Gender Inequality and Economic Growth in South Kalimantan

Yunita Sopiana a,1,* Melisa Khairina b,2 Dessy Maulina c,2

abcDevelopment Economics Study Program Faculty of Economics and Business, Lambung Mangkurat University 1yunitasopiana@ulm.ac.id* corresponding author

ARTICLE INFO

ABSTRACT

Article history

Received Revised Accepted

Keywords

Gender Inequality; Average length of school; Life expectancy; Expenditure Per Capita; Labor Force Participation Rate; Economic Growth

The purpose of this study is to investigate the relationship between gender inequality and GDP development in several fields, such as health, education, economics, and employment. A panel random effect regression model is used to analyze the data in order to achieve this. This study found that economic growth in South Kalimantan is negatively and significantly affected by gender inequality in education, as indicated by the average ratio of school time. According to the life expectancy ratio, the gender disparity in health has a small but favorable impact on economic growth in South Kalimantan. When the per capita expenditure ratio is used to examine economic disparities in South Kalimantan, a negative and significant effect becomes apparent. Gender imbalance in the workplace considerably retards South Kalimantan's economic growth, as seen by the ratio of women to males in the working force.

This is an open access article under the CC-BY-SA license.



1. Introduction

To improve the quality of human resources without discrimination based on gender, gender equality is an aim of human development in Indonesia. There will be issues with development due to gender inequity, which affects women as well. The term "gender equality" refers to a society in which men and women are treated equally in all spheres of society, including but not limited to: political life, economics, culture, and national security and defense. When it comes to economic issues, empowering women is crucial for development, poverty reduction, and growth.

Gender does not limit itself to a singular pronoun. The term "gender" is more often used to describe the dynamics of interpersonal connections, such as those between sexes, between boys and girls, and within social groups.

In order to gauge progress toward gender parity and the acquisition of fundamental human abilities across domains including health, education, and economics, the Gender Development Index (IPG) takes both sexes into account. One way to see how men's and women's progress is through the Gender Development Index. A ratio lower than 100 indicates that there is gender imbalance in development.

The value of the national Gender Development Index has decreased slightly, which in 2019 was 91.07 and in 2020 it decreased to 91.06. The provinces of DI Yogyakarta and DKI Jakarta are the provinces with the highest Gender Development Index, namely in the Province of DI Yogyakarta in 2020 which has a Gender Development Index value of 94.80 and DKI Jakarta of 94.63. This value is above the National IPG value, namely Indonesia has a Gender Development Index value of 91.06 in 2020. Meanwhile, South Kalimantan increased the Gender Development Index which in 2019 was 88.61 to 88.86 in 2020, although it has increased, the Gender Development Index in South Kalimantan is still below the national Gender Development Index value.

The basic problems that women in South Kalimantan Province in general often face are gender injustice and the many patriarchal cultures that still grow in tradition, regarding the people's thinking that continues to develop about women which results in women not being free to move and participate both in terms of education, health and employment. Socio-cultural in society there is still



a stigma that education is not important for women to achieve higher education because women are only housewives and take care of the family. As a result of this, there is gender inequality.

In various efforts made in human development aimed at improving the quality of life, we have made headway. An increase in women's labor force participation and economic growth in developing nations can be achieved through improved access to development, according to Agénor and Agénor (2023). But it's clear that men and women haven't reaped the same rewards from human growth thus far, and there hasn't been nearly enough progress toward gender parity in education, healthcare, employment, and per capita spending. Gender equality may not improve even if human development in South Kalimantan continues to advance.

Not only does gender disparity in politics, resources, and rights hurt women, but it hurts society as a whole and slows progress. Klasen and Lamanna's (2008) research shows that economic growth can be severely stunted when gender disparity is present in the workplace and classroom. That one in Pakistan is very much like this. Gender inequality in early education and education expansion has a negative impact on economic growth (Sharif, 2013). This is because, as stated in a study by Sharif (2003), women in Pakistan are disproportionately perceived as weak and vulnerable compared to men in many areas, including education, health, employment, law, decision-making, media, communication, and livelihood conditions. So, it's the government's responsibility to make sure women can find work, particularly in the formal sector where educated people can find jobs that pay well and contribute to economic growth (Anggraeni et al., 2022). The findings also reveal that GDP growth reduces the gender inequality index, so policymakers should set growth rates based on equitable opportunity. A sustainable economy can be built by developing and less developed nations that prioritize gender equality. (Girón & Kazemikhasragh, 2022).

Literature Review Economic Growth

According to Sadano (2000), economic growth is a development that occurs in economic activities that result in services and goods that will be produced by the community to increase and increase the prosperity of the community. There are four factors that can affect economic growth in a country, namely: Capital accumulation, which includes tangible investments such as land, physical equipment and human resources, economic growth, technological advances and institutional resources.

Gender Theory

Gender has the meaning of differentiating in existence, roles, status, and functions between women and men not based on biological differences but on sociocultural relationships that are subject to the influence of the improvement of the broader social structure. (Ministry of PPPA, 2021). Gender refers to socially constructed roles, learned morals, and desires placed on women and men. Gender is one of the most important social factors in determining a person's opportunities and involvement in society and the economy. In various societies, the roles and interactions between men and women have varying degrees of variation.

Gender Inequality in Education

Suryadi (2004) shows that in all areas of life, unbalanced education between men and women is the main cause of gender inequality. This has an impact on the difference in jobs, status, roles in society, and their representation in important positions. Gender inequality in terms of education is the main factor that has the greatest impact on overall gender inequality. Similar to what Klasen (2018) put forward, she highlights that women's education has more often an impact on growth than men's education, thus supporting the argument that reducing the gender gap in education will increase growth (Klasen, 2018).

Later by Klasen & Lamanna (Klasen & Lamanna, 2008) further revealed in her research that improvements in education will increase women's chances of getting better jobs economically. Economic improvements contribute positively to gender equality in terms of education, as women get greater motivation and opportunities to pursue education. According to a study conducted in Pakistan, the economic growth is greatly affected by the literacy rates of women and their life expectancy (Lin & Yin, 2023). Fewer children are born to women with higher levels of education.

Greater gender equality is associated with a falling birth rate, which in turn can boost economic growth. In line with what was found in the study of Khan et al., which found that economic development is greatly enhanced by the gender parity index for educational success (Khan et al., 2017). Developing nations often experience economic growth when gender equality in education is prioritized, according to research by Altuzarra et al. (2021)

Gender Inequality in the Health Sector

In a study conducted by Mandal, Raymond, and Wen (2018), it was shown that health factors had a stronger influence on economic growth compared to education factors in both developed and developing nations from 1975 to 2010. Men typically have a shorter life expectancy than women. But progress will be impeded if women's life expectancy keeps going up without optimization of women's contributions to development, women's job creation, and women's work abilities. A region's economic growth will be impeded if, even when women's life expectancy is increasing, the productivity of the goods and services that power the economy is not optimal (Padang et al., 2019).

One indicator of health sector development success according to the United Nations Development Programme (UNDP) is life expectancy. An improvement in the community's socioeconomic status, health, and environmental conditions can be demonstrated by an increase in life expectancy. Similarly, a fall in the community's life expectancy will be exacerbated if their economic and social standing declines within a specific time frame. No nation can attain its full potential in terms of productivity unless its citizens have access to quality healthcare.

Gender Inequality in the Economy

These metrics will be impacted by the attainment of gender- and region-neutral economic participation. This indicator is calculated using the Living Standards indicator using the Expenditure Per Capita Index as a proxy.

The ubiquitous discrimination against women and their underrepresentation in economic development are common barriers to achieving gender equality. The gender gap in per capita spending between men and women is a clear indicator of the financial sector's lack of gender balance. The disparity between men's and women's earnings causes a gender gap in per capita expenditure.

One cultural issue that contributes to the gender pay gap is the widespread belief that men should have more possibilities to be economically active, while women are treated less favorably. Furthermore, discrimination based on gender in occupations held by only one gender might impact pay and wage levels in the labor market. To achieve gender parity in economic possibilities, it is necessary to promote gender-neutral policies and work to enhance women's skill sets (Ministry of PPPA, 2021).

Gender Inequality in the Employment Sector

A rise in per capita income is possible when there is high participation in the labor force and good education. Consequently, pushing for a larger work force is a way to boost the economy (Puspasari, 2019). To put it simply, women are economically underutilized despite their considerable potential. According to a study conducted by Jinyoung et al. (Kim et al., 2018), gender equality policies have the potential to decrease discrimination in the workplace or increase fathers' time spent caring for children, both of which can have a positive impact on women's labor force participation and per capita income growth. The results of the simulation demonstrate that women's labor force participation rises once the gender gap is eradicated in the home and the work market. Put simply, these findings have significant policy implications as they demonstrate the need to incorporate female workers into the consolidation plan's design, which should be informed by the nature of the labor market (Tafuro, 2023).

Therefore, there is a tremendous opportunity for women to contribute to development if their labor market involvement can be enhanced. Short- and long-term gains in women's employment are strongly correlated with increased trade openness and female education, as shown by CS-ARDL. Thus, it is imperative that these governments' employment programs prioritize women's education and trade (Voumik et al., 2023).

However, in reality, discrimination based on gender is still present in the workplace. According to the African Union Declaration on Gender Equality in Africa, it is crucial for policymakers to make sure that gender issues are being more integrated into all pertinent regional policies, programs, and activities. To achieve this goal, their economies must implement gender-responsive budgeting, do gender impact assessments, and work to increase the number of women in positions of power. The potential for population expansion to spur economic growth and positive gender results needs to be acknowledged if we are to achieve improved development outcomes (Okere et al., 2024).

Previous Research

As mentioned in "A Model of Gender Inequality and Economic Growth" (Kim et al., 2016), promoting gender parity considerably increases GDP growth.

(Seguino, 2000, "Gender Inequality and Economic Growth: A Cross-Country Analysis"). Gender pay gap is positively correlated with GDP growth and negatively correlated with income inequality.

Klasen and Lamanna's "The Impact of Gender Inequality in Education and Employment on Economic Growth in Developing Countries: Updates and Extensions" (2008) shows that educational inequality and gender inequality in the labor force participation both hinder economic growth.

Gender disparity significantly affects economic growth, as demonstrated in "Gender Inequality and Economic Growth: A Case Study in East Asian and Pacific Countries" (Napitupulu and Ekawaty, 2022).

Results showed that achieving gender equality in the classroom positively and significantly affected GDP growth, according to a study titled "Analysis of the Influence of Gender Equality on Economic Growth in West Sumatra" (Padang et al., 2019). Things change, though, when we factor in health care spending per capita. As a matter of fact, these two variables considerably reduce economic growth.

Workplace productivity, buying power, and health are all negatively affected by gender inequality in West Java Province, according to "Analysis of the influence of gender inequality on labor productivity in West Java Province" (Ariani and Novita, 2022). These findings point to gender disparity as a potential workplace factor influencing productivity.

2. Method

This study is a type of quantitative research using operational data, namely *time series* and *cross section* data, by taking data per district/city in South Kalimantan for the 2011-2020 period. This study uses economic growth taken from Gross Domestic Product data based on constant prices as a dependent variable and an independent variable, namely gender inequality in the education sector using data on the average ratio of school length. To measure gender inequality in the health sector, use data on the ratio of life expectancy numbers. To measure gender inequality in the economy, use per capita expenditure ratio data. And to measure gender inequality in the field of employment, use data on the ratio of labor force participation rates.

Technical Data Analysis

In this study, the following equation was used to analyze panel data using a Random Effect Model:

$$Y_{it} = \beta 0_{it} + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + e_{it}$$

Where:

Y : Economic Growth

β0 : Constant

 β 1, β 2, β 3 : regression coefficients

X1it : Average Length of School Duration ratio

X2it : Life Expectancy Ratio X3it : Expenditure Per Capita ratio

X4it : Labor Force Participation Rate ratio

EIT : Fault variable (error).

3. Results and Discussion

From the tests that have been carried out with panel data regression with a random effect model using e-Views 10, the following results are obtained:

Table 1 Result Random Effect Model

Variabel	Coefficient	Std. Error	t-Statistic	Prob
С	373445879	13291732	2.809707	0,0058
RLS	-27714093	11750068	-2.358633	0,0199
АНН	3672674,	8273124,	0,443952	0,6578
PP	-2831996,	884744,1	-3,200921	0,0017
TPAK	-11030180	5399087,	-2,042971	0,0432
R-squared		0,133473		
Adjusted R-squared		0,105744		
F-statistic		4,813515		
Prob(F-statistic)		0,001207		

Source: Eviews Data Processing

In table 1, the following equation is obtained:

$PE_{it} = 373445879 - 27714093 \text{ RLS}_{it} + 3672674 \text{ AHH}_{it} - 2831996 \text{ PP}_{it} - 11030180 \text{ TPAK}_{it}$

An R-squared value of 0.133473 was produced by estimating gender disparity using the following indicators: average ratio of school age to life expectancy, expenditure per capita, and labor force participation rate: the independent variable accounts for 13.34% of the variation in the fluctuation of economic growth in South Kalimantan, while other variables outside the study account for the remaining amount.

Discussion of Analysis Results

The Relationship of the Average Ratio of School Length to Economic Growth

With a coefficient of -27714093 and a probability of 0.0199, the tests demonstrated that the average ratio of school length was a statistically significant negative variable. This means the variable's effect was less than the 0.05 level of significance. Accordingly, with all other factors held constant, the GDP will contract by -27714093 points for every one-unit increase in the average ratio of school length.

One possible explanation for the inverse relationship between the average school length ratio and economic growth could be the influence of certain sociocultural factors, such as the long-standing belief that women should remain at home and handle household duties.

Consistent with previous research, this study confirms that the average duration of school time ratio negatively impacts GDP (Vininda & Yuliana, 2019). This is demonstrated by the fact that, from 2011 to 2015, GDP in Riau Province had an upward trend, but the average length of school length ratio had a downward trend, suggesting a negative relationship between GDP and the average length of school age ratio. It was also discovered in Turkey. According to Şentürk and Ali (2021), women's life expectancy in Turkey is not significantly impacted by characteristics such as their education level and average length of schooling, according to the study's results.

The Relationship of Life Expectancy to Economic Growth

With a chance of 0.6578 and a coefficient of 3672647, the life expectancy ratio is said to have an insignificant negative effect, as the likelihood is greater than the significance level of 0.05. This indicates that, everything else being equal, a one-unit rise in the life expectancy ratio will lead to a 3673647-percent boost in economic growth.

Muda (2019) found that when people are healthy, it helps the local economy. A person's level of health has a significant impact on their desire, efficiency, and productivity, all of which are key aspects of human quality.

Development influences gender equality in labor force participation, according to research in the feminist literature by Ruiters and Charteris (2020). However, economic growth is also influenced by gender equality.

This finding accords with that of Harahap (2014), who found that variations in life expectancy between sexes have a beneficial effect on GDP growth.

The Relationship of the Per Capita Expenditure Ratio to Economic Growth

Since the likelihood is less than the significance level of 0.05, the variable per capita expenditure ratio is considered to have a negative and significant influence, as evidenced by its coefficient of -2831996 and probability of 0.0017. Assuming everything else remains constant, this indicates that a -2831996 drop in economic growth is possible for every one unit increase in the per capita expenditure ratio.

This study's findings corroborate those of Padang et al. (2019), who found a negative correlation between per capita expenditure and economic growth in West Sumatra. Growth in the economy will slow down as a result of higher per capita expenditure.

The Relationship of the Ratio of Labor Force Participation Rate to Economic Growth

At the 0.05 level of significance, the labor force participation rate ratio has a coefficient of -11030180 and a probability of 0.0432. Therefore, the ratio of the labor force participation rate is significantly and negatively affecting the outcome. This means that for every one unit rise in the ratio of the labor force participation rate, economic growth will be negatively affected by -11030180, all else being equal.

Reasons for this issue include women's lower employment rates compared to men's, limited access to employment options, and a negative relationship between the labor force participation rate and economic growth.

Similar to what Ruiters and Charteris found, economic growth is negatively impacted by labor force participation (Ruiters & Charteris, 2020). Similarly, Klasen and Lamanna's (2008) research reveals that GDP growth is negatively affected by the level of labor force participation. (Chartaris and Ruiters, 2020).

4. Conclusion

First, the study found that economic growth in South Kalimantan is significantly impacted by the average ratio of school time, which has a negative effect. Secondly, South Kalimantan's economic growth is unaffected by the life expectancy ratio, which has a favorable influence. Third, South Kalimantan's economic growth is significantly and negatively affected by the per capita expenditure ratio. Fourth, South Kalimantan's economic growth is significantly and negatively affected by the labor force participation rate.

References

- [1] Agénor, P. R., & Agénor, M. (2023). Access to infrastructure and women's time allocation: Implications for growth and gender equality. Journal of Macroeconomics, 75(October 2022), 103472. https://doi.org/10.1016/j.jmacro.2022.103472
- [2] Altuzarra, A., Gálvez-Gálvez, C., & González-Flores, A. (2021). Is gender inequality a barrier to economic growth? A panel data analysis of developing countries. Sustainability (Switzerland), 13(1), 1–21. https://doi.org/10.3390/su13010367
- [3] Anggraeni, V. P., Bariyah, N., & Kurniawati, S. (2022). Gender Equality and Economic Growth Toward Fulfillment of Sustainable Development Goals. Geography Journal, 14(1), 107.

- https://doi.org/10.24114/jg.v14i1.26737
- [4] Ariani, M. B. N., & Novita Sari, A. (2022). Analyzing the effect of gender inequality on labor productivity in West Java province. International Journal of Research in Business and Social Science (2147-4478), 11(1), 130–137. https://doi.org/10.20525/ijrbs.v11i1.1572
- [5] Girón, A., & Kazemikhasragh, A. (2022). Gender Equality and Economic Growth in Asia and Africa: Empirical Analysis of Developing and Least Developed Countries. Journal of the Knowledge Economy, 13(2), 1433–1443. https://doi.org/10.1007/s13132-021-00782-1
- [6] Harahap, R. F. A. (2014). Analysis of the Effect of Gender Inequality on Economic Growth in Central Java Province . Diponegoro University.
- [7] Ministry of PPPA. (2021). Gender-Based Human Development 2021. Ministry of Women's Empowerment and Child Protection, xviii + 178.
- [8] Khan, H. U. R., Khan, A., Zaman, K., Nabi, A. A., Hishan, S. S., & Islam, T. (2017). Gender discrimination in education, health, and labor market: a voice for equality. Quality and Quantity, 51(5), 2245–2266. https://doi.org/10.1007/s11135-016-0384-4
- [9] Kim, J., Lee, J., & Shin, K. (2016). A Model of Gender Inequality and Economic Growth. 475. Kim, J., Lee, J. W., & Shin, K. (2018). Gender Inequality and Economic Growth in Korea. Pacific Economic Review, 23(4), 658–682. https://doi.org/10.1111/1468-0106.12181
- [10] Klasen, S. (2018). The Impact of Gender Inequality on Economic Performance in Developing Countries. Annual Review of Resource Economics, 10(April), 279–298. https://doi.org/10.1146/annurev-resource-100517-023429
- [11] Klasen, S., & Lamanna, f. (2008). The Impact of Gender Inequality in Education and Employment on Economic Growth in Developing Countries: Updates and Extensions. Feminist Economics, Vol. 15.
- [12] Lin, X. L., & Yin, H. T. (2023). The Impact of Gender Equality on Green Innovation. Energy Research Letters, 4(3), 37–53. https://doi.org/10.46557/001c.36536 Mandal, B., Batina, R. G., & Chen, W. (2018). Do gender gaps in education and health affect economic growth? A cross-country study from 1975 to 2010. Health Economics (United Kingdom), 27(5), 877–886. https://doi.org/10.1002/hec.3636
- [13] Muda, R., Koleangan, R., & Kalangi, J. B. (2019). The influence of life expectancy, education level and per capita expenditure on economic growth in North Sulawesi in 2003-2017. Scientific Periodical Journal of Efficiency, 19(01), 44–55.
- [14] Napitupulu, F., & Ekawaty, M. (2022). Gender Inequality and Economic Growth; Case studies in East Asian and Pacific countries. 1(1), 29–43.
- [15] Okere, K. I., Dimnwobi, S. K., Ekesiobi, C., & Onuoha, F. C. (2024). Pollution, governance, and women's work: Examining African female labor force participation in the face of environmental pollution and governance quality puzzles. Women's Studies International Forum, 102. https://doi.org/10.1016/j.wsif.2023.102851
- [16] Padang, D. M., Anis, A., & Ariusni. (2019). Analysis of the Influence of Gender Equality on Economic Growth in West Sumatra. Journal of Economic and Development Studies, 1(3), 969–976.
- [17] Puspasari, S. (2019). The Influence of Educated Workforce Participation on Economic Growth in Indonesia: Human Capital Perspective. Journal of Administrative Sciences (JIA), XVI(2), 194–209.
- [18] Ruiters, M., & Charteris, A. (2020). Gender equality in labor force participation, economic growth and development in South Africa. Development Southern Africa, 37(6), 997–1011. https://doi.org/10.1080/0376835X.2020.1772042
- [19] Sadano, S. (2000). Modern Macroeconomics: Development of Thought From Classical to New Keynesian. Raja Grafindo Pustaka.
- [20] Seguino, S. (2000). Gender inequality and economic growth: A cross-country analysis. World Development, 28(7), 1211–1230. https://doi.org/10.1016/S0305-750X(00)00018-8 Şentürk,
- [21] İ., & Ali, A. (2021). Socioeconomic Determinants of Gender-Specific Life Expectancy in Turkey: A Time Series Analysis. Socioeconomics, 29(49), 85–111. https://doi.org/10.17233/sosyo Ekonomi.2021.03.05 Sharif, I. (2013). Gender Inequality in Education and Economic Growth: Case Study of Pakistan. 60(4), 81–91.
- [22] Suryadi, A. E. (2004). Gender Equality in the Field of Education. PT. Ganesindo.
- [23] Tafuro, A. (2023). Labor market rigidity and expansionary austerity. Journal of Macroeconomics, 75(December 2022), 103495. https://doi.org/10.1016/j.jmacro.2022.103495
- [24] Vininda, S., & Yuliana, L. (2019). Implementation Panel Data Regression of the Effect of Gender Equality on Economic Growth in Riau Province for the Period 2011-2015. National Seminar on Official Statistics, 549–559.
- [25] Voumik, L. C., Rahman, H., & Islam, A. (2023). GDP, and Urbanization on Women's Employment in South Asia: Systems, 11(97).