GENDER INEQUALITY AND POVERTY IN ACEH

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ABSTRACT
This research analyzes gender inequality through the Gender Inequality Index (GII) and its influence on poverty in Aceh. The study employed a panel data analysis method for 23 districts/cities in Aceh from 2018 to 2022. The research findings indicate that gender inequality significantly affects poverty in the 23 districts/cities of the Aceh Province, with a coefficient value of 3.089289. This suggests that a one percent increase in the Gender Inequality Index (GII) will lead to a 3.089 percent increase in poverty, assuming other factors remain constant. High gender inequality can make the realization of inclusive development challenging. Therefore, it is hoped that the Aceh government can formulate strategies to increase women's labor participation and encourage their involvement in public positions and strategic decision-making, thus acknowledging their involvement in public spaces.

Keywords: Gender, Inequality, Poverty,

INTRODUCTION

Gender discrimination has become a complex issue, given that it occurs in multiple dimensions and has accumulated over time. The gender gap or discrimination based on gender poses obstacles for certain groups, particularly women, to access various economic opportunities. Unequal gender norms prevalent in society often hinder women's progress in domestic and public spheres (Hadiarta et al., 2022).

The discussion on gender, besides addressing various forms of inequality that may arise from unequal relations, also explores various awareness-raising efforts. Various studies indicate that building awareness about women can be achieved through the education process. As a continuous and repetitive process, education shapes the orientation toward recognizing human reality and oneself. Therefore, efforts to enhance gender awareness must also be accompanied by comprehensive policies. (Jamaluddin et al., 2014).

The Human Development Report (UNDP) broadens the measurements in defining gender inequality that occurs across the globe. Through the Human Development Report, the UNDP introduces the Gender Inequality Index (GII) as a quantitative measure that portrays the loss of achievements in women's lives in three dimensions: reproductive health, empowerment, and employment. (Aktaria & Handoko, 2012).

In the gender and poverty issue, households are one of the sources of discrimination and subordination against women. The Indonesian government has recently completed a significant task of formulating the National Poverty Alleviation Strategy under the coordination of Bappenas. National and local strategies implemented by the government to reduce poverty rates should be able to promote increased participation and well-being for women. If women are not targeted for poverty alleviation efforts and gender analysis is not used to examine the root causes of poverty, poverty alleviation programs will not be able to reach the majority of women who face limitations in accessing public spaces (Noerdin et al., 2006).

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT
Inequality Gender

According to the presentation by Bappenas (2023), gender inequality in the field of development includes: (a) High maternal mortality rates; (b) Violence against women in various aspects of life; (c) Low participation of women in the workforce; (d) Women predominantly working in the informal sector with low productivity; (e) Women constituting 60% of SMEs, but these businesses are necessity-based and not growth-oriented; (f) Low participation of women in public positions and decision-making.

The gender Inequality Index (GII) according to the Central Statistics Agency (BPS) is an adoption of the GII applied at the national and regional levels, indicating suboptimal human development achievements due to inequality between women and men in the dimensions of reproductive health, empowerment, and the labor market. The need to measure gender inequality aims to enhance human development by providing opportunities for the expansion of choices for women, reducing inequality in achievements among individuals and genders. To understand gender inequality, representative measures are required that can demonstrate the characteristics of inequality and provide guidance for solutions (Ahmadriswan, 2023). The following are the dimensions and indicators of the Gender Inequality Index according to the BPS in the Aceh Province (2023):

Figure 1
Dimensions and Indicators of the Gender Inequality Index (GII).

Source: Central Statistics Agency (2023)

The Gender Inequality Index (GII) comprises three dimensions: (1) Reproductive Health; (2) Empowerment; and (3) Labor Market. The Reproductive Health dimension includes the proportion of women delivering live births outside health facilities and the proportion of women aged 15-49 delivering their first live birth at < 20 years old. Meanwhile, the Empowerment dimension is based on indicators such as the percentage of the population with at least a high school education and the percentage of female legislative members. As for the Labor Market dimension, it includes the indicator of the Labor Force Participation Rate (LFPR). The following are the phenomena of the three dimensions of the Gender Inequality Index (GII) based on their respective indicators:

Figure 2
Gender Inequality Index Aceh Year 2022
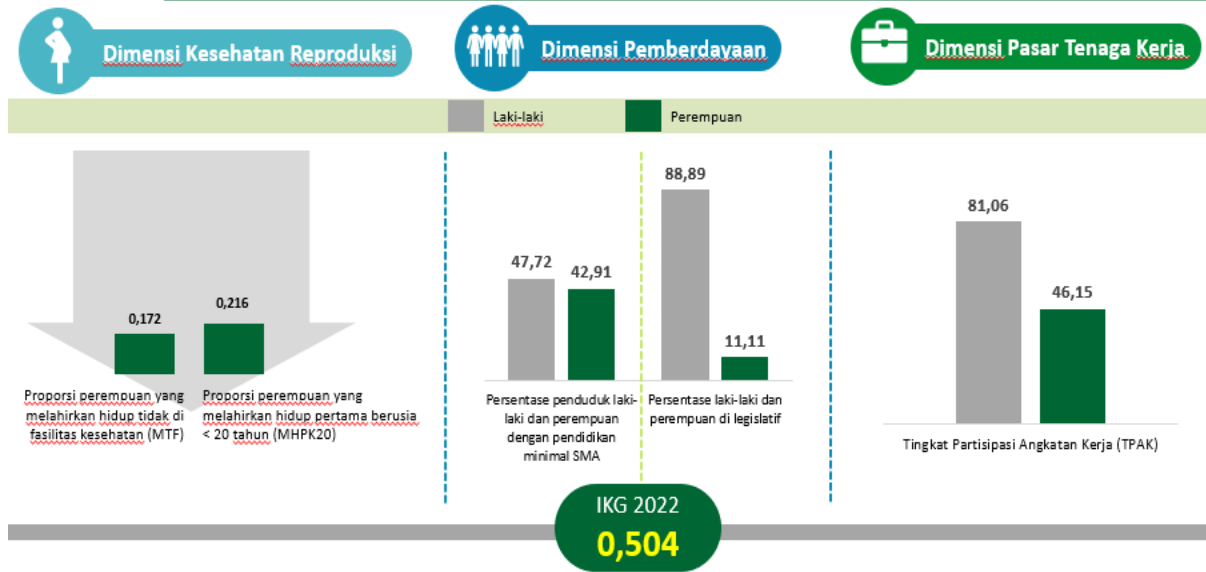
Based on the Gender Inequality Index (GII) of Aceh Province in 2022 with a value of 0.504, it indicates that among the three dimensions measured by the GII, the empowerment dimension and the labor market dimension play a crucial role in influencing the GII in Aceh Province. The empowerment dimension illustrates that there is significant disparity between men and women in the legislature, with 88.89 percent of seats occupied by men and only around 11.11 percent by women. Meanwhile, the labor market dimension indicates that the female labor force participation rate is considerably lower compared to men. This illustrates the limited opportunities for women in the workforce, leading to lower productivity for women.

Poverty

Poverty, according to Bappenas as cited in Akhmad & Amir (2020), is a condition in which an individual or a group of men and women are unable to fulfill their basic rights to sustain and develop a dignified life. This definition indicates that poverty is not merely viewed as economic incapacity but also as a failure to meet fundamental rights and differences in behavior for an individual or a group of people in living a dignified life. Generally acknowledged basic rights include the fulfillment of needs such as food, health, education, employment, housing, clean water, land, natural resources, and the environment, as well as the right to safety from treatment or threats of violence or the right to participate in social and political life, both for women and men.

The Central Statistics Agency (BPS, 2017) until the year 2021 stated that the Aceh Province is one of the provinces in Indonesia with a significant poverty rate, especially after experiencing the impacts of conflicts and natural disasters. Local government and various non-profit organizations have been working hard to reduce the poverty rate in the Aceh Province through various development programs, including social assistance programs, local economic development, as well as infrastructure development programs.

RESEARCH METHODS

This research will employ a quantitative research method using the panel data regression model, which combines cross-sectional data with time-series data. The study utilizes secondary data and employs panel data analysis, a combination of time series and cross-sectional data, from the years 2018 to 2022 in 23 regencies/cities in the Aceh Province. The objective of this research is to determine whether independent variables, specifically the Gender Inequality Index (GII), can have an impact on

the dependent variable, which is poverty in the Aceh Province from 2018 to 2022. The equation for this research model is as follows:

$$PPM_i = \beta_0 + \beta_1 IPG_{1i} + \beta_2 IDG_{2i} + \beta_3 IKG_{3i} + e_i$$

Information:

PPM	= Percentage of the Population Living in Poverty
IPG_1	= Gender Development Index
IDG_2	= Gender Empowerment Index
IKG_3	= Gender Inequality Index
i	= Number of observation units
t	= Number of time periods
β_0	= Constanta
$\beta_1, \beta_2, \beta_3$	= Number of observation units
e	= Residual

Panel data analysis will go through the following stages:

Figure 3
Stages of Determining Panel Data Regression Methods
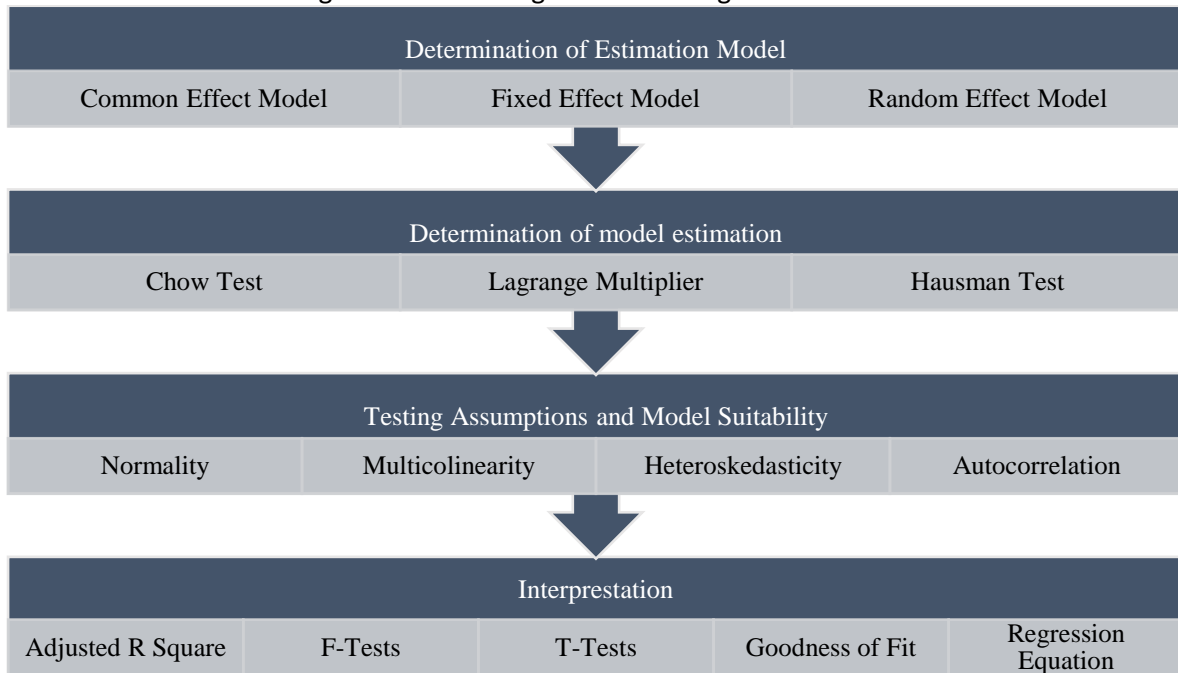
RESULT AND DISCUSSION

To determine which model is better in panel data testing, the addition of dummy variables can be performed to identify whether their intercepts differ, and this can be tested using the Chow Test statistical test. This test is utilized to determine whether the panel data regression technique with the fixed effect method is superior to the panel data regression model without dummy variables (common effect). The results of the Chow Test calculation are presented in the following table:

Table 1.
Chow Test

Redundant Fixed Effects Tests Pool: PANEL Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.

Cross-section F	159.879104	(22,89)	0.0000
Cross-section Chi-square	425.708426	22	0.0000

Based on the test, it shows that the Probability Cross-section Chi-square value is 0.0000, which is < 0.05; therefore, we accept H1 with the hypothesis:

H_0 : Common Effect Model
H_1 : Fixed Effect Model

Thus, it can be concluded that the Fixed Effect Model (FEM) is more appropriate compared to the Common Effect Model (CEM). Furthermore, the model selection will be reinforced by conducting the Hausman test.

The Hausman Test aims to compare between the Fixed Effect Model and Random Effect Model. The results of the test determine whether the panel data regression technique with the Generalized Least Square method (random effect model) is superior to the panel data regression with the Least Square Dummy Variable method (fixed effect model). The results of the Hausman Test calculation are presented in the following table:

Table 2.
Hausman Test

Correlated Random Effects – Hausman Test
Pool: PANEL
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.091072	3	0.1652

In the calculations performed, it can be observed that the Probability Cross-section random value is 0.1652, which is > 0.05, indicating insignificance. Therefore, the decision made in this Hausman Test is to accept H0 (P-value > 0.05) with the hypothesis:

H_0 : Random Effect Model
H_1 : Fixed Effect Model

Based on the results of the Hausman Test, the selected research model is the Random Effect Model (REM). To further validate the selected REM model, the Lagrange Multiplier test will be conducted.

The Lagrange Multiplier test is a test to determine the use of methods between random effects or common effects. The hypothesis of the Lagrange Multiplier test is:

H_0: Common Effect Model
H_1: Random Effect Model

If the Breusch-Pagan Probability>0.05, then H0 is accepted and H_1 is rejected. If the Breusch-Pagan Probability<0.05, then H_0 is rejected, and H1 is accepted. The results of the model selection test for panel data using the Lagrange Multiplier test are as follows:

Table 3.

Lagrange Multiplier Model

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided
(all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	195.2872	1.385827	196.6730
	(0.0000)	(0.2391)	(0.0000)
Honda	13.97452	-1.177211	9.049063
	(0.0000)	--	(0.0000)
King-Wu	13.97452	-1.177211	4.398381
	(0.0000)	--	(0.0000)
Standardized Honda	15.00974	-0.967637	6.409175
	(0.0000)	--	(0.0000)
Standardized King-Wu	15.00974	-0.967637	2.092368
	(0.0000)	--	(0.0182)
Gourierioux, et al.*	--	--	195.2872
			(< 0.01)

*Mixed chi-square asymptotic critical values:

1%	7.289
5%	4.321
10%	2.952

Based on the table above, the Breusch-Pagan probability value is 0.0000, which is smaller than alpha 0.05, thus rejecting the null hypothesis. Therefore, according to the Lagrange Multiplier test, the most appropriate model for panel data testing is the Random Effect Model (REM).

Considering the Random Effect Model (REM) as the model to be estimated, the classical assumption test employed is multicollinearity. Meanwhile, heteroskedasticity is not necessary since the Random Effect Model (REM) utilizes the Generalized Least Squared (GLS) approach to estimate the model (Widarjono, 2007). The following are the results of the multicollinearity test:

Table 4.

Multicollinearity Test Result

	IPG	IDG	IKG
IPG	1.000000	-0.113543	-0.098368
IDG	-0.113543	1.000000	-0.380879
IKG	-0.098368	-0.380879	1.000000

Based on the test results above, it can be observed that the correlation values for each variable are below 0.80, indicating that the data in the study is free from multicollinearity.

Based on the previously conducted selection of the best model, the result shows that the most suitable model for this study is the random effect model. Therefore, in this research, the estimation is carried out using the Random Effect Model method, and the results are as follows:

Table 5.
Panel Data Regression

Dependent Variable: PPM?
Method: Pooled EGLS (Cross-section random effects)
Date: 10/24/23   Time: 23:54
Sample: 2018 2022
Included observations: 5
Cross-sections included: 23
Total pool (balanced) observations: 115
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15.30564	1.739513	8.798810	0.0000
IPG?	-0.005959	0.006955	-0.856856	0.3934
IDG?	-0.011260	0.020167	-0.558325	0.5777
IKG?	3.089289	1.322582	2.335801	0.0213
Random Effects (Cross)				
SIMEULUE_--C	3.505859			
ACEH_SINGKIL_--C	4.449553			
ACEH_SELATAN_--C	-2.484379			
ACEH_TENGGARA_--C	-2.294344			
ACEH_TIMUR_--C	-1.723175			
ACEH_TENGAH_--C	-0.395430			
ACEH_BARAT_--C	3.002681			
ACEH_BESAR_--C	-1.921405			
PIDIE_--C	4.221942			
BIREUEN_--C	-2.359256			
ACEH_UTARA_--C	1.356378			
ACEH_BARAT_DAYA_--C	0.627750			
GAYO_LUES_--C	3.678147			
ACEH_TAMIANG_--C	-2.158273			
NAGAN_RAYA_--C	2.418385			
ACEH_JAYA_--C	-2.521394			
BENER_MERIAH_--C	3.252533			
PIDIE_JAYA_--C	3.501863			
BANDA_ACEH_--C	-7.514356			
SABANG_--C	0.487762			
LANGSA_--C	-4.832759			
LHOKSEUMAWE_--C	-4.193733			
SUBULUSSALAM_--C	1.895651			

	Effects Specification			
			S.D.	Rho
Cross-section random			3.169568	0.9717

Idiosyncratic random		0.541359	0.0283

	Weighted Statistics		
R-squared	0.073862	Mean dependent var	1.189620
Adjusted R-squared	0.048831	S.D. dependent var	0.560285
S.E. of regression	0.546434	Sum squared resid	33.14351
F-statistic	2.950849	Durbin-Watson stat	1.250179
Prob(F-statistic)	0.035828		

	Unweighted Statistics		
R-squared	0.072990	Mean dependent var	15.61965
Sum squared resid	1237.423	Durbin-Watson stat	0.033485

The regression equation that can be derived in this study based on the Random Effect Model (REM) is:

$$PPM = 15.30564 - 0.005959 IPG_{it} - 0.011260 IDG_{it} + 3.089289 IKG_{it}$$

$$(0,3934) \qquad (0,5777) \qquad (0,0213)$$

Based on the equation above, the regression results based on the Random Effect Model (REM) are obtained. The results show that the Gender Inequality Index (GII) variable has a probability value of less than 5 percent. Thus, it can be said that this variable has a statistically significant influence. In other words, poverty in the Aceh Province is influenced by the Gender Inequality Index (GII). The Gender Inequality Index (GII) significantly influences poverty in the 23 regencies/cities in the Aceh Province, with a coefficient value of 3.089289. This means that a one percent increase in the GII will result in a 3.089 percent increase in poverty, assuming ceteris paribus. Gender inequality, such as unequal access for girls in education, inequality in specific opportunities, such as inequality in access to higher education, inequality in professional training, such as inequality in access to certain jobs in the division of labor, and household inequality in asset ownership. Furthermore, there is gender inequality in the workplace, such as wage differences between men and women and unequal treatment of women in the workplace. This will result in a lower standard of living (Nazmi & Jamal, 2018).

CONCLUSION

The Gender Inequality Index (GII) variable has a probability value of less than 5 percent. Therefore, it can be stated that this variable has a statistically significant influence. In other words, poverty in the Aceh Province is influenced by the Gender Inequality Index (GII). Hence, national and local strategies implemented by the government to reduce poverty rates should promote increased participation and well-being for women. If women are not targeted for poverty alleviation efforts, and gender analysis is not used to examine the root causes of poverty, poverty alleviation programs will not be able to reach the majority of women who face limitations in accessing public spaces.

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