Women’s representation and government welfare spending in Indonesia 1970—2020

E S Prihatini
International Relations Department, Faculty of Humanities, Bina Nusantara University, Jakarta, Indonesia
E-mail: ella.prihatini@binus.edu

Abstract Women’s participation in decision-making process is imperative in achieving Sustainable Development Goals (SGDs), as their representation will improve the quality of development in the society. Cross-national studies suggest that the number of women in parliament and in the labor-force are closely associated with higher government spending on education and health. Other studies highlight the correlation between women’s share in parliament with better economic performance measured by GDP per capita. Using a unique dataset for the years spanning from 1970 to 2020, this paper aims to unpack the experience in Indonesia, an emerging economy in Asia with a relatively stable democracy. The findings suggest that women’s presence in the national parliament correlates strongly positive with higher GDP. Also, with a weaker correlation, more women elected as legislator, bigger fiscal allocation by the government for education and health. On the other hand, the impact of women’s participation in the labor force has less significant connection with government welfare spending in Indonesia.

Keywords: women’s representation, education, health, parliament, Indonesia.

1. Introduction
Government spending decisions are ultimately political decisions, shaped by lawmakers who form committees, develop legislation, and respond differentially to constituent demands [1], [2]. Women’s access to parliament shapes their collective capacity to influence government policy making directly by making public policy change, including fiscal policy. Cross-national studies find that women’s share in national legislatures is associated with increase in social spending [3], spending on family benefits [2], and spending on health and social welfare [4]. On the other hand, women’s presence in parliaments is correlated with decrease in defense spending [5]. Women’s participation in the labor force is also associated with better economic performance, measured by the GDP per capita [6]. The setting of the literature on this topic has been dominated by the Western societies. Little is known about how women’s presence in parliament and the labor force are correlated with government welfare spending in developing countries.

This paper aims to shed some lights into Indonesia, an emerging economy with a relatively stable democracy. Women’s share in the national parliament has fluctuated from 12.4% under the authoritarian regime of Suharto in 1990, to 17.39% in 2019 [7]. Women’s participation in the labor force has been increasing from 45% in 1971 to 65% in 2018. This paper investigates the correlation between women’s political and economy participation and government welfare spending. It poses a question: Does
Indonesian experience in line with the literature on the influence of women’s representation and fiscal policy, in this case government expenditure on education and health?

Using a quantitative approach, this paper finds that women’s share as lawmakers in the national parliament correlates positively with higher government welfare spending. It also argues that more women elected as lawmakers is associated with better economic development performance, here measured as GDP per capita. The remainder of the study is as follows. The data and method section presents the variables and the sources of the data. In the subsequent part, I discuss the findings from the data analysis. I conclude with a couple of key takeaways for policymaking and academic research.

2. Methodology
To examine the empirical merits of the claims above, I have gathered a longitudinal dataset for the years spanning from 1970 to 2020. The data collected from the World Development Indicators and Gender Statistics [8]. The full datasets for all the variables can be provided by the author upon request.

The first outcome variable, Domestic general government health expenditure (% of GDP), is the percentage of government spending on health relative to total GDP. It is a widely used proxy to gauge the government's priority in providing a healthcare system. The second outcome variable, Government expenditure on education (% of government expenditure), is the proportion of education in the government total expenditure. Lastly, the analysis uses GDP per capita (current US$) as an outcome variable. All data were collected from the World Development Indicators [9].

The explanatory variables consist of the Proportion of seats held by women in national parliaments and Ratio of female to male labor force participation rate. The first variable accounts for female political participation in the House of Representatives (Dewan Perwakilan Rakyat/DPR), while the latter represents women’s economic participation. The data for these variables are from the Gender Statistics [10].

The next step is to include all the variables in a correlation matrix using SPSS. Following that is a bivariate regression analysis to calculate the influence of women’s participation in politics and economy on government welfare spending (education and health).

3. Result and discussions
The correlation output in Table 1 displays the bivariate correlations between the five continuous variables in the dataset. The relationship between women’s share in parliament and GDP per capita indicates a strong positive correlation with the coefficient sits at 0.915. This highlights the connection between women’s representation in political decision-making processes and economic development achievements (here measured with GDP per capita). Hence, it is evident to suggest that more women entering DPR means Indonesia’s GDP per capita tends to improve as well. Similarly, women’s presence in the national parliament positively correlates with government expenditure on education (0.683) and on health (0.604). Also, more seats held by women in DPR will bring higher women’s participation in the labor force (0.646).

| Correlations | Proportion of seats held by women in national parliaments (%) | Ratio of female to male labor force participation rate (%) (national estimate) | Domestic general government health expenditure (% of GDP) | Government expenditure on education, total (% of government expenditure) | GDP per capita (current US$) |
|--------------|-------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------|------------------------------|

Table 1. Correlation Matrix.
The correlation matrix also suggests that women’s greater level of economic participation has a positive connection with how women fare in parliament, government health expenditure, and GDP per capita. Interestingly, women’s participation in paid labor has no correlation with how the government is spending on education. The analysis also indicates that government welfare spending (both on education and health) is strongly correlated with the GDP per capita. This finding implies that Indonesian government tends to increase welfare expenditure in line with the economic general performance measured with higher GDP per capita over the years.

The equations between women’s parliamentary representation and the three outcome variables are presented in Figure 1. From the regression analysis, it is clear to assert that women’s participation in politics has the biggest correlation ratio with GDP per capita. With the slope that is the steepest compared to the other two lines, the data indicates having more women in parliament will enable Indonesia to achieve better economic performance.
Figure 1. The Equations between Women’s Share in Parliament and Government Welfare Spending and GDP per Capita.

In comparison, women’s participation in the labor force has weaker correlation with the outcome variables observed (see Figure 2). Clearly, government spending on education has not been influenced by how women participate in paid labor. And thus, this finding offers no support for previous study which suggests the two variables are positively correlated [11].
Figure 2. The Equations between Female to Male Ratio in the Labor Force and Government Welfare Spending and GDP per Capita.

To further calculate the correlation, Table 2 reports the results of a bivariate regression model measuring the influence of the proportion of seats held by women in DPR on government health expenditure. The model portrays a positive and statistically significant relationship between the two variables. The R-squared of the model further highlights that the independent variable, women’s parliamentary representation, explains 36.5 percent of the variance in government health expenditure. In substantive terms, the model predicts that for every percent of women’s share in the national parliament increases, government spending on health will also improve by 0.033%. This influence is substantial with a regression equation:

\[ y = 0.457 + 0.033x \]  (1)

Table 2. Bivariate Regression Analysis between Women’s Parliamentary Representation and Government Health Spending in Indonesia (1970-2020).

|                                      | Coefficient | Std. error | Sig |
|--------------------------------------|-------------|------------|-----|
| Proportion of seats held by women in national parliaments (%) | 0.033       | 0.011      | 0.008 |
| Constant                             | 0.457       | 0.158      | 0.011 |
| R-squared                            | 0.365       |            |      |
| N                                    | 18          |            |      |

Next, as presented in Table 3, is the calculation for women’s share in DPR and government spending on education. This model explains nearly half of the variance in government expenditure on
education. The model predicts that for every additional percent of women’s share in DPR, government spending on education will also improve:

\[ y = 8.523 + 0.522x \]  \hspace{1cm} (2)

**Table 3.** Bivariate Regression Analysis between Women’s Parliamentary Representation and Government Expenditure on Education in Indonesia (1970-2020).

| Coefficient | Std. error | Sig  |
|-------------|------------|------|
| Proportion of seats held by women in national parliaments (%) | 0.522 | 0.155 | 0.005 |
| Constant | 8.523 | 2.222 | 0.002 |
| R-squared | 0.467 | 0.467 |  |
| N | 15 |  |

The trend in Indonesia lends support to previous studies which suggest that women’s legislative presence influences the extent of government welfare spending [3,12]. It indicates women in key political positions, in this case parliament, tend to strongly advocate for social spending once in office [2],[13],[14].

### 4. Conclusion

This paper has demonstrated the correlation between women’s participation and government welfare spending in Indonesia since 1970 until 2020. The findings suggest that the Indonesian experience provides support to prior cross-national studies which assert women’s presence in politics and the labor force shape how the government is allocating resources for health and education [2], [14].

The proportion of parliamentary seats held by women is associated with government spending on education and health. It also correlates strongly with higher GDP, indicating that women’s political representation is an integral aspect with the country’s economic development performance. The findings also suggest that women’s share in the labor force has a positive correlation with the number of female deputies in DPR.

Whilst offering conformity with the literature, this paper is limited in terms of comparative perspective. Therefore, further study might benefit from comparing Indonesia with other countries in Asia with similar political and social-cultural settings.

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