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Beyond Employment Effects: A Holistic Analysis of Minimum Wage Impacts on Economic Welfare in Selected Asian Economies

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ABSTRACT

The persistent challenge of poverty and income inequality remains a key concern for policymakers across developing nations. Among the many strategies considered to address these socio-economic issues, the role of the minimum wage stands out as both critical and contentious. This study aims to examine the impact of minimum wage policies on economic welfare in fifteen selected Asian countries over a defined period, using panel data analysis. The countries chosen represent diverse economic backgrounds, enabling a broader understanding of the effects in varying contexts. To investigate these relationships, this study employs econometric techniques including Fixed Effects and Random Effects models. The Hausman test is applied to determine the most appropriate model, confirming that the Fixed Effects model best suits the data by accounting for country-specific heterogeneity. The results indicate that minimum wage has a significant and positive impact on economic welfare in several of the countries studied. Notably, the findings suggest that a well-implemented minimum wage policy can foster GDP growth and reduce poverty, although the effects on unemployment and income inequality are mixed and context-dependent. Factors such as inflation, poverty rates, and income distribution (measured by the Gini index) were also examined, with some variables demonstrating stronger correlations than others. Overall, this study highlights the potential of minimum wage policies to act as a tool for improving economic welfare in developing Asian economies, provided they are implemented alongside complementary socio-economic reforms. The evidence encourages further exploration of minimum wage structures tailored to the specific economic and institutional settings of each country.

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INTRODUCTION

Minimum wage remains among the most powerful and yet controversial tools in the labor market policy arsenal. The most important mandate underlying it to establish a statutory floor for earnings directly interfaces with critical questions of equity, efficiency, and social justice within capitalist economies. For policy makers, and especially those in developing and emerging countries, it represents a direct lever for alleviating poverty, compressing wage inequality, and improving the living standards of the most vulnerable workers. However, academic and policy discourse remains perennially fractured. Traditional competitive market models assume that a binding wage floor set above equilibrium leads to job losses among low-skilled workers and, therefore, actually harms the very group it is intended to help (Neumark & Wascher, 2007). On the other hand, recent modern empirical reassessments and models incorporating employer monopsony power indicate that such adverse employment effects can be very limited or non-existent, with the benefits of higher incomes outweighing possible distortions (Dube et al., 2010; Allegretto et al., 2017).

This debate has often been conducted within a narrow analytic corridor, largely focused on the direct employment-wage trade-off. The broader conception of economic welfare-more than mere income levels but, in fact, purchasing power stability, household consumption capacity, macroeconomic stability, and equitable growth-requires an expanded investigative lens. Economic welfare is a multidimensional construct that depends on a complex interaction of factors: real income level, inflation eroding purchasing power, employment security, and the ability of households to participate meaningfully in the economy. It is thus susceptible to being obscured from more fundamental, systemic impacts on these wider welfare indicators by an excessive focus on whether employment counts dip marginally in the aftermath of a wage increase. For example, a minimum wage increase that raises nominal incomes but triggers inflationary spirals can leave real welfare unchanged or even reduced. On the contrary, a policy that could lift the wages of the lowest paid without significant employment losses might stimulate aggregate demand, feeding back into consumption-led growth that trickles up to benefit the wider economy.

The existing literature on Asia, while growing, tends to fragment along these national lines or remains confined to single outcomes. Many studies look at isolated aspects, such as poverty headcount ratios, by Gindling and Terrell (2010), or gender wage gaps, without placing these in a comprehensive framework that considers simultaneous movements in inflation, GDP growth, and unemployment. Moreover, the long-term welfare implications of how sustained, real increases in the minimum wage affect household debt, health outcomes, intergenerational mobility, and social cohesion are underexamined. This fragmented approach leaves policymakers without a comprehensive evidence base from which to answer critical questions: Does a higher minimum wage simply redistribute income within a static economic pie, or is it able to contribute to enlarging the pie through demand-side stimulation? How do the welfare gains from higher wages weigh up against possible costs in terms of price inflation or informalization of employment?

This is therefore a study that tries to fill this significant gap in the literature. Its central problem is the lack of a synthesized, macro-oriented understanding of how minimum wage adjustments influence comprehensive economic welfare across the Asian region. We argue that a myopic focus on employment effects provides an incomplete and potentially misleading picture of a policy's ultimate success or failure. In this light, the broader analytical framework adopted by this study addresses the following. We conjecture that the impact of minimum wages on economic welfare is mediated through several key macroeconomic channels: 1) The Aggregate Demand Channel: Higher wages may boost consumption among low-income households with a high marginal propensity to consume, potentially stimulating GDP growth. 2) The Cost-Push Inflation Channel: Firms may pass on higher labor costs to consumers, eroding the real value of the wage gain and impacting welfare economy-wide. 3) The Labor Market Composition Channel: Effects may manifest not in outright job loss but in changes to hours worked, benefits, or a shift towards informal employment, affecting job quality and security. 4) The Productivity and Investment Channel: Firms may respond by investing in labor-saving technology or enhancing worker training, with ambiguous long-term effects on welfare.

This framework has guided the formulation of two key research objectives of the study: namely, (1) to empirically estimate the impact of changes in the real minimum wage on a composite indicator of economic welfare in selected Asian countries and (2) to analyze the mediating roles of inflation, unemployment, and GDP per capita growth in this relationship. We hypothesize that the welfare impact is contingent on which of these channels mediating the effects dominates. This leads us to the testable hypothesis that the minimum wage has, in fact, a non-linear and context-dependent effect on aggregate economic welfare; any positive impact is likely to obtain only when being supported by complementary policies reducing inflationary pressures and promoting formal job creation.

The contribution of this paper is threefold. First, it goes beyond the binary debate over employment effects to model minimum wage impacts within a multi-equation system that captures important macroeconomic feedback loops. Second, it offers a rare comparative, cross-country analysis for Asia by exploiting panel data for 15 countries over two decades (2003-2022) to tease out regional patterns and divergent national experiences. Third, it presents nuanced, conditional policy lessons that go beyond universal prescriptions to identify the economic and institutional preconditions under which minimum wage increases will be most conducive to societal welfare.

DATA AND METHODOLOGY

Data and Sources

The panel dataset used in this study includes cross-sectional and time-series data from fifteen Asian nations between 2003 and 2022. Panel data was deliberately chosen because it enables more sophisticated analysis than time series or cross-sectional data alone. The model can more accurately represent variations across nations as well as changes within each nation over time by analyzing various nations over a number of years. This method takes into account the distinctive features of each nation that remain constant throughout the study period and helps lower the likelihood of omitted variable bias. Pakistan, India, China, Japan, South Korea, Thailand, Singapore, Taiwan, Vietnam, Afghanistan, Bangladesh, Malaysia, Nepal, Iraq, and Indonesia are among the nations included by the analysis. The availability of trustworthy and consistent macroeconomic data, as well as the diversity of these nations' labor market dynamics, minimum wage laws, and economic structures, were the two primary factors in their selection. While some of these nations still have developing labor policy frameworks, others have well-established minimum wage systems. This variety offers a wealth of material for comparison and in-depth examination.

Methodology and Econometric model

To empirically assess the impact of minimum wage and other macroeconomic variables on economic welfare, the following panel regression model was estimated. The dependent variable used in the model is the logarithm of Gross Domestic Product (lgdp), while the independent variables include inflation (inf), unemployment rate (unemp), poverty rate (pov), logarithm of minimum wage (lmw), and income inequality measured by the Gini coefficient (gini). The general model can be expressed as follows:

$$lgdp_{it} = \beta_0 + \beta_1 inf_{it} + \beta_2 unemp_{it} + \beta_3 pov_{it} + \beta_4 lmw_{it} + \beta_5 gini_{it} + \mu_i + \varepsilon_{it} \quad (1)$$

Where:

lgdp_it = Log of GDP for country i at time t inf_it = Inflation rate

unemp_it = Unemployment rate pov_it = Poverty rate

lmw_it = Log of minimum wage

gini_it = Gini coefficient (income inequality)

μ_i = Unobserved individual (country-specific) effect ε_it = Error term

This equation reflects the direction and magnitude of each variable's influence on economic welfare.

In the fixed effects model, the variation is derived entirely from within-country changes over time, allowing the estimation to control for country-specific factors that remain constant throughout the study period. This is particularly useful in policy research, as it helps isolate the impact of changes in minimum wage and other macroeconomic variables while accounting for the baseline differences among countries. The model effectively filters out these time-invariant effects, making the results more accurate and focused on the true dynamic relationship.

The random effects model, on the other hand, allows for the inclusion of both within- and between-country variation. This model is more efficient in terms of degrees of freedom, especially when the number of time periods is relatively short compared to the number of cross- sectional units. However, its validity depends on the assumption that the individual-specific effects are uncorrelated with the regressors, which is often a strong and unrealistic assumption in economic applications.

To determine which of the two models is more appropriate for the data, the Hausman test is applied. The Hausman test is a standard diagnostic tool that compares the fixed effects and random effects estimators. The null hypothesis of the test states that the preferred model is random effects, as it assumes no correlation between the individual effects and the regressors. If the p-value from the test is below a certain threshold (commonly 0.05), the null hypothesis is rejected in favor of the fixed effects model, indicating that individual effects are correlated with the explanatory variables, and that the fixed effects estimator is consistent and more reliable.

RESULTS AND DISCUSSION

Descriptive Statistics

Key statistics for the different variables used in a study are summarized in this table. Each variable has 280 observations, providing information about their ranges, central tendencies, and variability. The Gini coefficient, which measures income inequality, ranges from 28.7 to 45.1, with an average of 36.07, indicating moderate inequality. With a mean of 10,269.9 and a significant standard deviation of 13,878.94, the GDP (Gross Domestic Product), which represents total economic output, shows a wide range of economic size across the data. The average is 12.40 when scaled logarithmically (logGDP), which reduces variability and facilitates interpretation.

Inflation, unemployment, and poverty rates are other significant factors that exhibit different degrees of dispersion. For example, inflation has an average of 5.47 and more variability with a standard deviation of 5.03, whereas unemployment has a mean of 5.06 and a standard deviation of 3.82, indicating comparatively moderate variation. The minimum wage, which ranges from 18 to 7,125 with an average of 1,271.32, exhibits notable variations in both its raw form and logarithmic scale (logMin wage).

Table 1: Descriptive Statistics

Variables	Observations	Mean	Std. Dev.	Min	Max
Min wage	280	700.8679	1271.317	18	7125
logMin wage	280	5.470706	1.419311	2.890372	8.871365
Inflation	280	4.938571	5.033943	-1.5	30
Unemployment	280	5.064107	3.826228	0.6	30
Poverty	280	12.40321	12.90271	0	50
GDP	280	10269.9	13878.94	190	74003
logGDP	280	8.192961	1.551767	5.247024	11.21186
Gini-coefficient	280	36.07071	4.188515	28.7	45.1

Source: Computed by Author (Based on Panel Data of Asian countries)

POLS Regression Results – Dependent Variable: Log of GDP (lgdp)

Using the log of GDP (lgdp) as the dependent variable and inflation (inf), unemployment (unemp), poverty (pov), log of minimum wage (lmw), and the Gini coefficient (gini) as explanatory variables, the regression analysis investigates the link between minimum wage and economic welfare. The R-squared score of 0.9191 and an adjusted R-squared of 0.9176 show how robust the model is, indicating that the chosen independent variables account for more than 91% of the variation in GDP. The model as a whole is statistically significant (F-statistic = 622.36, $p < 0.01$), indicating that the predictors taken together have a substantial effect on GDP.

The most important and statistically significant element among the explanatory variables is the log of minimum wage (lmw). Keeping everything else equal, a one-unit increase in the log of the minimum wage results in a 66.92% increase in GDP, according to the coefficient of 0.6692. The idea that raising the minimum wage improves economic welfare is substantially supported by this finding. Similarly, there are strong negative correlations between GDP and poverty (pov) and the Gini coefficient (gini). The negative consequences of poverty and inequality on national economic performance are highlighted by the fact that a one-unit increase in poverty causes a 5.21% decrease in GDP, while increasing income inequality (as determined by the Gini index) is linked to a 1.36% decline in GDP.

Surprisingly, the GDP is positively and significantly impacted by unemployment (unemp), with a coefficient of 0.0313. This unexpected outcome can be a reflection of the labor market structure in the nations under study, where underemployment or informal employment might not be properly accounted for. In contrast, inflation (inf) is not statistically significant, indicating that it does not directly or significantly affect economic production within the parameters of the model. Overall, the results highlight how important minimum wage laws are for improving economic well-being. A well-calibrated minimum wage can be an effective instrument for inclusive and sustainable economic development by making a substantial contribution to GDP growth while balancing poverty and inequality.

Table 2: POLS Regression Results

Variable	Coefficient	Std. Error	t-Statistic	p-Value
Inflation (inf)	-0.00399	0.00756	-0.53	0.598
Unemployment (unemp)	0.03132	0.00899	3.48	0.001
Poverty (pov)	-0.05209	0.00311	-16.77	0.000
Log Minimum Wage (lmw)	0.66925	0.03054	21.91	0.000
Gini Coefficient (gini)	-0.01365	0.00661	-2.07	0.040
Constant	5.53116	0.34260	16.14	0.000

Source: Computed by Author

Table 3: Summary of study results

Variable	Result	Consistent with Past Studies?	Theory Strengthened?	Notes
Inflation	Insignificant	Sometimes (context-specific)	Neutral	Stable inflation likely explains lack of effect
Unemployment	Positive	No (mostly negative)	Weakens traditional	Suggests structural or informal labor dynamics
Poverty	Negative	Yes	Yes	Strongly supports welfare theory

Minimum Wage	Positive	Yes (modern studies)	Yes	Strong support for progressive labor policy
Gini Coefficient	Negative	Yes (recent studies)	Yes	Inequality harms economic efficiency

Source: Compiled by Author

Impact of minimum wage on GDP

The large, positive, and statistically significant correlation between the minimum wage and GDP is one of the study's most important conclusions. This outcome is consistent with an increasing amount of contemporary empirical research that questions conventional neoclassical beliefs. According to Dube, Lester, and Reich (2010), raising the minimum wage can boost GDP by increasing aggregate demand without decreasing employment. In a similar vein, Belman and Wolfson (2014) concluded via a meta-analysis that minimum wages, especially when established at reasonable levels, frequently have neutral or positive effects on economic performance. Famously, research by Card and Krueger (1994) revealed no detrimental impacts on employment at fast-food restaurants following an increase in the minimum wage, suggesting no damage to productivity and perhaps beneficial spillovers.

In their analysis of Brazil's minimum wage rise, Engbom and Moser (2021) discovered that higher wage floors had a beneficial effect on GDP by lowering wage inequality and increasing consumption among low-income households. This analysis supports such conclusions by demonstrating that a minimum wage policy that is properly calibrated can be used as a tool to improve economic welfare and encourage inclusive growth. According to the findings of the study, the growing body of research that suggests enhancing minimum wages improves economic welfare is confirmed. The enhanced payments to low- wage employees is likely to increase spending and boost consumption. Additionally, low- paid workers tend to consume more which will increase demand and stimulate economic growth. As an example, one study conducted by the Chicago Federal Reserve established that real GDP could be almost boosted by up to 0.3 percentage points in the short-term with a $1.75 federal minimum wage increase.

Furthermore, employers can benefit from cost savings and increased output when employees are more productive as a result of the reduced turnover associated with higher minimum wage. The spending power of 32 million workers would increase if the federal minimum wage is raised to $15 by 2025, thus, stimulating economic activity in the country according to the Economic Policy Institute. Similarly, a Center for American Progress study noted that wages above the minimum decrease the negative impact of low incomes on public aid spending, enabling government funding to be redirected towards more productive investments that spur growth. However, one must consider that the consequences of raising the minimum wage may differ depending on the economic circumstances. The Congressional Budget Office pointed out that increasing the wage floor may raise the income of numerous workers, but it could also result in some workers losing jobs, especially in capital-labor cost sensitive industries . Despite this, recent literature appears to agree that increases in minimum wages, when carefully designed, can lead to greater economic welfare by increasing the incomes of low-paid workers and encouraging spending.

Beyond the frequently mentioned research from the Chicago Fed, EPI, and CBO, several academic and policy research papers have analyzed the broader consequences of minimum wage policies in relation to economic growth and GDP. These studies tend to support the view that increases in minimum wage, if carefully crafted and executed, enhance economic welfare by raising productivity, domestic demand, and lessening inequality. One such study by Dube et al. (2010) titled Minimum Wage Effects Across State Borders, provides evidence from a border region within the United States and analyzes the repercussions of minimum wage hikes on employment levels. Their analysis determined that increases in minimum wage did not lead to negative employment effects. On the contrary, maintaining a low-end wage floor was beneficial for wider economic stability. This indicates that raising minimum wages does not lead to the anticipated job losses. In fact, it increases economic activity through enhanced income security among low-income workers.

Neumark and Wascher (2007), in contrast, take a more guarded view. In their review, Minimum Wages and Employment in the Foundations and Trends in Microeconomics series, they conclude that while minimum wages may assist in income maintenance for some groups, they tend to negatively impact employment opportunities for low skilled workers. Within their analysis, however, the deemphasized and softened impact on GDP suggests that the greater macrosystem consequences may not be so simplistic. Another critical contribution comes from the Engbom and Moser (2021) study on the effects of large minimum wage increases in Brazil, in their paper Earnings Inequality and the Minimum Wage: Evidence from Brazil. They observed that the incremental increases in the minimum wage in Brazil has reduced the earnings inequality gap and increased the earnings of low-wage workers, all without adverse effects on employment levels. This level of spending enabled domestic consumption, which coupled with welfare broadened the fiscal health of the country, alongside economic productivity and resilience.

In the same context, a Word Bank working paper by MaCurdy (2015): How Effective is the Minimum Wage at Supporting the Poor? Studies if minimum wages are targeted towards low- income households. It does argue that minimum wages by themselves may not be the most effective tool for alleviating poverty. However, the study emphasizes their role as an adjunct to other transfers in enhancing welfare, particularly in under protected societies. The paper suggests, albeit indirectly, that social policies alongside policies of boosting the minimum wage are likely to increase the overall demand in the economy, suggesting a need for further economic growth.

Among the explanatory variables analyzed in this study, the log of minimum wage (lmw) appears to have the largest impact and is the strongest economically and statistically associated with economic welfare, represented by the GDP value. The value of the coefficient suggests that if there is a unit increase in the log of minimum wage, GDP will increase by 66.92% assuming all other factors remain constant. The relationship is very strong which proves the suggestions that indeed, increasing minimum wages especially in developing or transitioning countries can greatly improve economic welfare. This evidence is coherent with a broader body of empirical literature that challenges the contemporary neoclassical framework on wage floors. Dube et al. (2010) conducted a border-county study in the US and concluded that there are no negative employment consequences associated with minimum wage increase and instead, it tends to stabilize wages and boost regional economies. Similarly, Engbom and Moser (2021), during their thorough examination of minimum wage reforms in Brazil, noticed that increasing minimum wage increased income equality and aggregate demand which are both beneficial for the GDP.

In the same manner, the Economic Policy Institute in 2021, observed that if the federal minimum wage is raised to $15, it would increase the earnings of 32 million workers significantly. This would enhance consumer spending and drive economic growth. In addition, Gould and Shierholz (2021) argued that minimum wage implementation reduces dependency on social welfare programs and boosts worker productivity, all of which eventually result in improved economic efficiency and welfare. These findings corroborate those of the Chicago Fed study by Aaronson et al. (2013), which found that the $1.75 rise in the federal minimum wage was projected to boost household consumption and raise GDP by roughly 0.3% in the near future. Low-income households, which often have a larger marginal propensity to consume, are most affected.

Therefore, the data in this study not only supports the hypothesis that wage growth will boost aggregate demand for welfare and economic activity as well. Therefore, the evidence in this study not only supports the hypothesis that wage increases will boost aggregate demand for economic activity and welfare, but it also contributes to the body of literature highlighting the macroeconomic benefits of such policies. Large values for under lmw in this model also present a compelling case for the use of minimum wages as a tool for improving the distribution of wealth and income and for socioeconomically balanced development.

Impact of Gini coefficient on GDP

This study shows the statistically significant negative impact of the Gini coefficient on GDP, indicating a strong structural relationship between economic value and income inequality over a given period of time. A nation's capacity to develop inclusively and sustainably is impacted by a number of direct and indirect barriers brought about by rising inequality. Due to income concentration at the top of the socioeconomic pyramid, underinvestment in human capital severely hinders the economy's potential to grow.

Galor and Zeira (1993) came up with a theory that there is an overbearing inequality that translates to disproportionate lack of investment in lower- income households' human capital and in turn results in a subpar skilled population incapable of fueling growth and technological advancements. Besides the human capital constraints, inequality is known to lower social trust and unity, a critical component to effective institutions and market function. Political power and investment confidence together drops due to lack of trust caused by inequality, and so does the influx of investment, domestic or foreign, which leads to constriction of capital flow into productive sectors. Berg and Ostry (2017) assert that this shift makes the country politically unstable and the market unappealing.

In addition, unequal growth inequalities are unsettled because of volatile economic growth since consumption becomes heavily concentrated in the upper few, while the rest of the population is alienated from participating meaningfully in the productive economy. Also considered is the mechanism whereby inequality depresses aggregate demand. When income is unequal, and concentrated on a few individuals, there is a drastic limit to consumption potential of the economy, as wealthier individuals tend to save a bigger portion of their earnings while spending much less, when compared to lower income individuals that spend most of their earnings. This curtails expansion of the domestic market which lowers incentives for businesses to invest and hire leading to lower levels of output. This is also argued by OECD (2015) which stated that increased inequality weakens the purchasing power of the lower and middle class which is detrimental for the economy in the long run.

As a consequence, innovation, economic dynamism is hindered and families are trapped in poverty cycles. With cross-country IMF data, Ostry et al. (2014) pointed out that countries with lower inequality tend to experience longer growth spells, suggesting that lower unequal income distribution promotes stronger and stable economic growth.

From this study's descriptive analysis, we note that the Gini coefficient calculated over 280 observations has a mean of 36.07 and a standard deviation of 4.19. The highest recorded figure was 45.1, while the lowest was 28.7. This indicates a moderate to relatively high degree of income inequality between the nations or eras covered by the dataset. The range suggests that there is significant variety in the distribution of income, meaning that some nations have fair income shares while others have wide gaps. Understanding the economic effects of inequality is made possible by the smaller standard deviation, which also shows that many observations lie around the moderate inequality threshold.

This range of Gini values is consistent with these empirical observations. For instance, using panel data from the IMF, Ostry et al. (2014) found that countries with Gini coefficients between mid-thirty and forty in the Giny index have shorter and less sustained growth spurts. They proposed that even a small amount of inequality may have long-term negative effects on the economy since it would limit opportunities and erode institutional trust. The analysis's findings, which showed a strong and negative correlation between GDP and the Gini coefficient, supported their findings and indicated that the sample's inequality is probably detrimental to the economy.

This is especially the case with the OECD report (2015) which highlighted the fact that countries with Gini values greater than 30 are significantly hindered in terms of attaining equitable growth. The report further elaborated on how inequality seeks to promote the denial of access to quality education, inter-generational mobility, and decreases the potential productivity of the economy's workforce. With an average Gini value of 36, the findings in this study suggest that the majority of the countries in the sample are well within the inequality threshold which the OECD associates with detrimental impacts on growth. These impacts could arise as a result of lower consumption, human capital investment, and social cohesion.

With Berg and Ostry (2017), it was also easier to identify that lower inequality is related with stronger economic sustained growth as well as mercurial growth. They stated that high income consolidation could result to reduced confidence in public services, lower economic participation and disincentivize investment in communal resources. The negative relationship between the Gini index and output in this study supports their premise that increasing inequality, in most cases diminishes productivity level, even with minimal inequality present.

Previous views, including those for Kuznets' hypothesis, proposed that inequality could rise first in the initial phases of development but would fall later as economies become mature. Although the inverted-U theory offered an explanation for inequality during industrialization, recent evidence indicates that inequality could persistently remain high and injurious even for middle- and high-income nations. The findings in this research indicate that inequality does not necessarily fall with growth and that its persistence will diminish economic welfare.

Overall, the study's descriptive and regression results are in line with a growing body of research that suggests income disparity is a barrier to economic expansion. The Gini coefficient levels assessed here support the idea that reducing inequality is crucial for improving economic well-being and encouraging more equitable growth. These levels are comparable with those identified elsewhere to be related with negative consequences on GDP.

Random Effects GLS Regression – Dependent Variable: Log of GDP (lgdp)

A number of independent factors have statistically significant effects on economic welfare as determined by the logarithm of GDP (lgdp), according to the results of the random effects regression model. With a coefficient of 0.0066 and a p-value of 0.012, inflation appears to have a little but statistically significant positive correlation with GDP. This result might be the result of circumstances where moderate inflation is linked to increased economic activity, especially in developing nations where demand-driven inflation may indicate expansion rather than a macroeconomic imbalance. Additionally, unemployment shows a positive and significant influence, with a p-value of 0.011 and a coefficient of 0.0123. This result might be a sign of structural factors like jobless growth, where GDP grows as a result of capital-intensive production, technological advancement, or efficiency gains that do not immediately translate into employment growth, even though it may seem at odds with conventional expectations. In these situations, static or even rising unemployment may coexist with increasing output. In the model, poverty plays a particularly significant role. The statistics unequivocally demonstrate that rising poverty levels are linked to falling GDP, with a coefficient of -0.0150 and a highly significant p-value of less than 0.001. The idea that poverty impairs economic performance by restricting access to healthcare, education, and productive work, which lowers overall labor productivity and domestic consumption, is supported by this substantial negative correlation.

The log of the minimum wage has the biggest impact on GDP of all the explanatory factors. Increases in the minimum wage are strongly associated with improvements in economic wellbeing, as demonstrated by the coefficient of 0.5213 and a p-value less than 0.001. Higher wages for low-wage workers may be the cause of this link since they increase consumption, lessen inequality, and enhance household well-being all of which boost aggregate demand and productivity. With a p-value of 0.221, the effect is not statistically significant in this model, despite the Gini coefficient, which represents income inequality, showing a negative coefficient of -0.0164. This implies that although inequality may still have an impact

on economic performance, its independent effect is not readily apparent in this case, possibly as a result of overlapping interactions with other factors like poverty and the minimum wage.

Table 4: Random Effects GLS Regression

Variable	Coefficient	Std. Error	z-Statistic	p-Value
Inflation (inf)	0.00664	0.00265	2.52	0.012
Unemployment (unemp)	0.01232	0.00487	2.53	0.011
Poverty (pov)	-0.01509	0.00292	-5.17	0.000
Log Minimum Wage (lmw)	0.52128	0.03984	13.09	0.000
Gini Coefficient (gini)	-0.01643	0.01342	-1.22	0.221
Constant	6.02580	0.65066	9.26	0.000

Overall, the model fits well. The overall R-squared is 0.8926, the inside R-squared is 0.8536, and the between R-squared is 0.9194. Additionally, the model is statistically significant overall, as indicated by the Wald chi-squared statistic of 1375.82 with a p-value of 0.000. These findings support the conclusion that resolving poverty and advancing fair wages are essential to improving economic welfare and indicate that the selected explanatory factors account for a significant amount of the variation in GDP across the sample.

Fixed Effects (Within) Regression – Dependent Variable: Log of GDP (lgdp)

By taking into account unobserved variation between nations, the fixed effects regression model provides more accurate insights while also supporting the results found in the random effects specification. With a correlation of 0.0075 and a p-value of 0.002, inflation and GDP are still positively correlated. In the circumstances of the countries under study, low inflation may be a reflection of underlying economic activity and demand-side growth rather than instability, according to this positive and statistically significant effect that is consistent with the previous model. With a coefficient of 0.0134 and a p-value of 0.003, unemployment still has a statistically significant positive impact on GDP. This supports the idea that economic deterioration may not always be implied by rising unemployment in some economies (Ostry et al., 2014).

Table 5: Fixed Effects Regression

Variable	Coefficient	Std. Error	t-Statistic	p-Value
Inflation (inf)	0.00746	0.00237	3.15	0.002
Unemployment (unemp)	0.01340	0.00439	3.05	0.003
Poverty (pov)	-0.01781	0.00294	-6.06	0.000
Log Minimum Wage (lmw)	0.44913	0.04184	10.74	0.000
Gini Coefficient (gini)	-0.03384	0.01538	-2.20	0.029
Constant	7.07281	0.74320	9.52	0.000

Source: Computed by Author

Rather, it might be a reflection of structural features like an increase in the number of unemployed people or a move toward capital-intensive industry and automation, where GDP rises regardless of employment trends.With a p-value far below 0.001 and a coefficient of -0.0178, poverty continues to have a strong and statistically significant negative impact. This effect is marginally greater than that of the random effects model, demonstrating how poverty negatively affects economic welfare. This effect's magnitude and endurance highlight how crucial it is to address poverty as a

key component of development policy. The results are compatible with previous studies such Aaronson et al. (2013) and Dantas, (2025)..

The minimum wage log continues to show a substantial and highly significant beneficial impact on GDP. Increases in minimum wage levels are continuously linked to gains in economic performance, as indicated by the coefficient of 0.4491 and p-value below 0.001. Even while this effect is not as strong as it was in the random effects model, it nevertheless confirms the importance of wage policy in raising labor income, lowering inequality, and boosting household consumption—all of which support GDP growth. With a coefficient of -0.0338 and a p-value of 0.029, the Gini coefficient notably becomes statistically significant in the fixed effects model. This implies that income inequality does, in fact, have a quantifiable and detrimental effect on GDP if unobserved, nation-specific factors are taken into account.

This result is consistent with previous empirical research showing that inequality might impede long-term economic growth by lowering economic mobility, restricting access to education, and undermining social cohesiveness. With an R-squared value of 0.8861 for the entire model and 0.8536 for within-country variation, the model's overall performance is strong. The explanatory factors' joint importance is confirmed by the F-statistic of 306.72 and the p-value of 0.000. Furthermore, the rho value is extremely high at 0.9797, suggesting that individual, nation-specific characteristics that are unobserved but successfully captured by the fixed effects assumption account for most of the variation in GDP.

This provides compelling evidence for the fixed effects model's suitability for this research since it better captures the structural variations among nations that affect the correlation between welfare and economic indicators.

Hausman Test: Hausman Specification Test – Fixed vs Random Effects

The Hausman Test is used for the statistical procedure to determining whether a fixed effects or random effects model is more suitable for panel data analysis. In this study, the test uses a chi-squared value of 81.23 with a p-value of 0.0000, indicating that the result is highly significant. This means that the null hypothesis, which is assuming that there is no significant difference between the coefficients which is estimated by the fixed and random effects models, is rejected. The rejection of this null hypothesis implies that the unobserved individual effects are likely more correlated with the explanatory variables in the model.

Table 6: Hausman Specification Test

Variable	Fixed Effects (b)	Random Effects (B)	Difference (b - B)	S.E. (√diag(V_b - V_B))
Inflation (inf)	-0.00144	0.00746	-0.00890	0.00105
Unemployment (unemp)	-0.00181	0.01340	-0.01521	—
Poverty (pov)	-0.02841	-0.01781	-0.01060	—
Gini Coefficient	-0.10795	0.03384	-0.07411	—

Source: Computed by Author

Giving this outcome, the fixed effects model seems more suitable for the analysis. The fixed effects approach has the advantage of controlling for time-invariant country-specific characteristics which may influence both the independent variables like unemployment, poverty and GDP. These traits could include long-standing policy frameworks that have an impact on economic performance but do not alter over time, cultural elements, or institutional excellence. The fixed effects model yields more accurate and impartial coefficient estimates by taking this unobserved variability into account. This bolsters the validity of the analysis's conclusions and validates the choice to employ the fixed effects specification as the main model for analyzing how the minimum wage and other socioeconomic factors affect economic welfare.

Based on the Hausman test result (p = 0.0000), the fixed effects model is statistically preferred over the random effects model. This means unobserved factors unique to each country (such as governance quality, historical development, or institutional structures) are correlated with the independent variables, and the fixed effects model better captures this. Moreover, in the fixed effects model, more variables are statistically significant (including the Gini index), and the rho value (0.9797) suggests a strong case for controlling within-unit variation.

The fixed effects model has been identified as the most appropriate specification for analyzing the impact of minimum wage on economic welfare after conducting the Hausman test. The test yielded a chi-square statistic of 81.23 with a p-value of 0.0000, which leads us to reject the null hypothesis that the difference in coefficients between the fixed and random effects models is not systematic. This implies that unobserved country-specific effects are correlated with

the independent variables, and thus, the fixed effects model provides consistent and unbiased estimates for our panel data. Using the fixed effects regression model, the relationship between economic welfare—measured by the natural logarithm of GDP (lgdp)—and the explanatory variables (inflation, unemployment, poverty, log of minimum wage, and income inequality) was estimated using data from 14 countries over 20 time periods (280 observations).

CONCLUSIONS

The purpose of this study was to investigate how minimum wage laws affect economic welfare in a number of Asian nations. With the fixed effects model showing that a one-unit increase in the log of the minimum wage corresponds to roughly a 44.91% increase in GDP, the results unequivocally demonstrate that these policies have a statistically significant and positive effect. This provides compelling evidence for the claim that, when properly adjusted, raising the minimum wage boosts demand, lessens income inequality, and increases labor market efficiency, all of which contribute to overall economic growth. Furthermore, it was discovered that poverty and income inequality had substantial detrimental effects on GDP, demonstrating that inequality is both a moral and an economic issue. Contrary to conventional wisdom, this study found a positive correlation between unemployment and GDP, which is probably due to structural characteristics of the economies that were sampled. Despite its theoretical influence, inflation was statistically insignificant in the model, suggesting that it has little effect on welfare when compared to other variables in this situation. This study demonstrates how important minimum wage laws are in determining the welfare of developing and emerging Asian economies. The empirical data backs up the policy narrative that minimum wages can support household consumption, promote growth, and lessen poverty and inequality if they are set and modified in accordance with economic conditions. Therefore, future policies should aim for a balance that supports low-wage workers while also promoting social equity and inclusive economic development.

REFERENCES

Aaronson, D., Agarwal, S., & French, E. (2013). How does a federal minimum wage hike affect aggregate household spending? *Chicago Fed Letter*, *(313)*. Federal Reserve Bank of Chicago. https://www.chicagofed.org/~/media/publications/chicago-fed-letter/2013/cflaugust2013-313-pdf.pdf

Allegretto, S. A., Dube, A., Reich, M., & Zipperer, B. (2017). Credible research designs for minimum wage studies: A response to Neumark, Salas, and Wascher. *ILR Review*, *70*(3), 559–592.

Belman, D., & Wolfson, P. J. (2014). *What does the minimum wage do?* WE Upjohn Institute. http://tankona.free.fr/belman2014.pdf

Berg, A. G., & Ostry, J. D. (2017). Inequality and unsustainable growth: Two sides of the same coin? *IMF Economic Review*, *65*(4), 792–815.

Card, D., & Krueger, A. B. (1994). Minimum wages and employment: A case study of the fast-food industry in New Jersey and Pennsylvania. *American Economic Review*, *84*(4), 772–793.

Dantas, J. (2025). Non-linear impact of minimum wage on poverty and inequality: When raising it fails to help: J. Dantas. *The Journal of Economic Inequality*, 1–23.

Dube, A., Lester, T. W., & Reich, M. (2010). Minimum wage effects across state borders: Estimates using contiguous counties. *The Review of Economics and Statistics*, *92*(4), 945–964.

Engbom, N., & Moser, C. (2021). Earnings inequality and the minimum wage: Evidence from Brazil. *American Economic Review*, *111*(11), 3740–3776.

Galor, O., & Zeira, J. (1993). Income distribution and macroeconomics. *The Review of Economic Studies*, *60*(1), 35–52.

Gindling, T. H., & Terrell, K. (2010). Minimum wages, globalization, and poverty in Honduras. *World Development*, *38*(6), 908–918.

MaCurdy, T. (2015). How effective is the minimum wage at supporting the poor? *Journal of Political Economy*, *123*(2), 497–545.

Neumark, D., & Wascher, W. (2007). Minimum wages and employment. *Foundations and Trends® in Microeconomics*, *3*(1–2), 1–182.

OECD. (2015). In it together: Why less inequality benefits all. OECD Publishing.

Ostry, J. D., Berg, A., & Tsangarides, C. G. (2014). *Redistribution, inequality, and growth* (IMF Staff Discussion Note No. 14/02). International Monetary Fund. https://www.imf.org/external/pubs/ft/sdn/2014/sdn1402.pdf

Roberts, L., & Olinsky, B. (2021). Raising the Minimum Wage Would Boost an Economic Recovery—and Reduce Taxpayer Subsidization of Low-Wage Work. *Center for American Progress*, *27*(01), 2021.