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Does Minimum Wage Reduces Gender Inequality Long and Short Term In Indonesia?

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Abstract

Gender inequality is a persistent challenge in many societies, reflecting disparities in access to resources, opportunities, and decision-making power between men and women. One policy area that has garnered significant attention in the quest for gender equality is the minimum wage. By setting a wage floor for all workers, minimum wage policies aim to enhance the economic well-being of low-income individuals, a group in which women are often overrepresented. However, the relationship between minimum wage policies and gender inequality is complex, and its impact remains a subject of extensive debate and research. This research investigates the impact of annual minimum wage policy changes in Indonesia on gender inequality using a dynamic panel data approach encompassing 34 provinces over eight years (2015-2022). Contrary to expectations, the results suggest that both in the short and long run, minimum wage policy increases gender inequality. This highlights the complexity of the relationship between minimum wage adjustments and gender dynamics, underscoring the need for nuanced policy design to ensure gender equality in labor market outcomes.

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INTRODUCTION

Gender equality is a concept that explains that women and men have the same conditions, treatment and opportunities in realizing all their potential. In addition, gender equality also includes equal rights between men and women to contribute to development both in terms of economic, social, cultural and political (UNICEF, 2017). Equality does not mean that women and men will become equal but that the rights, responsibilities and opportunities of women and men will not depend on whether they are born male or female.

The human capital theory proposed by Mincer (1962) and Bradley (1989) explains the position of women in wage employment. This theory bases its understanding on women having lower skills and quality of experience compared to men. Classical economists also argue that the wages received by workers in the world of work are determined by the quality of education, training and abilities possessed by workers so that high wages can be given from the work performed by these workers. In this argument, women tend to have lower skills than men because women are synonymous with household chores and being mothers to their children at home.

The position of women in work is still widely seen in workers who have low wages in various countries, so the determination of the minimum wage is a new hope specifically for female workers (Caliendo & Wittbrodt, 2022), So it is important to discuss the issue of gender justice which is a very important aspect in development (Chuanchuan & Jingwen, 2021).

The composition of women in the labor force has increased in many developed countries in recent decades and there has indeed been a decrease in gender disparity in various fields, but there are fewer female workers and there is inequality in terms of high wages (Jessen, 2022), Whereas since the 1950s gender equality has become an important subject for economic and social improvement in industrial countries, because gender equality is not only a moral value for optimizing the potential of both women and men but also a tool for welfare and high economic growth where the role of women must be productive in the labor market (Mussida & Picchio, 2014).

One of the important issues in gender equality in the labor market is that discrimination in women's wages even tends to increase when workers are paid unequal wages while working with the same qualifications and outcomes as men. Women are usually a discriminated group and this phenomenon occurs on various fronts, both the public and private sectors. The inequality of wages of female workers occurs because the differences between men and women cannot be adjusted objectively conditionally with tasks and qualifications that are considered the same (Anastasiade & Tillé, 2017).

Studies of wage differences received by women and men have been widely conducted over several years and globally focus on methods rather than comprehensively identifying differences in the average wages of female workers (Bargain et al., 2021). In addition, studies of wage differences are associated with population movement, as shown by Xing et al. (2022) and Gustafsson & Wan (2020) Gustafsson & Wan (2020) where wage inequality is shrinking for migrants working in big cities as is the case in China.

Gender inequality can arise from peoples beliefs influenced by long established and deeply ingrained societal expectations, which have traditionally limited women to domestic responsibilities. Women, who play a role, in driving progress are an asset to our nation and their active involvement in economic growth is vital for achieving sustainable development. The progress we make can be gauged by a quality of life that reflects the increased empowerment of women. Womens contributions span across domains such, as development, the economy, healthcare and education (Sulisto et al., 2023).

The implementation of the minimum wage on provincial level system contributes to the narrowing of the gender pay gap and that such effects on low-wage groups are more significant than effects on high-wage groups.

However, that effect was not seen in the short term (Li & Ma, 2015).

Significantly, the negative employment impact of the minimum wage increase is greatest for groups most vulnerable to changing labor market conditions, such as women workers, young and less educated workers, who make up the bulk of Indonesia's labor force. For women and young workers, the employment elasticity to the minimum wage is about –0.3, while for low-educated workers it is about –0.2 (Suryahadi et al., 2003).

Laws on the minimum wage can encourage low-skill individuals to become entrepreneurs. Furthermore, women and paid workers tend to be relatively well educated which implies that education allows women to step out of the job ceiling even though men typically earn much more than women (Olarewaju et al., 2019).

The effect of the minimum wage increase is negligible for middle-aged workers. Changes in the gender pay gap among education groups are much smaller. The results confirm that minimum wage policy can be an appropriate tool to reduce the wage disparity that exists between men and women, but the potential impact of unemployment must be considered (Majchrowska & Strawiński, 2018).

The minimum wage has a large spillover effect on wages at the bottom of the distribution; The effect is most pronounced up to the twentieth percentile and then decreases markedly. The minimum wage has contributed to low wage inequality and this has particularly benefited low-wage segments of the labor market such as women and the elderly. Interestingly, the importance of the minimum wage to wage distribution was smaller during the global financial crisis than before or after the crisis (Ferraro et al., 2018).

The gender gap in the wage structure widened disproportionately at the bottom of the distribution, coinciding with falling absolute and relative profits for women in manufacturing industries and production jobs facing greater international competition (Seneviratne, 2020).

Wage inequality among wage earners can be considered in many dimensions, including gender, skill level, migration background or age. Due to space constraints, here we will limit ourselves to wage inequality as a whole. Such wage inequality is a result of wage inequality within and between companies (Keune, 2021).

The rapid influx of female workers into high-wage managerial jobs, and their exit from low-wage private domestic work, contributed to the convergence of gender pay. However, the wage equalization effect of job shifts and related behavior changes diminished over time, and wage convergence stopped after 2007. It also found that female workers continue to be disadvantaged by wage spread and most of the remaining gender pay gaps appear in employment (Moore, 2018).

Studies on gender gaps can also be linked to education levels as conducted by Wang & Cheng (2021) which suggests that investments made in education do not have a serious impact on reducing the gender gap in returns on education in the labor market but have a serious impact on reducing the gender gap in informal sector.

Gender equality is becoming an important topic for countries that have high development inequality. The gap that occurs in gender will lead to poor quality of development due to non-optimal potential. Quality development ideally occurs equality between women and men to play an active role in development, play a key role in the use of available resources and ultimately both men and women benefit from development.

Countries with higher levels of gender marking in their dominant language have higher wage gaps between genders. Using an instrumental variable approach, it was found that gender tagging has an indirect impact on state income inequality through gender wage inequality. In addition, there is evidence that income inequality in society as a whole (Palma ratio and Gini index, alternately) is influenced by gender pay inequality (Shoham & Lee, 2018).

Indonesia is no exception, the phenomenon of gender gap is still high. The Central Bureau of Statistics measures gender inequality in Indonesia with the Gender Inequality Index (IKG). This index shows the

disadvantages of achieving human development due to gender inequality approached from the aspects of health, empowerment and access in the labor market. The calculation by BPS on Indonesia's IKG in 2021 is 0.390, which is interpreted as a loss of development achievement due to gender inequality of 39 percent. The calculation of Indonesia's IKG so far is still quite high despite a downward trend for three consecutive years, namely 2019 of 0.421 at the end of 2021 reaching 0.390 (BPS, 2022).

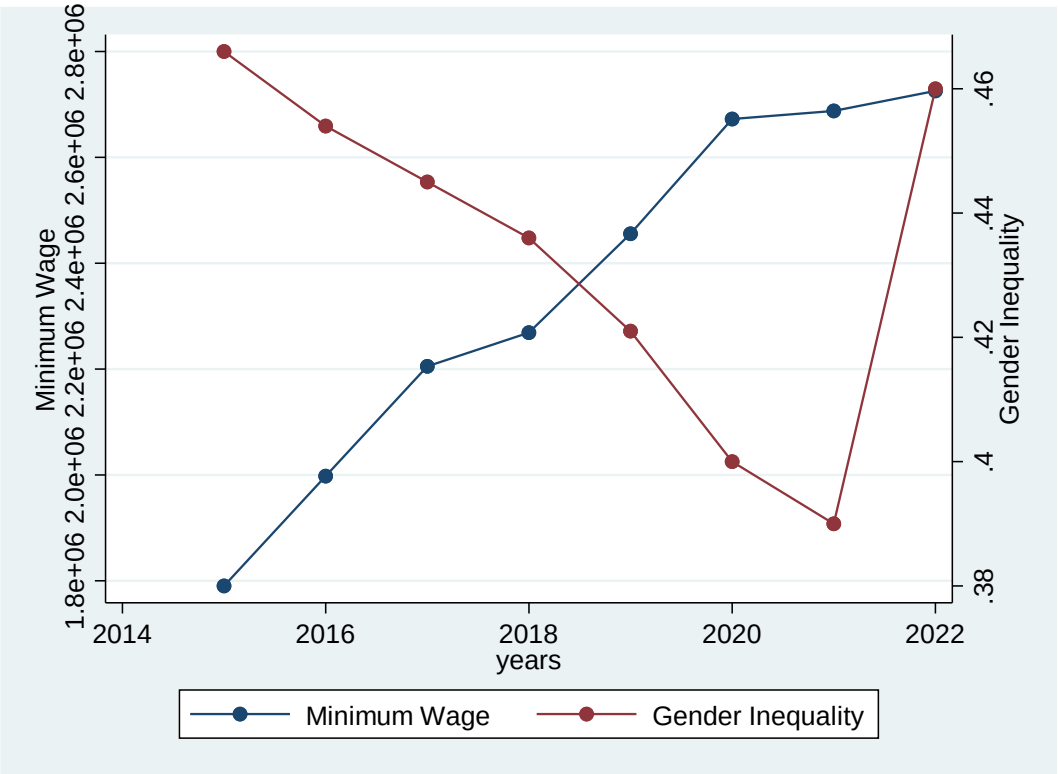

Figure 1. Indonesian Gender Inequality Index and Minimum Wage Trend from 2014 to 2022. Source : Central Bureau Statistics, 2022.

Indonesia's IKG condition since 2015 has been 46 percent, decreased to 45 percent in 2016, slightly decreased in 2017 to 44 percent. In 2018, Indonesia's IKG reached 43 percent and continued to show a downward trend to 39 percent at the end of 2021. However, Indonesia's IKG figure is among the 4 highest in the Southeast Asian region after Myanmar, Laos, and Cambodia. The IKG calculation figure by BPS looks lower than the Gender Inequality Index published by UNDP. This is due to differences in indicators used including Maternal Mortality Rate (MMR) proxies, Adolescent Birth Rate (ABR) proxies and education levels.

There is still quite a high IKG in Indonesia and considering that the minimum wage set by the local government every year has increased, the researcher wanted to know the impact of increasing the minimum wage among provinces in Indonesia. The wage regulation policy in Indonesia, namely through the determination of the Provincial Minimum Wage (UMP) only applies to workers, while the wages of non-labor workers have no one to regulate. Many workers as workers are women so that there is a lot of wage gap between male and female workers.

The increase in Indonesia's UMP shows an improvement in terms of labor wages. In 2014 which only amounted to Rp. 1,584,391 increased to Rp. 2,672,371 at the end of 2020. This increase is an important topic why the minimum wage will affect the quality and productivity of labor, including female workers. So this research is very

urgent to be carried out considering the gender inequality that is still high in Indonesia.

Empirical studies on the impact of the Provincial Minimum Wage (UMP) on gender disparity in Indonesia are still minimal. This study wants to empirically examine these impacts so that they become an important part of the study material in future development policy making. This research will also be the initial research for future studies because the research method used will use the dynamic panel method with the Arrelano Bond approach as a robust impact measurement tool in the long and short term.

The findings of this empirical study will address the issue of the wage gap between female and male workers by calibrating other factors that are considered influential on the gender gap in Indonesia.

RESEARCH METHODS

In this study, the approach used by researchers is quantitative research with statistical tools to help analyze data empirically.

The data used in this study is secondary data that has been published by certain institutions to collect, process and publish data. The source of the data obtained is from the Central Statistics Agency (BPS) with a period of observation from 2015 to 2022.

The analytical tool in this study uses a dynamic model. A dynamic model is defined as an analysis of regression models that have variables with the current time and also depend on the previous time. Panel data is defined as a collection of time series and cross section (individual) data. This dynamic model is a lag distribution model and an autoregressive model. But in this paper only uses an autoregressive model.

This study used regional panel data in Indonesia from 2015 to 2022. This study then uses panel data analysis with fixed effect model (FEM) and then develops dynamic panel data analysis using generalized moment of method (GMM). The principle used by Arellano and Bond (1991) is to use Arellano-Bond GMM. The correlation between explanatory endogenous variables and errors is the definition of a dynamic panel data model. Some of the estimates that have been developed show what assumptions underlie the estimates, how well the estimates work relative to each other and how to test the validity of the assumptions behind the estimates in order to select the most appropriate estimates for the data used in the study y_(i,t-1)

In estimating the impact between minimum wage and gender disparity in Indonesia, this study uses Provincial Minimum Wage variables that have been published by each province. The study also emphasizes the importance of examining other factors partially to determine the influence with gender disparity in Indonesia. The data in this study was obtained from the Central Bureau of Statistics Indonesia (BPS).

Table 1. Operational Definition of each Variables

Variables Name	Operational Definition	Unit	Data Source
GII	Composite measurement used to assess and quantify gender inequality in various aspects of human development within a particular country.	Index	BPS
MW	Remuneration received during sebolan by laborers / employees in the form of money or goods paid by the company / office / employer on a region	Rupiah	BPS
GEI	Indicator illustrates whether women have the ability to play an active role in economic and political life.	Index	BPS

Variables Name	Operational Definition	Unit	Data Source
GDI	Achievement in the same dimensions and variables as the HDI, but highlights inequities in achievement between men and women.	Index	BPS
POV	Condition in which a person or group does not have access to or sufficient resources to meet their basic needs, such as food, shelter, education, and health care.	Percentage	BPS
LABORPRODUCTIVITY	Labor productivity refers to the measure of the efficiency and output produced by a worker or a workforce within a specific period of time.	Rupiah	BPS
WOMANINCOME	Ratio or percentage of income earned by women compared to the total income generated within a certain context, such as a specific industry, region, or country.	Percentage	BPS

Source: Data Processed, 2024

The main dependent variable in this study is gender disparity, and the main independent variable in this study is the minimum wage as summarized in the equation below:

$$GII_{i,t} = \gamma_0 GII_{i,t-1} + \alpha_1 MW_{i,t} + \sum \theta_k X_{i,t,k} + \omega_i + \mu_{i,t} \quad \text{.....(1)}$$

$GII_{i,t}$ is the provincial gender inequality index i on period time t; $GII_{i,t-1}$ is a lag of provincial gender inequality i; γ is the lag coefficient of the gender inequality index; while α Parameter coefficient of the minimum wage; θ_k is another variable that controls for influencing gender inequality $X_{i,t,k}$; ω_i be fixed effect, and $\mu_{i,t}$ is disturbance (Other variables not observed in the model).

RESULTS AND DISCUSSION

This part first showing the statistic descriptive about the maximum, minimum, mean, standar deviation and total observation which include on this research. Total observation on each variables are 272 it comes from panel data 34 provinces times 8 years (2015-2022). Details descriptive statistics showed in tables 2 below :

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
GII	272	0.468	0.095	0.11	0.668
MW	272	2312568.5	603053.12	910000	4641854
GEI	272	68.8	6.699	47.88	83.2
GDI	272	90.255	3.347	78.52	95.04
Laborproductivity	272	130.872	106.067	34.3	653.62
Poverty	272	10.798	5.635	3.42	28.4
Womanincome	272	33.202	4.525	22.54	43.93

Source: Data Processed, 2024

Average of gender inequality index (GII) on this research is 0.468 with standard deviation 0.095 which is lower than its mean. The minimum and maximum values respectively are equal to 0.11 (DKI Jakarta) and 0.668 (West Nusa Tenggara). Minimum wage has an average value 2.312.568 with standard deviation 603.053, maximum value equals to 4.641.854 (DKI Jakarta) and minimum 910.000 (Central Java). The gender empowerment index has an average value of 68.8 with a standard deviation of 6.69. The minimum score for gender empowerment is 47.88 (West Papua) and the maximum score is 83.2 (Central Kalimantan). Meanwhile, the

average gender development index value is 90.25 with a standard deviation of 3.34 and the minimum and maximum values are 78.52 (Papua) and 95.04 (North Sulawesi) respectively. Furthermore, the labor productivity variable has an average of 130.872 with a standard deviation of 106.06. The minimum and maximum values for the labor productivity variable are 34.3 (East Nusa Tenggara) and 653.62 (DKI Jakarta). While the last two variables, namely poverty and woman income, have an average of 10.79 and 33.20. The standard deviation values for these two variables are 5.63 and 4.52 with minimum values of 3.42 (DKI Jakarta) and 22.54 (East Kalimantan) and maximum values of 28.4 (Papua) and 43.93 (East Nusa Tenggara).

Table 3. Estimation for Dynamic Panel Data Arrelano Bond Approach, Fixed Effect, and PLS.

Variable	FDGMM (1)	SYSGMM (2)	FEM (3)	PLS (4)
GII				
L1.	0.261	0.30543746**	0.25255671***	0.85049075***
MW	0.11953297**	0.12516459***	0.053	0.010
GEI	-0.00370852***	-0.00332282**	-0.00379639***	-0.00072795*
GDI	-0.01993694**	-0.006	-0.006	-0.001
Laborproductivity	-0.06659969*	-0.07296831***	-0.036	-0.010
Poverty	-0.01874342***	-0.002	-.01105767**	-0.000
Womanincome	0.003	-0.013	0.011	0.000
_cons	1.2488499*	0.066	0.272	0.138
R-Square			0.8321	0.8806

Note: * p<0.05; ** p<0.01; *** p<0.001

Source: Data Processed, 2024

Based on the tables above, estimation result showing the comparation between 4 models which are FDGMM, SYSGMM, FEM, and PLS. Comparing the results of FDGMM to FEM and PLS models in dynamic panel data analysis is a crucial step in model selection, robustness checking, and understanding the underlying data-generating process. It helps ensure that your analysis is based on the most appropriate model and provides reliable insights into the relationships between variables. Table 4 aboves describes about the short run effect of several variables involved in the dynamic panel data analysis using the Generalized Method of Moments (GMM), there are also has a lag variables that refers to the inclusion of past observations of variables in the model to account for time dependencies and dynamics. Dynamic panel data models are commonly used in econometrics and other fields to capture how variables change over time and how past values of these variables influence their current values.

This research dependent variable is Gender Inequality Index which can be a lagged dependent variable (Dependent Variable Lag). This involves including the past values of the dependent variable itself as explanatory variables in the model. This is done to capture the persistence or autocorrelation of the dependent variable over time.

Table 3 presents estimates of panel data regression with FDGMM, SYSGMM, FEM and PLS which provides the correlation between minimum wage and gender inequality in Indonesia during the period of 2015 to 2022. Model 1 and 2 provides estimates of GMM and model 3 and 4 provides results of FEM and PLS estimates in the model which considered the lag of gender inequality index in the model.

To properly analyze the outcomes of a panel data model it is crucial to perform tests that evaluate the validity of instruments, the consistency of parameter estimates and the absence of any biases, in estimation. These tests play a role, in ensuring the dependability and validity of panel model. First we do a test to ensure validity instrument with Sargan Test. Result of Sargan Test can be seen on this table below:

Table 4. Sargan Test for Validity

Sargan test of overidentifying restrictions H0: overidentifying restrictions are valid		
	FDGMM	**SYSGMM**
chi2(20)	12.2183	13.9525
Prob > chi2	0.2308	0.0911

Note: Data Processed, 2023

Sargan test in the table above shows probability for FDGMM is 0.2308 and SYSGMM is 0.09, both more than 0.05 so this model is valid. Common tests to assess instrument validity include the Hansen J-statistic or Sargan test. These tests evaluate whether the overidentifying instruments (instruments in excess of the number of endogenous variables) are uncorrelated with the residuals. A high p-value (more than 0.05) suggests that the instruments are valid, indicating that they are not correlated with the error term.

After sargan test, do the Arellano-Bond test for zero autocorrelation in first-differenced errors, also known as the Arellano-Bond test for second-order serial correlation or the AR(2) test, is a common diagnostic test used in dynamic panel data analysis. This test assesses whether there is evidence of second-order serial correlation (autocorrelation of order 2) in the first-differenced errors of a dynamic panel data model estimated using Generalized Method of Moments (GMM) techniques.

The test statistic (often denoted as AR(2) or similar) is compared to a critical value from an appropriate distribution (usually a chi-squared distribution) to determine its significance. If the test statistic is greater than the critical value, it suggests evidence of serial correlation. The null hypothesis of this test is that there is no second-order serial correlation (AR(2) autocorrelation) in the first-differenced errors. The alternative hypothesis suggests that there is second-order serial correlation in the first-differenced errors. If the p-value is less than your chosen significance level (0.05), conclude that there is evidence of second-order serial correlation in the first-differenced errors, and reject the null hypothesis. Conversely, if the p-value is greater than significance level, we fail to reject the null hypothesis, indicating no evidence of AR(2) autocorrelation.

Table 5. Arrelano Bond Test for Consistency

Arellano-Bond test for zero autocorrelation in first-differenced errors				
	FDGMM		**SYSGMM**	
Order	Z	Prob > z	z	Prob > z
1	-1.7016	0.0073	-2.1158	0.0028
2	0.53527	0.1568	1.1224	0.406

Note: H0: no autocorrelation

Source: Data Processed, 2023

The last test to ensure the result is unbiasedness. Comparing the results of First Difference Generalized Method of Moments (FDGMM) and System GMM to Fixed Effects Model (FEM) and Pooled Least Squares (PLS) is a way to assess the potential bias and consistency of parameter estimates in dynamic panel data analysis. This comparison can help test for unbiasedness by examining whether different models produce consistent and unbiased parameter estimates. to pass this unbiased the coefficient lag dependent FDGMM must be more than coefficient lag independent FEM and less than coefficient lag independent PLS. coefficient lag dependent FDGMM more than FEM and less than PLS, also lag dependent SYSGMM have to be greater than FEM but lower than PLS so it can interpret that unbiased test is succeed.

Table 6. Unbiasedness Check

Variable	**FDGMM (1)**	**SYSGMM (2)**	**FEM (3)**	**PLS (4)**
GII				
L1.	0.261	0.30543746**	0.25255671***	0.85049075***

Source: Data Processed, 2023

From the tables above the lag dependent variable of GII in FDGMM is 0.261 which is greater than FEM model that 0.252 and lower than lag dependent in PLS coefficient which 0.850. lag dependent coefficient for SYSGMM is 0.305 which greater than FEM and lower than PLS. Because of FDGMM and SYSGMM consistently outperform FEM and PLS, it provides evidence that the GMM methods may be more suitable for this research and that the unobserved heterogeneity and endogeneity concerns are adequately addressed.

Interpretation of the estimation result on table 3 is In the FDGMM model, the coefficient for lag dependent GII is 0.261. In the SYSGMM model, it's approximately 0.305 (significant at the 1% level, denoted by **). In the FEM model, it's approximately 0.253 (significant at the 1% level). In the PLS model, it's approximately 0.850 (significant at the 1% level). These results suggest that the lag dependent variable GII has a positive and statistically significant relationship with the dependent variable GII in all models except for FDGMM that has a positive but unsignificant to GII.

In the FDGMM model, the coefficient for minimum wage (MW) is approximately 0.120 (significant at the 5% level, denoted by **). In the SYSGMM model, it's approximately 0.125 (significant at the 1% level, denoted by ***). In the FEM model, it's approximately 0.053. In the PLS model, it's approximately 0.010. These results suggest that MW is positively associated with the dependent variable, and the relationship is statistically significant in FDGMM and SYSGMM.

In the FDGMM model, the coefficient for gender empowerment index (GEI) is approximately -0.004 (significant at the 1% level, denoted by ***). In the SYSGMM model, it's approximately -0.003 (significant at the 5% level, denoted by **). In the FEM model, it's approximately -0.004 (significant at the 1% level). In the PLS model, it's approximately -0.001. These results suggest that GEI is negatively associated with the dependent variable, and the relationship is statistically significant in FDGMM and FEM.

The coefficient for gender development index (GDI) in the FDGMM model is approximately -0.020 (significant at the 5% level, denoted by **). In the SYSGMM model, it's approximately -0.006. In the FEM model, it's approximately -0.006. In the PLS model, it's approximately -0.001. These results suggest that GDI is negatively associated with the dependent variable, and the relationship is statistically significant in FDGMM.

Labor productivity in the FDGMM model, the coefficient is approximately -0.067 (significant at the 10% level). SYSGMM model, it is approximately -0.073 (significant at the 1% level). In the FEM model, it is -0.036. In the PLS model, it is -0.010. The coefficient for the Labor Productivity variable suggests a negative and significant relationship with the dependent variable in the FDGMM and SYSGMM models, with stronger effects in the SYSGMM model.

Variable poverty at that model indicates in the FDGMM model, the coefficient is approximately -0.019 (significant at the 5% level). In the SYSGMM model, it is approximately -0.002. In the FEM model, it is approximately -0.011 (significant at the 5% level). In the PLS model, it is approximately 0.000. Coefficient for the Poverty variable suggests a negative and significant relationship with the dependent variable in the FDGMM and FEM models.

In the FDGMM model, the coefficient for woman income proportion is approximately 0.003. In the SYSGMM model, it is approximately -0.013. In the FEM model, it is approximately 0.011. In the PLS model, it is approximately 0.000. The coefficient for the Woman Income variable varies across models, with no consistent pattern which positively correlated in FDGMM, FEM and PLS while in SYSGMM it’s negative correlated with Gender Inequality index.

Furthermore we count Convergence coefficient which is often used to analyze the rate at which different entities in this case provinces are converging or diverging over time in terms of a particular variable of interest that gender inequality index. This coefficient equals to

0.1860. it means that the the inequality is decreasing, at a rate of 18.60% per year (t).

Now we estimate the long term impact. It is crucial to estimate the long term impacts, in dynamic panel data analysis as it offers a comprehension of how variables interact and change over time. This knowledge holds significance for policy making, forecasting, testing hypotheses and decision making in domains such, as economics, social sciences and public policy.

Table 7. Long Term Impact

Genderineq	Coef.	Std.Err.	z	P>z	[95%Conf.	Interval]
minimumwage	0.070	0.076	0.920	0.358	-0.079	0.218
genderempower	-0.005	0.003	-1.880	0.060	-0.010	0.000
genderdevelop	-0.009	0.006	-1.610	0.108	-0.021	0.002
laborprdctivity	-0.070	0.038	-1.830	0.067	-0.145	0.005
poverty	-0.003	0.003	-0.960	0.335	-0.010	0.003
womanincome	0.002	0.005	0.410	0.679	-0.007	0.011

Source: Data Processed, 2023

We can see the long term impact of each variables to gender inequality index. Table 7 above shows the long run effects of each independent variable on the gender inequality in Indonesia. Because there are dynamics that use lag, adjustments can be calculated in subsequent periods, so long-term effects can be calculated. Long-term effect can be interpreted as the accumulation of short-term effects of each period that is accumulated onwards and the whole of each period will be calculated as long-term effect.

In Generalized Method of Moments (GMM), it's essential to consider the long-run or asymptotic properties of estimators because it helps us assess the efficiency and consistency of the estimator.

Based on long-term estimates, In the long term, the impact of the minimum wage on gender inequality index is positive but not significant. This is certainly beneficial for future wage policies, as the even distribution of job opportunities for women will gradually help reduce gender inequality. Meanwhile, the gender empowerment index in the long term is negatively correlated with gender inequality, significant at the 10% level. The Gender Development Index is negatively correlated with gender inequality, but its long-term influence is not significant. Meanwhile, labor productivity is quite good, as it significantly correlates negatively with gender inequality at the 10 percent level. The poverty variable negatively affects gender inequality but is not significant. It's important to note that the impact of minimum wage policies on gender inequality can vary depending on several factors, including the level at which the minimum wage is set, the cost of living in a particular region, and the overall economic context. Additionally, potential negative effects should be considered as well job loss some, argue that increasing the minimum wage can lead to job loss, particularly in industries that rely heavily on low-wage workers. This could disproportionately affect women if they are overrepresented in such industries. Furthermore, increasing of minimum wage can lead to gender inequality reduced work hours. Employers might respond to minimum wage hikes by reducing employees' work hours or benefits, which can affect women's overall income and well-being. Concerns have been raised that raising the minimum wage may lead to higher prices for goods and services, potentially impacting the purchasing power of workers, including women. In conclusion, minimum wage policies can potentially improve gender inequality by addressing wage disparities, lifting women out of poverty, and promoting economic independence. However, the actual impact can be complex and context-specific, and potential drawbacks need to be considered as well. Policymakers must carefully evaluate the specific circumstances in their region and the

potential consequences of minimum wage changes on gender equality.

The finding that an increase in the minimum wage (in all models) is associated with an increase in the gender inequality index may seem counterintuitive, but it can be understood by examining the potential mechanisms and unintended consequences of minimum wage policies. Several reasons could explain why such an association might occur, Minimum wage policies can sometimes reinforce occupational segregation, where women are concentrated in lower-paying jobs. If minimum wage hikes primarily affect industries or sectors that employ more women and these sectors have limited opportunities for wage growth, this could contribute to a relative increase in gender inequality. For example, if the minimum wage is raised in industries like retail or shopping centre where women are overrepresented, and these industries do not experience substantial wage increases beyond the minimum wage, it can exacerbate the wage gap between men and women.

Based on human capital theory posits that heightened investments in education will provoke the generation of employment opportunities (Chen & Wu, 2007). While Dreepaul-Dabee & Tandrayen-Ragoobur (2023) shows that through the utilization of sex-disaggregated data, the analysis elucidates that the deleterious employment repercussions of the minimum wage disproportionately affect women in a more pronounced manner than men.At the tertiary level, intriguingly, the introduction of minimum wage exhibits a negligible impact on male workers, while manifesting a positive and statistically significant effect on their female counterparts. This phenomenon could be attributed, in part, to the "creeping" or consequential influence of the glass ceiling, where women might find themselves compelled to accept positions below their qualifications. Alternatively, women may demonstrate a greater susceptibility to labor market mismatches compared to men, where the qualifications of workers fail to align with the demands of the job.

CONCLUSION

The result estimation indicating that minimum wage hikes may be associated with an increase in gender inequality in Indonesia highlights the complexity of the relationship between minimum wage policies and gender dynamics. While minimum wage increases aim to improve the economic well-being of low-income workers, including women, they can have unintended consequences. Factors such as occupational segregation, potential job losses, and informal labor market dynamics may contribute to an adverse impact on gender equality.

This finding underscores the importance of designing and implementing minimum wage policies in a manner that considers gender-specific challenges and incorporates measures to mitigate any adverse effects on women's economic empowerment. Policymakers should complement minimum wage adjustments with targeted policies that promote equal opportunities, address occupational segregation, strengthen labor protections, and enhance access to education and training for women. A holistic approach is essential to ensure that minimum wage policies contribute positively to both economic growth and gender equality in Indonesia.The relationship between minimum wage policies and gender inequality is complex and context-dependent. The impact can vary based on the specific design and implementation of the minimum wage policy, the regional economic context, and other factors. Policymakers need to carefully consider potential unintended consequences and implement complementary policies to address gender inequality comprehensively, including measures to promote wage equality, access to education, and labor market opportunities for women.

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