Study of the Socio-Economic Analysis of Females Role in Eastern part of Indonesia

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ABSTRACT

It is very crucial to involve women in a development, especially in developing countries. It will be more successful if it has the support from   men and women to increase gender equality and reduce inequality. Females are the human resources that play a role in the development and gender empowerment. The role can be measured by GEM (Gender Empowerment Measure). This research determined the socio-economic role of females in Eastern Indonesia in terms of education, health, employment, and politics. This study utilizes some variables including : Mean Year of Female School , Female Life Expectancy, Female Labor Force Participation Rate, and Female Representation in Parliament Rates. This research uses panel data regression and the Fixed Effect Model method. Secondary macro data are shared from BPS from 2013 to 2020.

It can be concluded that this study indicates the mean year female school, female life expectancy, female labor force participation rate, and female representation in parliament rate have a positive and significant effect partially and simultaneously on the Gender Empowerment Measure (GEM) in Eastern Indonesia.

Keywords: Gender Empowerment Measure, Mean years of female school, Female life expectancy, Female labor force participation rate, Female representation in parliament rate, Fixed Effect Model.

1. INTRODUCTION

The development process of an area can be successful if supported by the growth of the economic sector related to economic activities. According to Presidential Decree No. 2 of 2015 on the National Medium-Term Development Plan 2015-2019 (NMTDP) of Ministry of Public Works and Spatial Planning , it is divisible into two regions based on the geographic location of Indonesia, namely West Region and East Region of Indonesia (ERI). The western region of Indonesia consists of the Sumatra Island, Java, and Bali, while Eastern Indonesia includes the islands of Nusa Tenggara, Kalimantan, Sulawesi, Maluku, and Papua. Economic development will achieve success requires the support of human resources to increase gender equality and reduce inequality. Indicators used to measure the condition of gender equality in Eastern Indonesia using the HDI and GDI.

Eastern Indonesia in 2013-2020 saw a 69.06 percent increase in the Human Development Index in the last eight years 2020, but this condition is inversely proportional to the Gender Development Index, which rose and fell in 2019-2020. An increase of 0.05 in 2019 then the following year in 2020 a decrease of 0.14. This condition states that the GDI figure is higher than the HDI and illustrates that there is no inequality in ERI . In this case, women play an important role because they are targets in the SDGs. Women can play an active role in monitoring the implementation and achievement of all goals and targets of the 2030 Agenda for Sustainable Development and Gender Equality. The Female mean years school is an indicator to measure the role of women in education, as this indicator is used to determine whether the level of education in the field is good or bad. Education is an investment that is able to improve the quality of women, because if the knowledge possessed by a person is supported by sufficient skills, to make the education better and able to compete in increasing development.

Female Life Expectancy (FLE) is an indicator to identify the role of women in the healthcare sector. Life expectancy used to measure the level of public welfare in an area. When life expectancy is high, defined as having relatively good health. Life expectancy is also an investment in health, a shared responsibility to create prosperity.

The Female Labor Force Participation (FLFP) is an indicator to see the role of women in the workforce, where FLFP is the number of people starting aged 15 and older who are in the labor force, increasing the number of productive workers who can increase the production results achieved. The contributions derived from the high skills of the workers and the high knowledge of the female workforce can be an important aspect of economic development where women entering the workforce will actively participate in economic activities. Women can contribute to income generation with the results of their work.

The measurement of women's roles can also be seen using the Gender Empowerment Index. The Gender Empowerment Measure (GEM) is an indicator to assess gender equality through the active participation of women in business, politics, and leadership or decision-making. The Gender Empowerment Measure (GEM) focuses on participation by measuring gender inequality in economics, politics, and decision-making. The indicator as a measure of the role of women in politics uses the female representation in parliament rate. Female rights are supported by UU No. 7 of 2017, which states that women can have at least 30 percent representation in Parliament [1]. Female representation in parliament has an important role in development because women can lead to great infrastructure investments that address women's rights and needs so that they can bridge the handling of gender gaps [2].

The condition of gender development in Eastern Indonesia has experienced a steady increase, and the trend of gender empowerment that continues to increase shows that the active role of the community in the region is quite good. The importance of women's roles in the implementation of accelerated economic development can be seen based on the mean year school female, female life expectancy, female labor force participation rate, and female representation in parliament rates. Therefore, research has required the analysis of the socio-economic role of women in Eastern Indonesia from 2013-2020. This research is expected to contribute to government policies related to development to increase women's empowerment and improve welfare in the regions.

2 .LITERATURE REVIEW

2.1 Gender Empowerment Measure

Gender is the difference in roles and functions between men and women in development. Gender empowerment in development is measured using the Gender Empowerment Measure (GEM), which was developed by UNDP [3]. The Gender Empowerment Index (IDG) or Gender Empowerment Measure (GEM) is an indicator to assess gender equality through the active participation of women in the economic, political, and managerial fields or decision making [4]. The Gender Empowerment Measure (GEM) focuses on women participation by measuring gender inequality in the economic, political, and decision-making fields. The GEM indicator looks at whether women play an active role in the economy and politics.

2.2 Gender Theory

Gender is a social relationship between men and women that is dynamic so that it can change at any time [3]. According to the Central Statistics Agency, gender is the difference in the roles of men and women that are innate from birth. Gender is the difference in roles, positions, responsibilities, and division of labor between men and women determined by the community based on the nature of women and men who are considered appropriate according to the norms, customs, beliefs, or habits of the community. Gender equality can occur through women's greater access to land and credit markets and an increase in their decision-making abilities within the household. This leads to increased women's empowerment, poverty reduction, and increased economic growth [2].

2.3 The Role of Women in Development

The role is an aspect of a dynamic position one be can say that a person performs their function or role when exercising the rights and duties according to their position [5]. Women in development are subjects who should be involved in the process

well as accept benefits [6]. Women's role in development is an activity, task, or involvement of women that encompasses the domestic and the public sector at this time known as the development phase. Women play an important and even larger role in the political field as women are known to have become players in the nationalist struggle in the public sphere that marked the entry of these nations into the era of modernity that coincided with the development process.

2.4 Human Capital Theory

According to Todaro [7], human capital through education can productivity. Health and human productivity have increased. Human capital theory shows that increases in productivity and income can be influenced by education, as increasing education can provide benefits in increased workers' skills. According to Ehrenberg [1], the individual's investments in education are aimed at his knowledge of the future. According to Becker in Ogundari [5], health is part of human capital related to knowing. This matter is intended when someone wants to have a high income before having to spend a lot of money on education and health [7].

2.5 Labor Force Participation Rate

According to Gujarati [8], the labor force participation rate describes the percentage of the population in the age group who enters the workforce. The labor force participation rate is the basis for knowing the population in the area is actively working or looking for work. If the FLFP number is small, then it is classified as not in the labor force because it included in the category of the population who are still in school, taking care of the household, or others, on the contrary, if the FLFP number is large, the number of people working in the area will also be higher [9]

2.6 Women's Political Participation

Politics is defined as the struggle for power, where politics is interconnected power. The presence of women in politics can provide changes in decision making, including women who work across parties, women who are responsive to political issues, women in world peace, women's participation can encourage citizens' trust in democracy, and women who prioritize aspects of education, health, politics, and the economy. This increase in women's representation in politics can achieve equal rights and justice, one of which is realizing laws and regulations that have a relationship with women's representation in parliament [6]. The position of women in decision-making in the political field is very important because it will provide opportunities to consider the voices, interests, and needs of women in various aspects of life [3].

2.7 Previous Research

Women's education has a positive relationship with women's empowerment [4]. Women's health has a positive impact on women's empowerment [10]. The increase in women's life expectancy is influenced by increasing levels of health, namely easier access to health facilities. The extent of female labor force participation is significantly associated with gender empowerment [9],[6] The representation of women in parliament has a significant impact on gender empowerment [11]. Ehrenberg [1] conducted a study analyzing the Gender Empowerment Measure (GEM) and Gender Empowerment Index (IDG) of Surakarta city and found that women's average school tenure and contribution of income to the family decreased due to suboptimal Access to Development Resources.

3. RESEARCH METHODS AND TECHNIQUES

This study uses secondary macro data sourced from the Central Bureau of Statistics, with variables used including the Gender Empowerment Measure (GEM), mean year school female, female life expectancy, female labor force participation rate, and female representation in parliament rates. The data are from 17 provinces of East Indonesia and the period used is 2013- 2020. The analysis technique in this research is the panel data regression method. Panel data regression involves three method levels, including Pooled Least Squares (PLS), Fixed Effects Model (FEM), and Random Effects Model (REM). The following is analysis model a panel data regression included in Gujarati [8] as follows:

$IDGit = \beta 0 + \beta 2\ RLSPit + \beta 3 AHHPit + \beta 1 FLFPit + \beta 4\ FRATEit + \varepsilon it$

IDG : Gender Empowerment Measure (GEM) in region I in year t

$RLSP$: Female Mean Year School in region I in year t

$AHHP$: Female Life Expectancy in region I in year t

$FLFP$: Female Labor Force Participation in region I in year t.

$FRATE$: Female Representation in Parliament Rate in region I in year t.

$\beta 0$: Intercept. $\beta 1$, $\beta 2$,3 ,$\beta 4$: Regression coefficient.

ε : Error term in region I in year t.

The data used in this study are panel data, which is a combination of time series and cross-sectional data. The dependent variable in this study is the Gender Empowerment Measure (GEM). The independent variables in this study were mean year school female, female life expectancy, female labor force participation rate, and female representation in parliament rates. Where Gender Empowerment Measure (GEM) measures gender inequality in the field of economics, politics, and decision-making. The overall Gender Empowerment Measure (GEM) in Eastern Indonesia has been increasing fairly steadily every year. The female mean year school is the number of years women spend in formal education. Female Life Expectancy (FLE) is an estimate of the average life expectancy of a person from birth, reflecting the health status of women. The female labor force participation rate is measured by the number of employed persons in the population aged 15 and over. The female representation in parliament rates is the percentage of seats occupied by women in the national parliament.

4. RESULT

4.1 Estimate before Robust

Table 1 Panel Data Regression Estimation Results on Fixed Effect Model (FEM)

Fixed Effect Model			
Variabel	**Coef.**	**SE**	**Prob.**
C	-45,3205	42,3123	0,286
RLSP	1,8533	0,7861	0,020
AHHP	1,1570	0,6772	0,090
FLFP	0,0852	0,0430	0,050
FRATE	0,7617	0,0284	0,000
Observasi (n)	-	136	-
Prob	-	0,0000	-
R^2	-	0,9053	-

Source: Stata 16 Regression Results

Table 1 shows the results of the panel data regression estimation using the FEM model, the female mean school length variable has a probability value of 0.020, which means that the RLSP variable has a significant impact on the Gender Empowerment Index because the value (p-value) is below the significance level of 0.05 (5%). The variable life expectancy for women has a probability value of 0.090, which means that the variable FLE has a significant Gender Empowerment Index because the p-value is less than the 10% significance level. The female labor force participation rate/FLFP variable has a probability value of 0.050, which means that the FLFP variable has a significant impact on the Gender Empowerment Index because the value (p-value) is less than the 10% significance level. The variable representation of women in parliament/FRATE has a probability value of 0.000, which means that the variable FRATE has a significant impact on the Gender Empowerment Index because the value (p-value) is less than the significance level of 0.01 (1%)

4.2 Estimate after robust

Table 2 Regression Results on Fixed Effect Model (FEM)

Variabel	Coef.	SE	Prob.
C	-47,034	38,395	0,221
RLSP	1,8533	0,7229	0,010
AHHP(F LE)	1,1570	0,6227	0,063
FLFP	0,0852	0,0395	0,031
FRATE	0,7617	0,02612	0,000
Observasi (n)	-	136	-
Prob	-	0,0000	-
R^2	-	0,9053	-

Source: Stata 16 Regression Results

Table 2 shows the results of the Panel data regression estimation using the GLS, the variable average length of school for women has a probability value of 0.010, meaning that the RLSP variable has a significant effect on the gender empowerment index because the value (p- value) is less than the 0.05 significance level (5%) . The female life expectancy variable has a probability value of 0.063, meaning that the FLE variable takes effect significantly on the gender empowerment index because the p-value is less than the 10% significance level. The female labor force participation rate/FLFP has a probability value of 0.031, meaning that the FLFP variable takes effect significantly on the gender empowerment index because the value (p- value) is less than the significance level of 0.05 (5%). The variable representation of women in parliament/FRATE has a probability value of 0.000, meaning the FRATE variable has a significant influence on the gender empowerment index because the value (p-value) is less than the 0.01 significance level (1%).

Based on data from the Central Statistics Agency, the Gender Empowerment Index in East Indonesia showed a fairly stable increase over the period 2013-2020, except that it decreased in 2020. The Gender Empowerment Measure is a measure of whether or not gender development is going well in the region. The results of the Fixed-Effects Model estimation in this study state that the variables of female mean year school, female life expectancy, female labor force participation rate, and female representation in parliament rates have a positive and significant impact on the Gender Empowerment Measure in Eastern Indonesia.

Based on the results of the regression (in Table 2) , it can be explained as follow: The female mean   year school has a positive association and significant impact on the Gender Empowerment Measure in Eastern Indonesia, implying that increasing the number of years of schooling for women will increase the GEM in the region. The results show that women's average schooling will increase the Gender Empowerment Index in Eastern Indonesia. If the average school time increases by 1 percent, the Gender Empowerment Index increases by 1.85 percent. Because higher education can be seen as a good form of human capital investment to influence development. Education is an aspect of implementing sustainable development.

The results of this study are supported by Akram [12], who finds that education has a positive and significant impact on the Gender Empowerment Index. Education will give women better career opportunities and will be able to enhance women's self-confidence to stimulate women's self-determination. Another supporting study by Charmes [4] and Chen [10] found that the

educational attainment of females in China has a significant impact on gender empowerment. This points to the importance of education to increase gender empowerment.

Female life expectancy has a positive relationship and a significant impact on the Gender Empowerment Measure in East Indonesia, meaning the higher the female age, the higher the chance of women surviving, which increases the Gender Empowerment Index. If the life expectancy of women increases by 1 percent, the Gender Empowerment Index increases by 1.15 percent. This is because life expectancy is used as a tool to assess the population's level of welfare and improve the health status of the community. The higher the life expectancy indicates, the higher the chances of survival. High health status can affect development [5].This finding is supported by Chen research [10] , which states that increasing women's life expectancy has an impact on gender empowerment, also finds that women's life expectancy, the trend of increasing life expectancy, is generally influenced by the increasing level of health, namely easier access to health facilities. Increasing life expectancy illustrates reduced health inequalities, this reduction in inequality reflects the government's success in efforts to achieve gender equality in the health sector.

The level of female labor force participation has a positive relationship and a significant impact on the Gender Empowerment Measure in East Indonesia, meaning that as the female labor force participation increases, the Gender Empowerment Measure in the region increases. If the female employment rate increases by 1 percent, the Gender Empowerment Index increases by 0.08 percent. Because women are entering the labor market and the economy will grow faster, a large labor force may hamper development [13]. Increasing labor force participation indicates there is a greater supply of labor in an economy for the production of goods and services. The findings of this study are also supported by the research of Huh [9], who finds that women's participation in the labor market influences gender empowerment. Further results in support of this research by Wyndow [6] who finds that women's participation is significantly associated with gender empowerment.

The female representation in parliament rates has a positive relationship and a significant impact on the Gender Empowerment Measure in East Indonesia, which means that increasing the female representation in parliament rates will increase the GEM in the region. If the representation of women in parliament increases by 1 percent, the Gender Empowerment Index increases by 0.76 percent. This is because the percentage of women in parliament shows the contribution of women in decision-making and can be interpreted as evidence of women's empowerment in politics [3].

These results are consistent with research by Sundstrom Empowerment of women in politics increases the capacity of women leading to participation in decision-making processes. This finding is also supported, who states that female representation in parliament rates an impact on the Gender Empowerment Measure. This proves that women's participation in politics through the female representation in parliament rates is important for future economic development. Politics is a space to express aspirations, especially those related to public policy. By realizing equality in the political sphere, it is hope that there will be no gender-specific policies

5. CONCLUSION

The results obtained are based on the research that has been done the variable female means Year school, female life expectancy, female labor force participation rate, and female representation in parliament rate has a positive and significant effect partially and simultaneously on the variable of Gender Empowerment Measure (GEM) in Eastern Indonesia in 2013-2020. The GEM will promote the strengthening of the role of women in education, measured by the average schooling of women in East Indonesia. From a health point of view, the GEM increases in East Indonesia as the life expectancy of women increases. From the employment perspective, the higher the participation rate of the female labor force, the higher the GEM in Eastern Indonesia.

Politically the high role of women in politics, measured by the representation of women in parliament, can increase the GEM in Eastern Indonesia.

The importance of the role of human resources, especially women, in achieving gender equality. Good human resources can improve the community welfare to achieve equitable development. Government should improve the quality of human resources fairly and equitably, especially for women. Equal employment opportunities for females, affect the level of women's labor market participation to reduce the risk of gender inequalities and further increase gender equality. Future research is expected to extend the research period and focus the research on the province or regency/city so that the results obtained can be used as policy considerations. It is also expected that future research will be able to add other variables outside of the model to yield better research results.

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