

Poverty and Gender Inequality on GRDP per Capita in Indonesia: A Path Analysis

Diana Berliyani, Marselina, Arivina Ratih Yulihar Taher

Lampung University, Indonesia

Corresponding author: dianaberlian5@gmail.com

Keywords

Poverty, Gender Inequality, GRDP Per Capita, Path Analysis.

ABSTRAK This study investigates the impact of poverty and the Gender Inequality Index (GII) on Indonesia's Gross Regional Domestic Product (GRDP) per capita across 34 provinces using secondary data from the Central Bureau of Statistics (BPS) for the years 2021–2023. Employing path analysis, the study examines both the direct and indirect effects of poverty and gender inequality on regional economic performance. The findings reveal that the poverty rate significantly negatively affects GRDP per capita, with a path coefficient of -0.305, indicating that higher poverty levels are associated with lower economic output per person. Furthermore, the GII significantly affects poverty (coefficient = 0.244), suggesting that increased gender inequality contributes to worsening poverty. Additionally, GII directly negatively affects GRDP per capita (coefficient = -0.269), implying that regions with greater gender disparities tend to have lower economic performance. The study also confirms an indirect effect, where gender inequality exacerbates poverty, depressing economic productivity and growth. These findings underscore the importance of integrating gender equality into economic development strategies. To achieve inclusive and sustainable economic growth, policies must reduce gender-based barriers in education, employment, and healthcare, empowering women to contribute fully to economic development and poverty reduction.

© The Author(s) 2025

Introduction

Poverty is multifaceted in various economic, social, political, and environmental domains (Danaan, 2018). United Nations data shows that 70% of people live below the poverty line (Jurnal Perempuan, 2005). One of the most devastating problems affecting economies globally is poverty, which is particularly widespread and severe in low- and middle-income countries (LMICs) (OECD, 2021). Although many efforts have been made to address the various dimensions of poverty, most LMICs still face significant challenges in poverty alleviation, as poverty is an ever-changing, complex issue that is unique to each

country (Wang & Wang, 2016).

Poverty remains a persistent issue in several developing countries, including Indonesia. The National Long-Term Development Plan and the Sustainable Development Goals (SDGs) Agenda prioritize poverty reduction in their development programs (Arifin, 2020).

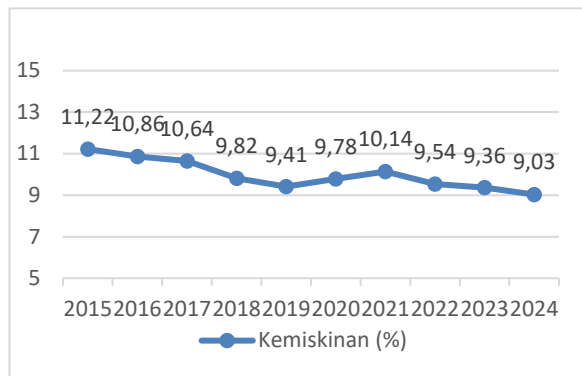


Figure 1.1 Indonesia Poverty Data
Source: Processed BPS Data

The graph above illustrates the trend of poverty rates in Indonesia from 2015 to 2024, showing an overall decline from 11.22% to 9.03%. The highest poverty rate occurred in 2015 at 11.22%, while the lowest was recorded in 2024 at 9.03%. Multiple factors influence poverty conditions, as poverty is a multidimensional issue. One contributing factor to poverty is household income. This aligns with the concept that an increase in average income per person (per capita income) is often used to indicate economic well-being and poverty reduction (Sukirno, 2010; Saraswati & Cahyono, 2014). According to Todaro (2000), low per capita income and a wide disparity in income distribution are two major poverty indicators.

In addition, based on the theory of the feminization of poverty, gender inequality contributes to higher poverty levels (Sanjay, 2018). Therefore, gender equality is crucial in combating poverty (Tavares & Martins, 2020). An analysis by Bread for the World Institute indicates that gender-based discrimination makes women more vulnerable to poverty and hunger (Staff Bread for the World, 2016).

Gender inequality refers to the unequal or unfair treatment of one gender—typically women—across various domains such as education, the economy, politics, and social life. López-Marmolejo and Rodríguez Caballero (2023) argue that enhancing gender equality policies can improve women's participation in the labor market and, in turn, stimulate economic activity.

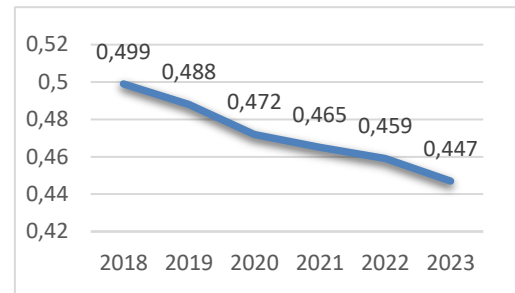


Figure 1.2. Gender Inequality Index.
Source: Processed BPS Data

The data above indicates that the Gender Inequality Index (GII) improved from 0.499 in 2018 to 0.447 in 2023, reflecting a significant reduction in gender disparities across various dimensions such as health, education, and economic participation. The GII is measured on a scale from 0 to 1, where 0 represents perfect gender equality and 1 indicates maximum gender inequality.

Based on the background described above, it is evident that high poverty rates limit people's purchasing power and their participation in economic activities, thereby hindering Gross Regional Domestic Product (GRDP) growth. On the other hand, a high level of gender inequality, as reflected by a higher GII score, reduces women's contributions to economic development, both as members of the workforce and as entrepreneurs. Therefore, this study examines the direct and indirect effects of poverty and the Gender Inequality Index on GRDP per capita across the 34 provinces in Indonesia.

Literature Review

2.1 Poverty

Poverty is when individuals cannot meet basic needs such as adequate housing, food, clothing, health care, and education (Utami & Siregar, 2021). Poverty includes primary aspects such as lacking assets, sociopolitical organization, knowledge, and skills. In addition, it also encompasses secondary elements, including the lack of social networks, financial resources, and access to information (Arsyad, 2015).

The Central Bureau of Statistics (BPS, 2004) defines poverty as the inability to meet a minimum standard of basic needs, including food and non-food necessities. The poverty line is defined as the value of food expenditures per person required to meet basic nutritional needs of 2,100 kilocalories

per day, plus monthly non-food expenditures (Damayanti, 2013).

2.2 Gender Inequality

Gender inequality can be defined as differences in attitudes or actions based on specific gender roles that restrict women from thoroughly enjoying the outcomes and participating in development. Benjamin's (2007) study on poor Black women in South Africa found that women's social class affects their own and their children's poverty status. These women are particularly vulnerable to exploitation under patriarchy, which pressures them to perform unpaid domestic labor, and capitalism, which treats them as a cheap labor force.

Morrison et al. (2005) argue that aside from economic growth, patriarchy is a significant determinant of gender-based poverty, because in male-dominated societies, women are less likely to benefit from national economic development. The impact of gender inequality extends beyond roles and activities to other fundamental socioeconomic aspects for women and girls. It affects their reproductive health, empowerment, and participation in the labor market (Mwiti & Goulding, 2018; Willie & Kershaw, 2019). A recent study by Alabuja et al. (2023) also provides evidence from Nigeria that gender inequality leads to persistent poverty among Nigerian women.

2.3 GRDP per Capita

The net value of goods and services produced through economic activity over a specific period is known as Gross Regional Domestic Product (GRDP) (Parwata et al., 2016). GRDP per capita is defined as the net value of final goods and services produced by various economic activities in a region within a specific period, and is used as one of the indicators to measure the success of regional economic development (Sasana, 2006). This aligns with Sukirno (2010), who notes that the increase in average income (per capita income) often indicates economic welfare and poverty reduction.

2.4 Gender Inequality and Poverty

Historically, poverty has been defined based on the idea that certain groups experience a lack of income (Bazan et al., 2011). However, this definition has evolved, as poverty is now studied from a broader perspective, linking it

to social welfare and giving it a more comprehensive dimension (Ponce, 2013). One of the root causes of poverty is gender inequality. Blau (2003) explains that countries with greater gender equality tend to experience lower levels of economic inequality. In addition, Jayachandran (2015) notes that the factors contributing to inequality are more commonly found in developing countries.

Poverty, along with gender inequality, is among the most prevalent social issues globally and affects virtually every nation (Dormekpor, 2015). In a study by Lawanson and Umar (2019), it is stated that gender and poverty negatively impact economic growth.

2.5 Poverty and GRDP per Capita

One key indicator of the welfare level of a region's population is GRDP per capita. Income enables people to meet their basic living needs. Regional income can be measured through per capita income (Todaro & Smith, 2006). Per capita income refers to the average income of the population in a region during a specific period, calculated by dividing total income by the total population (Sukirno, 2019).

When people's incomes decline, it becomes challenging to meet their basic needs (Wahyu Azizah et al., 2018). The higher the GRDP per capita of a region, the greater the potential revenue sources for that region, due to the increase in public income (Simanjuntak, 2001). This implies that as GRDP per capita increases, the area's population becomes more prosperous. In other words, the number of people living in poverty will decrease.

Research Methodology

Using a quantitative research approach, this study measures and analyzes both the direct and indirect effects of independent variables—namely, wages and average years of schooling—on the intervening variable, the female labor force participation rate, and the dependent variable, economic growth. The processed data are used to explain the study findings. Panel data from the Central Bureau of Statistics (BPS) covering 34 provinces in Indonesia from 2021 to 2023 are employed as secondary data for this research.

This study applies path analysis to determine the effect of independent variables on the

dependent variable, both directly and indirectly. This path analysis aims to identify the magnitude of the influence exerted by the independent variables on the dependent variable, either directly or through the intervening variable. The study is conducted using SmartPLS (Partial Least Squares) version 4.

The first structural model used in this research is:

$$PDRBP = \beta_1 \text{Poverty} + \beta_2 \text{GII} + e \dots\dots\dots(1)$$

The second structural model used in this research is:

$$GII_{it} = \beta \text{Poverty}_{it} + e \dots\dots\dots(2)$$

Results and Discussion

4.1 Hypothesis Testing Results

Path Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation	T-Statistics	P-Value
Poverty → GRDP per Capita	-0.305	-0.304	0.060	5.077	0.000
GII → Poverty	0.244	0.245	0.078	3.137	0.002
GII → GRDP per Capita	-0.269	-0.263	0.111	2.425	0.015

The results of the study indicate that poverty has a significant negative effect on GRDP per capita, with a path coefficient of -0.305, suggesting that the higher the poverty level in a region, the lower its GRDP per capita. These findings are consistent with previous studies, such as those by [Alhudhori \(2017\)](#) and [Zuhdiyaty & Kaluge \(2017\)](#), which found that GRDP has a negative and insignificant effect on poverty. From an economic theory perspective, poverty limits individual productivity and the ability to contribute optimally to the economy.

With a path coefficient of 0.244, the Gender Inequality Index (GII) also significantly positively affects poverty. This indicates that higher gender inequality correlates with higher poverty levels. Gender inequality—reflected in women’s limited access to education, employment, and healthcare—reduces their ability to contribute to household income and overall economic growth, thereby exacerbating poverty. This finding is consistent with previous research emphasizing the impact of gender inequality on household economic resilience ([Klasen & Lamanna, 2009](#)).

Furthermore, gender inequality directly negatively affects GRDP per capita, with a path

coefficient of -0.269. This influence suggests that gender inequality restricts women's economic participation, reducing per capita economic output. Additionally, the indirect effect of gender inequality on GRDP per capita through poverty demonstrates a mediating role: gender inequality contributes to increased poverty, leading to lower GRDP per capita.

4.2 Coefficient of Determination

The analysis results show that the Gender Inequality Index (X2) contributes only 6% to the variation in poverty (X1), with an adjusted path coefficient of 5%. Although this contribution is relatively small, the earlier path coefficient indicates that the effect of X2 on X1 is statistically significant. This suggests that, while gender inequality is an essential factor influencing poverty, its impact is partial. The existing literature has shown that gender inequality affects poverty through various mechanisms, such as limiting women’s access to decent employment, education, and healthcare ([Klasen & Lamanna, 2009](#)). However, labor market conditions, income distribution, and the existence of social safety nets are among other contributing factors to poverty.

Meanwhile, the model for GRDP per capita (Y) shows that the variables Poverty (X1) and Gender Inequality Index (X2) together explain 20.5% of the variation in GRDP per capita, with an adjusted R-squared of 18.9%. This indicates that, although these two variables contribute to economic growth, approximately 79.5% of the variation remains unexplained. This finding aligns with economic growth theory, which emphasizes that socioeconomic factors are not the only determinants of GRDP per capita; other contributing factors include investment, trade, infrastructure, political stability, and technological innovation ([Barro, 1991](#)).

4.4 Indirect Effect

	Original sample (O)	Sample mean (M)	Standard deviation	T statistics	P values
X2 -> X1 -> Y	-0.074	-0.072	0.023	3.284	0.001

The results above indicate an indirect effect of the Gender Inequality Index (GII) on GRDP per capita through poverty. The coefficient of -

0.074 suggests that the GII (X2) hurts GRDP per capita (Y), but this effect occurs through poverty (X1) as a mediating variable. In other words, an increase in gender inequality exacerbates poverty, reducing the GRDP per capita of a region.

Thus, although gender inequality directly affects GRDP per capita, its indirect impact via poverty is more pronounced. The T-statistic value of 3.284 indicates that this effect is highly significant, with a P-value of 0.001, meaning that the indirect influence of gender inequality on GRDP per capita through poverty is statistically substantial and strongly supported within this model.

Conclusion

This study reveals that poverty and gender inequality significantly impact GRDP per capita in Indonesia. The analysis shows that an increase in poverty levels directly reduces GRDP per capita, reflecting the limited economic productivity of impoverished communities. On the other hand, gender inequality plays a crucial role in influencing both poverty and GRDP per capita, where high levels of inequality exacerbate poverty and restrict women's contributions to economic growth.

The indirect effect of gender inequality through poverty highlights that gender disparity can harm the economy as a whole. Therefore, development policies must prioritize reducing gender inequality to enhance women's active economic participation, which will help alleviate poverty and promote GRDP per capita growth. Reducing gender inequality and improving societal welfare are expected to foster more inclusive and sustainable economic growth.

References

- Abbas. 2011. Gender Dalam Sastra. Makasar: Universitas Hassanudin.
- Alabuja, F., Anthony, L., & Ebuk. Iba, E. (2023). Socio-economics characteristics, income inequality, and poverty status of female headed cassava (*Manihot esculenta* Crantz) farming households in federal capital territory, igeria. *International Journal of Agriculture Environment and Food Sciences*, 7(1), 29–40.
- Alhudhori, (2017). Pengaruh Ipm, Pdrb Dan Jumlah Pengangguran Terhadap Penduduk Miskin Di Provinsi Jambi. *Ekonomis: Journal of Economics and Business*, 1(1), 113.
<https://doi.org/10.33087/ekonomis.v1i1.12>
- Altiok, Tayfur dan Melamed Benjamin. 2007. *Simulation Modeling and Analysis with Arena*. Amsterdam: Academic Press
- Arifin, J. (2020). Budaya kemiskinan dalam penanggulangan kemiskinan di Indonesia. *Sosio Informa*, 6(2), 114–132.
<https://doi.org/10.33007/inf.v6i2.2372>
- Arivia, Gadis. 2005. *Jurnal Perempuan*. Jakarta : Yayasan Jurnal Perempuan.
- Arsyad, Lincolin. 2015. *Ekonomi Pembangunan Edisi Kelima*. Yogyakarta: UPP STIM YKPN.
- Barro, R. J. (1991). Economic growth in a cross section of countries. *The Quarterly Journal of Economics*, 106(2), 407–443.
<https://doi.org/10.2307/2937943>
- Bazán O.A., Quintero S.M.L., Hernández E.A.L. Evolución del concepto de pobreza y el enfoque multidimensional para su estudio. *Quivera*. 2011;13(1):207-219. <http://www.redalyc.org/pdf/401/40118420013.pdf>
- Blau, F. D., & Kahn, L. M. (2003). Understanding international differences in the gender pay gap. *Journal of Labor Economics*, 21(1), 106–144.
<https://doi.org/10.1086/344125>
- Danaan, V. V. (2018). Analysing poverty in Nigeria through theoretical lenses. *Journal of Sustainable Development*, 11(1), 20–31.
<https://doi.org/10.5539/jsd.v11n1p20>
- Jayachandran, S. (2015). The roots of gender inequality in developing countries. *Annual Review of Economics*, 7(1), 63–88.
<https://doi.org/10.1146/annurev-economics-080614-115404>
- Klasen, S., & Lamanna, F. (2009). The impact of gender inequality in education and employment on economic growth: New evidence for a panel of countries. *Feminist Economics*, 15(3), 91–132.
<https://doi.org/10.1080/13545700902853603>
- López-Marmolejo, A. & Rodríguez-Caballero, C. Vladimir. (2023). *Assessing the effect of gender-related legal reforms on female labour participation and GRDP per capita in the Central American region*. *Regional Statistics*, Vol. 13. No. 3. 2023: 391–411.
- Morrison, A., Raju, D., & Sinha, N. (2005). *Gender equality, poverty, and economic*

- growth*. World Bank.
- Mwiti, F., & C. Goulding. (2018). "Strategies for community improvement to tackle poverty and gender issues: An ethnography of community based organizations ('Chamas') and women's interventions in the Nairobi slums." *European Journal of Operational Research*, 268(3), 875–886. <https://doi.org/10.1016/j.ejor.2017.12.009>
- OECD, Pensions at a Glance 2021 OECD and G20 INDICATORS, OECD, 2021. Available on: <https://www.oecd.org/publications/oecd-pensions-at-a-glance19991363.htm>. (Accessed 20 July 2023).
- Sanjay, M. (2018). Feminization of poverty and dimension of women's agencies. *Asian Journal of Multidisciplinary Studies*, 6(2), 93–100.
- Saraswati, S. W., & Cahyono, H. (2014). Pengaruh Tingkat Pendidikan Dan Kesehatan Terhadap Pdrb Per Kapita Di Kota Surabaya. *Jurnal Ilmiah*, 1–11.
- Sasana, Hadi.(2006). Analisis Dampak Desentralisasi Fiskal terhadap Pertumbuhan Ekonomi Kabupaten/Kota Provinsi Jawa Tengah.
- Simanjuntak, Payaman. (2001). Pengantar Ekonomi Sumber Daya Manusia. Jakarta: LPFEUI.
- Staff Bread for the World. (2016, March 16). Gender Inequality Worsens Hunger and Poverty. Bread for the World.
- Sukirno, Sadono, 2010, Mikro Ekonomi Teori Pengantar, Jakarta : Rajawali Pers.
- Tavares, P., & Matins, S. M. N. (2020, October 16). We can't end Poverty without Tackling Gender Inequality. World Bank Blogs
- Todaro P. Michael. 2000. Pembangunan Ekonomi Dunia Ketiga Jilid I, Jakarta Penerbit : Erlangga
- Todaro, M. P., & Smith, S. C. (2020). *Economic Development* (13th ed.). Pearson Education.
- Umar, Husein. 2019. "Metode Riset Manajemen Perusahaan", Jakarta: Gramedia Pustaka Utama
- Wahyu Azizah E, Sudarti, & dan Kusuma, H. (2018). Pengaruh Pendidikan, Pendapatan Perkapita Dan Jumlah Penduduk Terhadap Kemiskinan Di Provinsi Jawa Timur. *Jurnal Ilmu Ekonomi*, 2, 167–180.
- Willie, T. C., & T. S. Kershaw. (2019). "An ecological analysis of gender inequality and intimate partner violence in the United States." *Preventive Medicine*, 118, 257–263. <https://doi.org/10.1016/j.ypmed.2018.10.019>
- Y. Wang, B. Wang, Multidimensional poverty measure and analysis: a case study from Hechi City, China, Springer Plus 5 (1) (2016) 642.
- Zuhdiyati, N., & Kaluge, D. (2017). Analisis Faktor-Faktor yang Mempengaruhi Kemiskinan di Indonesia Selama Lima Tahun Terakhir (Studi Kasus 33 Provinsi). *JIBEKA*, 27-31.