment compared to government consumption. Similarly, Sinambela et al. (2023) confirm that PMDN positively and significantly affects economic growth in Sumatra by generating national output through various investments, creating job opportunities, advancing technology, and expanding markets. However, these results contrast with Ningsih et al. (2020), who found that PMDN negatively affects short-term economic growth in Jambi, and Muryanto et al. (2022), who reported that increasing PMDN could reduce economic growth in East Java, possibly due to inadequate facilities for domestic investors.

### *Individual Effects*

The analysis of individual effects for ten provinces in Sumatra from 2017 to 2022 reveals varying values for each province due to their distinct characteristics. The individual effect, calculated as the sum of the fixed effects constant and coefficient effects, illustrates the unique economic behavior of each province. According to Table 4.9, Riau exhibits the highest individual effect at 9.54440, indicating that if the Index of Gender Development, Index of Gender Empowerment, and Domestic Investment are zero, the economic growth in Riau would be 9.54440 units. This high economic performance is attributed to Riau's prominent role in trade, processing, and its resource-based sectors, including palm oil, paper, and oil and gas, supported by substantial mining, processing, and agricultural activities. Conversely, Bengkulu has the lowest individual effect of 6.95191, suggesting that with the same variables at zero, its economic growth would be 6.95191 units. Bengkulu's economy is predominantly driven by trade, education, and transportation, with major contributions from wholesale and retail trade, vehicle repairs, and agriculture, forestry, and fisheries (Output Eviews 10, Appendix 12).

## **CONCLUSIONS AND RECOMMENDATIONS**

The study concludes that the Gender Development Index (GDI) positively and significantly impacts economic growth in Sumatra, with a coefficient of 10.8774, meaning a 1% increase in GDI results in a 10.8774 increase in economic growth, *ceteris paribus*. The Gender Empowerment Index (GEI) also positively affects economic growth, with a coefficient of 0.5456, indicating a 1% increase in

GEI leads to a 0.5456 increase in economic growth, *ceteris paribus*. Additionally, Domestic Investment significantly boosts economic growth, with a coefficient of 0.0473, meaning a 1 billion increase in investment raises economic growth by 0.0473, *ceteris paribus*.

To achieve gender equality in education, health, labor, and political participation, a comprehensive approach addressing structural, social, and economic barriers affecting women is necessary. This includes ensuring equal access to education and health services, eliminating gender stereotypes in the workplace, strengthening legal protections for women in employment and politics, and encouraging active female participation in political decision-making. Such measures require cooperation from both government and society to foster a more inclusive and equitable community. In terms of investment, the government should actively foster a conducive investment climate by streamlining regulations and reducing bureaucratic barriers, while also prioritizing the enhancement of human resource quality through relevant education and vocational training to meet labor market needs. These policies, supported by adequate infrastructure and skilled labor, will create a more attractive environment for domestic investment, thereby contributing significantly to sustainable economic growth.

#### **ADVANCED RESEARCH**

Future research should explore the broader implications of gender-related indices and domestic investment on economic growth by incorporating a more diverse range of variables and extending the analysis to different regions and time periods. It would be beneficial to investigate the underlying mechanisms through which Gender Development Index (GDI) and Gender Empowerment Index (GEI) impact economic growth, including potential mediating factors such as education, healthcare access, and labor market participation. Additionally, examining the role of policy interventions and their effectiveness in promoting gender equality and enhancing investment climates could provide valuable insights. Comparative studies across various countries or regions might also reveal differential impacts and contribute to the development of more targeted and effective strategies for sustainable economic development.

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