

DETERMINANTS OF PROVINCIAL MINIMUM WAGE POLICY IN SUMATRA INDONESIA

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Abstract

This study aimed to analyze the factors influencing provincial minimum wage policy in Sumatra, Indonesia, by evaluating the impacts of the Human Development Index, inflation, Local Own-Source Revenue, and Gross Regional Domestic Product. The study was motivated by the persistent disparities in minimum wage levels across provinces and the inconsistent findings of previous research regarding the determinants of regional wage policy. A quantitative research approach was employed using secondary panel data from ten provinces in Sumatra during the 2020–2024 period, resulting in fifty observations. Descriptive statistics and panel data regression analysis with the random effects model were utilized, with the Chow test, Hausman test, and Lagrange Multiplier test employed to determine the most appropriate model specification. The results indicated that the Human Development Index exerted a positive and significant influence on provincial minimum wage determination, while inflation had a negative and significant impact. Local Own-Source Revenue showed a positive but insignificant effect, while Gross Regional Domestic Product demonstrated a negative and insignificant effect. The simultaneous analysis revealed that all independent variables jointly influenced provincial minimum wage determination, with the model accounting for 89.07% of the variation in the dependent variable. These findings indicated that the determination of provincial minimum wage in Sumatra was influenced by socioeconomic and fiscal factors rather than a singular cause. Consequently, policymakers ought to evaluate these variables holistically to develop wage policies that promote labor welfare, ensure economic stability, and improve public accountability in regional wage governance.

Keywords: Human Development, Inflation, Revenue, GRDP, Minimum Wage

1. Introduction

The minimum wage policy is a crucial tool for labor regulation since it directly influences workers' well-being, income distribution, and economic stability. In developing countries such as Indonesia, minimum wage determination remains a strategic policy issue because it serves both as a form of worker protection and as a mechanism to maintain business sustainability and regional economic balance. In Indonesia, provincial governments are tasked with establishing minimum wage levels according to current economic and social situations, necessitating that wage policy be based on quantifiable and pertinent factors. From the perspective of public-sector accounting, such policy decisions should also reflect accountability, transparency, and the use of reliable information in public decision-making (International Public Sector Accounting Standards Board, 2020).



In Sumatra, provincial minimum wages increased during the 2020–2024 period, but the magnitude of the increase varied across provinces. This variation indicates that wage-setting decisions were not determined by a single factor, but by a combination of development, macroeconomic, and fiscal conditions. One important indicator frequently used in regional development policy is HDI. HDI reflects development achievements in health, education, and a decent standard of living (BPS-Statistics Indonesia, 2023). A higher HDI generally indicates better quality of human resources, which may increase labor productivity and strengthen the rationale for higher minimum wages (Aprilia et al., 2024). Inflation is a significant determinant in wage policy since it influences the cost of living and the purchasing power of workers. When inflation rises, the real value of income decreases if wages do not adjust accordingly. In the context of public-sector accounting, inflation also matters because it influences the real value of government expenditure and household purchasing power. If inflation is not matched by income growth, people's purchasing power declines (Ma'mun & Fuadi, 2023). Therefore, wage policy that ignores inflation may fail to protect workers' welfare, especially when nominal wage increases are insufficient to offset rising prices. LOSR is also relevant because it reflects the fiscal independence of local governments. The larger the local revenue base, the greater the fiscal space available to support regional development and labor welfare programs. The Ministry of Finance stated that LOSR is part of regional fiscal capacity and contributes to the calculation of regional financial capability (Ministry of Finance of the Republic of Indonesia, 2024). In theory, stronger fiscal capacity may support more progressive wage policies, although the relationship is not always direct because wage decisions also depend on business structure and labor-market conditions. GRDP is another important determinant because it reflects the economic performance and productive capacity of a province. Regions with higher GRDP are generally assumed to have stronger economic capacity and greater ability to support labor welfare through wage policy.

The urgency of this research is driven by several critical factors. First, Indonesia has implemented a decentralized governance system that grants regional governments greater authority in managing economic development and public welfare. In this structure, it is the duty of provincial governments to suggest and establish minimum wage rates considering current economic circumstances and labor market dynamics. Second, significant disparities in minimum wage levels remain evident across provinces. Provinces with stronger economic performance and better development indicators generally tend to establish higher minimum wages than provinces with relatively lower levels of development. These disparities indicate that minimum wage determination is influenced by multiple factors rather than by labor market considerations alone. Third, empirical studies have shown mixed results regarding the determinants of minimum wage. Certain studies indicated that economic growth and HDI exerted positive and significant influences on minimum wage, while inflation and other indicators were not always significant (Trianingsih & Huda, 2025; Aprilia et al., 2024; Tsalsalaila et al., 2022). Other studies found that HDI did not significantly affect minimum wage, and that regional revenue and growth indicators also produced inconsistent results across regions and periods (Albariq et al., 2024; Bediona & Subarjo, 2022; Kusumaningrum & Nurhayati, 2023). Fourth, the inconsistent results indicate an empirical gap that warrants additional research, particularly in the context of Sumatra, where interprovincial disparities in development, inflation, fiscal capacity, and economic performance are significant. Fifth, there is a need to understand how public-



sector accountability and transparency considerations shape wage policy decisions, as reliable information and accountable decision-making are essential for effective public policy.

Previous research has shown significant but fragmented findings regarding the determinants of minimum wage. Studies have demonstrated that HDI positively influences minimum wage determination, reflecting the relationship between human capital development and wage policy (Aprilia et al., 2024; Trianingsih & Huda, 2025). Research has shown that inflation significantly affects minimum wage, with rising inflation often associated with adjustments in wage policy to protect workers' purchasing power (Ma'mun & Fuadi, 2023). Studies have also identified that fiscal capacity, reflected in LOSR, may influence wage policy through the availability of resources to support labor welfare programs (Ministry of Finance of the Republic of Indonesia, 2024). GRDP has been examined as a determinant of minimum wage, with mixed results across different regions and periods (Albariq et al., 2024; Bediona & Subarjo, 2022; Kusumaningrum & Nurhayati, 2023). However, these studies have examined these factors in isolation or with inconsistent results, leaving a significant gap in understanding how HDI, inflation, LOSR, and GRDP collectively influence provincial minimum wage determination in Sumatra.

The research gap in this study lies in the limited understanding of how social, macroeconomic, and fiscal factors collectively influence provincial minimum wage determination in Sumatra. While individual studies have examined the direct effects of HDI, inflation, LOSR, or GRDP on minimum wage, the integrated framework connecting these factors remains underexplored (Trianingsih & Huda, 2025; Albariq et al., 2024). Additionally, most previous studies have focused on national-level analysis or specific regions, leaving a significant gap in knowledge regarding the dynamics of minimum wage determination in Sumatra, where interprovincial disparities in development, inflation, fiscal capacity, and economic performance create distinct challenges and opportunities. Furthermore, empirical evidence on the determinants of minimum wage in Sumatra during the 2020–2024 period remains limited, particularly in the context of post-pandemic economic recovery and regional fiscal decentralization.

The novelty of this research lies in several aspects. First, this study focuses on the ten provinces in Sumatra during the 2020–2024 period, representing a unique context characterized by interprovincial disparities in human development, inflation dynamics, fiscal capacity, and economic performance. Second, this study develops an integrative model that simultaneously examines the influence of HDI, inflation, LOSR, and GRDP on provincial minimum wage determination, providing a more comprehensive understanding of the determinants of regional wage policy. Third, this study contributes to the limited empirical evidence on minimum wage determination in Sumatra, providing insights into how social, macroeconomic, and fiscal factors collectively shape wage policy outcomes. Fourth, this study extends the application of public-sector accounting and public policy theory to the context of regional wage determination, validating theoretical predictions in an under-researched institutional context (Kurniawati & Sitorus, 2024; Kurniawan & Samsuddin, 2025). Fifth, this study provides normative recommendations for policymakers in designing wage policies that balance worker welfare with economic sustainability and public accountability.

The purpose of this study is to analyze the effects of HDI, inflation, LOSR, and GRDP on provincial minimum wage setting in the ten provinces of Sumatra during the 2020–2024 period. In addition, this study aims to contribute to the literature on public



policy and public-sector accountability by showing how regional wage policy is shaped by a combination of development, macroeconomic, and fiscal indicators rather than by economic growth alone. The choice of this goal was driven by the inconsistency of findings from previous studies, where some researchers found significant positive effects while others found negative or insignificant effects, and the limited understanding of how these factors collectively influence provincial minimum wage determination in Sumatra.

The contribution of this research is multifaceted. From a theoretical perspective, this research contributes to the enrichment of literature on wage policy and regional economic development by proposing and testing an integrative model that links HDI, inflation, LOSR, and GRDP with provincial minimum wage determination, extending the application of public-sector accounting and public policy theory to the context of regional wage governance. The findings contribute to the understanding of how specific social, macroeconomic, and fiscal factors influence wage policy outcomes, providing a more nuanced theoretical framework for analyzing minimum wage determination in decentralized governance systems. From a practical perspective, this study provides actionable insights for regional governments, policymakers, and stakeholders in designing wage policies that balance worker welfare with economic stability and business sustainability. For regional governments, the findings provide guidance on which factors should be prioritized in wage-setting decisions. For policymakers, the results offer insights into the importance of considering human development, macroeconomic conditions, fiscal capacity, and regional economic performance in formulating minimum wage regulations. For stakeholders, this study provides evidence on the mechanisms through which socioeconomic and fiscal factors influence wage policy, supporting the development of more effective and accountable regional wage governance in Indonesia.

2. Theoretical Background

2.1 Public Policy Theory

A public policy is a series of decisions and actions taken by government institutions to address public issues and achieve societal objectives. Public policy is not merely a technical decision-making process, but a systematic framework through which the government allocates resources, responds to social needs, and regulates public welfare. In the context of minimum wage determination, public policy theory explains why wage-setting should be understood as a governmental action that balances workers' protection, business sustainability, and regional economic conditions (Parsons, 1995; Winarno, 2014).

The process of public policy typically includes problem identification, agenda setting, consultation, decision-making, implementation, and evaluation (Damanik & Zalukhu, 2021). Each stage requires relevant information and policy considerations. In regional wage setting, this means that government decisions should be based on indicators that accurately reflect labor conditions, regional development, and fiscal capacity. From the perspective of public-sector accounting, this process is also connected to planning, budgeting, reporting, and accountability because public resources must be allocated and justified in a transparent and responsible manner.

2.2 Wage Theory

Wages are the compensation received by workers in exchange for labor services provided to employers. According to Indonesian labor law, wages refer to the monetary



compensation that workers receive from employers, which is defined as their right, and this remuneration is established and paid based on work contracts, agreements, or legal statutes, including benefits for workers and their families. This definition shows that wages are not voluntary payments but legally binding obligations that arise from employment relations (Indonesian Law No. 13 of 2003 on Manpower).

In practice, wages may be classified into several forms, including time-based wages, piece-rate wages, and contract wages (Damanik & Zalukhu, 2021). In addition, efficiency wage theory explains that wages above a certain level can improve worker productivity, loyalty, and performance. This theory is relevant to minimum wage policy because wage setting is not only a cost issue but also a mechanism for improving labor quality and welfare (Aprilia et al., 2024; Febrianty et al., 2025). Therefore, wage theory supports the view that provincial minimum wage policy should be shaped by both economic and social considerations.

2.3 Human Development Index (HDI) on Provincial Minimum Wage Policy

HDI functions as a measure for evaluating human development advancement in a certain region. HDI indicates the availability of healthcare, education, and adequate quality of life, which are essential aspects of well-being and productivity (BPS-Statistics Indonesia, 2015). A higher HDI indicates better human capital quality, which can increase worker productivity and strengthen the basis for higher wages.

In regional policy, HDI is often used to assess development performance and to inform economic decision-making. Regions with higher HDI values usually have stronger human resources and greater welfare expectations, which may encourage governments to set higher minimum wages. Empirical studies have indicated that HDI often has a positive and significant effect on wage policy, although not all studies report the same result (Damanik & Zalukhu, 2021; Kusumaningrum & Nurhayati, 2023; Trianingsih & Huda, 2025). Based on this rationale, the subsequent hypothesis is posited:

H1: Human Development Index has a positive and significant effect on provincial wage setting in Sumatra.

2.4 Inflation on Provincial Minimum Wage Policy

Inflation denotes a persistent rise in the overall prices of goods and services over time. It affects the cost of living and reduces purchasing power, especially for workers with fixed incomes (Ekawarna & Muslim, 2008). In wage policy, inflation is often considered because minimum wages should help preserve workers' real income when prices rise.

Theoretically, inflation may push governments to raise minimum wages so that workers can maintain their standard of living. However, high inflation can also create pressure on business costs, so governments may become cautious in adjusting wages too aggressively. This helps explain why the empirical relationship between inflation and minimum wage policy is not always consistent. Some studies found positive effects, while others found negative or insignificant effects depending on the region and period observed (Amelia, 2021; Damanik & Zalukhu, 2021; Tsalsalaila et al., 2022). Accordingly, the following hypothesis is formulated:

H2: Inflation has a significant effect on provincial minimum wage setting in Sumatra.



2.5 Local Own-Source Revenue (LOSR) on Provincial Minimum Wage Policy

LOSR is the revenue collected by regional governments from local taxes, levies, and other legally recognized sources. It reflects the fiscal independence and financial capacity of a province to finance public services and development activities (Mahsun et al., 2013). From a public finance perspective, higher own-source revenue may provide greater fiscal space for policies that support labor welfare.

Nevertheless, the relationship between local revenue and wage policy may not be direct. Minimum wage decisions are influenced by many actors and policy considerations, including employers, workers, and the regional government itself. Therefore, although strong fiscal capacity may support better welfare policies, it does not necessarily guarantee higher wage levels. Previous studies also reported mixed findings regarding the effect of local revenue on wage policy (Azhari et al., 2021; Bediona & Subarjo, 2022). Based on this reasoning, the following hypothesis is proposed:

H3: Local Own-Source Revenue has a positive and significant effect on provincial minimum wage setting in Sumatra.

2.6 Gross Regional Domestic Product (GRDP) on Provincial Minimum Wage Policy

GRDP is a regional economic metric that represents the aggregate value of goods and services generated within a province. GRDP is extensively utilized to evaluate economic growth, productive capacity, and sectoral performance within regional economies (SastroAtmodjo et al., 2025; Tampubolon, 2024). Regions with higher GRDP are generally assumed to have stronger economic capacity and a greater ability to support higher wage levels.

However, higher output does not always translate into higher wages because economic growth may be concentrated in sectors that do not strongly improve workers' earnings. As a result, the relationship between GRDP and minimum wage policy remains empirically open. Some studies found positive effects, while others reported negative or insignificant effects (Aprilia et al., 2024; Kusumaningrum & Nurhayati, 2023; Tsalsalaila et al., 2022). The subsequent hypothesis is posited:

H4: Gross Regional Domestic Product has a positive and significant effect on provincial minimum wage setting in Sumatra.

3. Methods

3.1 Research Design

This study utilized a quantitative research approach to analyze the impact of the Human Development Index (HDI), inflation, Local Own-Source Revenue (LOSR), and Gross Regional Domestic Product (GRDP) on the calculation of provincial minimum wage in Sumatra. A quantitative methodology was selected to assess the amount and direction of the correlations between the variables and to statistically evaluate the offered hypotheses. The study employed secondary data using panel data regression to analyze both cross-sectional and temporal variations across provinces and years. The explanatory research design was chosen because the study aims to empirically test the proposed hypotheses using statistical analysis of numerical data derived from government publications and provincial regulations.



3.2 Population and Sample

The study population included 10 provinces in Sumatra: Aceh, North Sumatra, West Sumatra, Riau, Jambi, South Sumatra, Bengkulu, Lampung, the Bangka Belitung Islands, and the Riau Islands. The study employed a saturation sampling technique, indicating that all provinces within the population were incorporated into the sample. The observation period was five years, from 2020 to 2024, resulting in 50 panel observations. This framework enabled the examination of interprovincial disparities and temporal variations in minimum wage determination across the Sumatra region.

3.3 Data Collection Techniques

This study utilized secondary data obtained from government papers. The primary data sources comprised regional budget execution reports from the Audit Board of the Republic of Indonesia (BPK RI) and the Directorate General of Fiscal Balance (DJPK), statistical publications from the BPS-Statistic Indonesia, and provincial governor rules concerning minimum wage determination. The utilization of secondary data was suitable as the study necessitated objective and comparable annual statistics across provinces. The data collection procedure involved several sequential steps: identification of the required variables for each province during the 2020–2024 period; extraction of HDI, inflation, LOSR, and GRDP data from official publications; collection of provincial minimum wage data from governor regulations; and systematic organization of all extracted data into a panel dataset suitable for statistical analysis using EViews 12 software.

3.4 Operational Definitions of Research Variables

Table 1. Operational Definition and Measurement of Variables

Variable	Definition	Measurement	Scale	References
Provincial Minimum Wage (Y)	The nominal monthly minimum wage set by the governor each year as the regional wage policy outcome	Natural logarithm of nominal provincial minimum wage	Ratio	Governor Regulations; BPS
Human Development Index (X ₁)	A composite index measuring average achievement in health, education, and living standards	Official HDI value	Ratio	BPS-Statistic Indonesia
Inflation (X ₂)	The rate of increase in general price levels of goods and services over a period	Consumer Price Index	Ratio	BPS-Statistic Indonesia
Local Own-Source Revenue (X ₃)	Regional revenue generated from local sources, including taxes,	Natural logarithm of total realized regional revenue	Ratio	BPK RI; DJPK



Variable	Definition	Measurement	Scale	References
	retributions, and other legitimate local revenues			
Gross Regional Domestic Product (X ₄)	The total value of goods and services produced within a province during a specific period	Regional output growth	Ratio	BPS-Statistic Indonesia

Source: Developed for this research (2026)

3.5 Data Analysis Techniques

The data were examined with descriptive statistical techniques and panel data regression with EViews 12 software. Panel data regression was chosen as it integrates time-series and cross-sectional data, enhancing estimation efficiency and enabling the analysis of variability across regions and temporal dimensions. The regression model evaluated three alternatives: the Common Effect Model, the Fixed Effect Model, and the Random Effect Model. The model selection process employed the Chow test, Hausman test, and Lagrange Multiplier test to ascertain the best suitable specification. The study revealed that the Random Effects Model was the selected model for estimation. The regression equation used in the study was:

$$Y_{it} = \alpha + \beta_1 HDI_{it} + \beta_2 INF_{it} + \beta_3 LOSR_{it} + \beta_4 GRDP_{it} + \varepsilon_{it}$$

Where:

- Y_{it} = Provincial Minimum Wage
- α = Constant
- $\beta_1, \beta_2, \beta_3, \beta_4$ = Regression coefficients of the independent variables
- HDI_{it} = Human Development Index
- INF_{it} = Inflation
- $LOSR_{it}$ = Local Own-Source Revenue
- $GRDP_{it}$ = Gross Regional Domestic Product
- i = Province
- t = Year
- ε_{it} = Error term

Hypothesis testing was performed via partial significance testing and simultaneous significance testing. The partial test was executed to assess the influence of each independent variable on the provincial minimum wage, while the simultaneous test was carried out to ascertain if all independent variables collectively impacted the dependent variable. All hypothesis tests were conducted at a significance level of 5% ($p < 0.05$) using EViews 12 software.

4. Results and Discussion

Table 2. Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev	Observation
HDI	72.74800	72.71000	77.97000	69.69000	1.774488	50
INF	2.872800	2.365000	7.570000	0.510000	1.749365	50
LOSR	28.54780	28.63500	29.63000	27.25000	0.657172	50
GRDP	2.183800	1.565000	5.210000	0.470000	1.607623	50
PMW	14.86920	14.88500	15.11000	14.61000	0.135071	50

Source: EViews 12 Output (2026)



The descriptive statistics in Table 2 show that the HDI had a mean of 72.74800, with a minimum value of 69.69000 and a maximum value of 77.97000. The relatively small standard deviation indicates that the variation in human development across provinces in Sumatra was not too wide during the observation period. Inflation had a mean of 2.872800, while the minimum and maximum values were 0.510000 and 7.570000, respectively. This suggests that inflation varied more noticeably across provinces and years. LOSR which had been transformed into natural logarithm form, showed a mean of 28.54780 and a standard deviation of 0.657172, indicating moderate variation in fiscal capacity. GRDP had a mean of 2.183800 and a standard deviation of 1.607623, showing substantial differences in regional economic performance. Provincial Minimum Wage had a mean of 14.86920 with a relatively small standard deviation, suggesting that wage levels were more stable after transformation.

Table 3. Multicollinearity Test Results

Variable	HDI	INF	LOSR	GRDP
HDI	1.000000	-0.127874	-0.047100	0.041087
INF	-0.127874	1.000000	0.122866	0.042832
LOSR	-0.047100	0.122866	1.000000	0.841886
GRDP	0.041087	0.042832	0.841886	1.000000

Source: EViews 12 Output (2026)

Table 3 presents the findings of the multicollinearity assessment utilizing the correlation matrix method. This test was conducted to determine the presence of high correlations among the independent variables included in the regression model. Multicollinearity can result in unstable coefficient estimates and diminish the reliability of statistical inference. Consequently, it is essential to verify that the explanatory variables exhibit low correlation with each other prior to generating the regression model.

According to Table 3, the correlation coefficient between the HDI and Inflation was -0.127874, while the coefficients between the HDI and LOSR and between the HDI Index and GRDP were -0.047100 and 0.041087, respectively. The correlation coefficient between Inflation and LOSR was 0.122866, whereas the correlation coefficient between Inflation and GRDP was 0.042832. The strongest association was identified between LOSR and GRDP, with a coefficient of 0.841886.

Although the correlation between LOSR and GRDP was relatively high, the value remained below the commonly accepted threshold of 0.90. Therefore, none of the correlation coefficients exceeded the critical value, indicating the absence of serious multicollinearity in the model. These findings suggest that each independent variable provides distinct information and can be included simultaneously in the panel data regression analysis without causing significant estimation bias.

Table 4. Panel Data Model Selection Results

Panel Data Model Test	Probability Value	Selected Model
Chow Test	0.0000	Fixed Effect Model
Hausman Test	0.9503	Random Effect Model
Lagrange Multiplier Test	0.0000	Random Effect Model

Source: EViews 12 Output (2026)



Table 4 presents the findings of the panel data model selection process. The selection method comprised three specification tests: the Chow test, the Hausman test, and the Lagrange Multiplier test. The experiments were performed to determine the most suitable estimation model among the Common Effect Model, Fixed Effect Model, and Random Effect Model.

The Chow test produced a probability value of 0.0000, which is below the 0.05 significance threshold, signifying that the Fixed Effect Model is more appropriate than the Common Effect Model. The Hausman test resulted a probability value of 0.9503, surpassing the significance criterion of 0.05, indicating that the Random Effect Model was more suitable than the Fixed Effect Model. Ultimately, the Lagrange Multiplier test resulted a probability value of 0.0000, endorsing the preference for the Random Effect Model over the Common Effect Model.

The findings of the three specification tests indicated that the Random Effect Model was the best suitable estimating model for this investigation. The application of the Random Effect Model indicates that unobserved individual effects among provinces were regarded as random elements of the error term. Thus, all hypothesis testing and interpretation of regression coefficients in this work relied on the results from the Random Effect Model estimation.

Table 5. Hypothesis Testing Results

Variable	t-Statistic	Probability	Decision
HDI	9.066789	0.0000	Supported
INF	-3.446176	0.0012	Supported
LOSR	1.479115	0.1461	Not Supported
GRDP	-0.266691	0.7909	Not Supported

Source: EVIEWS 12 Output (2026)

The results of the Random Effect Model estimation are displayed in Table 5. The results demonstrate that the HDI exerted a favourable and statistically significant influence on the calculation of provincial minimum wage in Sumatra. The coefficient of 0.047605 and a probability value of 0.0000 suggest that enhancements in human development correlate with increased provincial minimum wages. This finding suggests that provinces with better educational attainment, health conditions, and living standards tended to establish higher minimum wages. The result supports public policy theory, which emphasizes that government policies are formulated to improve public welfare. In this context, provincial minimum wage determination represents one of the policy instruments used by regional governments to enhance workers welfare. The finding is also consistent with wage theory, which argues that wage levels are closely related to labor quality and productivity. Regions with higher human development generally possess healthier, more educated, and more productive workers who are entitled to better compensation. This result is consistent with Trianingsih & Huda (2025), who reported that the HDI positively and significantly influences regional minimum wages.

Inflation exhibited a negative and statistically significant impact on the setting of provincial minimum wage, evidenced by a coefficient of -0.006409 and a probability value of 0.0012. The result suggests that increases in inflation were associated with lower minimum wage determination during the observation period. This condition may occur because rising inflation increases production and operational costs faced by



businesses. Consequently, regional governments tend to be more cautious when adjusting minimum wages in order to avoid placing excessive pressure on business sustainability and regional economic stability. The finding supports public policy theory, which argues that policymakers must consider multiple interests when formulating public policies, including worker welfare, economic conditions, and business continuity. Although inflation is closely related to changes in the cost of living, the results indicate that increases in inflation do not necessarily lead to higher minimum wages. Instead, wage-setting policies in Sumatra appear to be directed toward maintaining a balance between workers' interests and the capacity of firms to absorb labor costs. This finding is consistent with Damanik & Zalukhu (2021), although it differs from the findings of Tsalsalaila et al (2022).

The estimation results further show that LOSR had a positive but statistically insignificant effect on provincial minimum wage determination. The coefficient value of 0.047147 was accompanied by a probability value of 0.1461, which exceeded the 5 percent significance level. This finding indicates that improvements in regional fiscal capacity did not significantly influence minimum wage determination in the provinces included in the study. The result suggests that wage-setting decisions are influenced not only by regional revenue performance but also by labor market conditions, business capacity, productivity levels, and broader economic considerations. From the perspective of public finance theory, LOSR represents an important source of regional government income used to finance development and public services. However, its magnitude does not directly determine wage policies because minimum wages are more closely related to labor market dynamics and workers' living standards. This finding supports the argument that fiscal capacity alone is insufficient to explain variations in provincial minimum wage determination. The result is in line with Azhari et al (2021) and Bediona & Subarjo (2022).

The GRDP exhibited a negative and statistically negligible impact on the calculation of provincial minimum wage. The estimated coefficient of -0.007159 and probability value of 0.7909 indicate that regional economic output did not significantly influence minimum wage policies during the study period. Although wage theory suggests that higher economic output should contribute to improved wage levels, the findings imply that economic growth does not automatically translate into higher worker compensation. This situation may occur when economic growth is concentrated in sectors that are not labor-intensive or when the benefits of growth are not distributed evenly among workers. Public policy theory also suggests that minimum wage determination is influenced by multiple considerations, including labor market conditions, business sustainability, and regional economic stability. Therefore, GRDP was not identified as a primary determinant of provincial minimum wage determination in Sumatra. This finding is consistent with the studies of Aprilia et al (2024) and Tsalsalaila et al (2022), although it differs from the findings reported by Kusumaningrum & Nurhayati (2023).

The results indicate that the HDI, inflation, LOSR, and GRDP collectively affected the calculation of provincial minimum wage in Sumatra. The F-statistic of 100.9254 and a probability value of 0.000000 validate the overall significance of the model. The results indicate that provincial minimum wage rules are influenced by a confluence of social and economic factors rather than a singular cause. HDI indicates the caliber of human resources, inflation signifies variations in living expenses, LOSR denotes regional fiscal capability, and GRDP measures regional economic performance. Collectively, these variables provide important considerations in the formulation of



minimum wage policies. The findings support public policy theory, wage theory, and public finance theory, all of which emphasize that wage-setting decisions should account for both economic conditions and social welfare objectives. The result is also consistent with Damanik & Zalukhu (2021) and Primadila & Asmara (2022), who reported that economic variables jointly affected regional minimum wage policies.

Table 6. Model Fit Statistics

Statistic	Value
R-squared	0.899711
Adjusted R-squared	0.890796
F-statistic	100.9254
Prob(F-statistic)	0.000000
Durbin-Watson stat	1.826469

Source: EViews 12 Output (2026)

The model fit results in Table 5 indicate that the regression model possessed substantial explanatory power. An Adjusted R-squared of 0.890796 indicates that 89.07 percent of the variance in provincial minimum wage determination is elucidated by the HDI, inflation, LOSR, and GRDP. The F-statistic was significant, demonstrating that the four independent variables collectively affected the dependent variable. The Durbin-Watson value indicates that the model did not encounter issues with autocorrelation.

The findings suggest that provincial minimum wage determination in Sumatra was shaped by a combination of social development, price stability, fiscal capacity, and regional economic performance. The positive and significant influence of the HDI indicates that better human development was associated with higher wage determination, while the negative and significant effect of inflation suggests that wage-setting decisions were sensitive to price instability. Meanwhile, LOSR and GRDP Product did not show statistically significant effects, meaning that fiscal strength and economic output alone were not sufficient to explain wage differences across provinces. Overall, the model demonstrates that regional wage determination is a multidimensional policy outcome rather than the result of a single economic factor.

5. Conclusion

This study aimed to analyze the impact of the Human Development Index (HDI), inflation, Local Own-Source Revenue (LOSR), and Gross Regional Domestic Product (GRDP) on the determination of provincial minimum wage in Sumatra. Using a quantitative research approach with panel data regression analysis on 50 observations from 10 provinces during the 2020–2024 period, the study successfully tested the direct effects of social and economic factors on regional wage policy outcomes and evaluated the proposed hypotheses through partial and simultaneous significance testing.

The findings indicated that the HDI exerted a positive and significant influence on the determination of provincial minimum wages, suggesting that provinces with elevated human development levels were inclined to set higher minimum salaries. This finding reflects the logical relationship between human capital development and wage policy, where provinces with better education, health, and living standards tend to establish higher wage floors to match the improved quality of life and productivity of their workforce. Inflation exhibited a detrimental and significant impact, indicating that rising inflation correlated with reduced minimum wage determination. This result suggests that in periods of high inflation, wage-setting authorities may adopt a more



cautious approach to prevent wage increases from further exacerbating price pressures and undermining economic stability. Conversely, LOSR showed a positive albeit insignificant influence, whilst GRDP demonstrated a negative and insignificant impact on the setting of provincial minimum wage. The insignificant effects of LOSR and GRDP indicate that fiscal capacity and regional economic output alone do not automatically translate into higher minimum wage determinations, as other institutional, political, and social considerations may play a more dominant role in the wage-setting process.

The concurrent analysis revealed that the HDI, inflation, LOSR, and GRDP collectively exerted a substantial influence on the calculation of provincial minimum wage in Sumatra. These findings suggest that minimum wage rules are shaped by a confluence of social and economic factors rather than a singular cause. The study emphasises the necessity of accounting for human development, macroeconomic conditions, fiscal capacity, and regional economic success in the formulation of provincial minimum wage regulations. Consequently, regional governments ought to adopt a balanced strategy in wage setting to enhance workers' welfare while ensuring economic stability and company sustainability. The simultaneous influence of these variables confirms that the provincial minimum wage is a multidimensional policy outcome that requires integrated consideration of social development indicators, macroeconomic conditions, fiscal capacity, and regional economic performance.

The theoretical implications of this study contribute to the understanding of wage determination as a complex policy process influenced by multiple interacting factors. The findings extend the application of wage theory and regional economic policy analysis to the context of provincial minimum wage determination in Indonesia, providing empirical evidence on the relative importance of human development, inflation, fiscal capacity, and economic output. From a practical perspective, this study provides normative recommendations for regional governments, policymakers, and stakeholders in designing wage policies that balance worker welfare with economic sustainability.

This study has several limitations that should be acknowledged. First, the study focuses only on provinces in Sumatra, which may limit the generalizability of the findings to other regions in Indonesia with different economic structures and labor market conditions. Second, the study uses a relatively short observation period of five years (2020–2024), which may not fully capture the long-term dynamics of minimum wage determination. Third, the study relies on secondary data from government publications, which may have limitations in terms of data quality and comparability. Fourth, the model's explanatory power may be limited, indicating that other factors not included in the model may significantly influence minimum wage determination. Fifth, the study does not examine the role of political factors, institutional arrangements, or labor union influence in the wage-setting process.

Future research should expand the geographical scope to include all provinces in Indonesia or conduct comparative studies across different regions to enhance the generalizability of the findings. Researchers should employ longer observation periods to examine how minimum wage determination evolves over time as economic conditions and policy frameworks develop. Future studies should incorporate additional variables, such as labor productivity, unemployment rates, poverty levels, and political factors, to improve the explanatory power of the model. Finally, future research could



employ qualitative approaches to provide richer insights into the institutional and political dynamics that shape minimum wage determination in Indonesia.

In conclusion, this study contributes to the growing body of literature on regional wage policy and economic development by providing empirical evidence on the determinants of provincial minimum wage in Sumatra. The findings suggest that HDI, inflation, LOSR, and GRDP collectively influence minimum wage determination, with HDI and inflation demonstrating significant effects. As Indonesia continues to pursue inclusive economic development and improve workers' welfare, understanding these factors becomes increasingly important for developing effective strategies to strengthen regional wage policies, promote economic stability, and enhance the competitiveness of the national economy.

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