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Determinants Of Labor Productivity In West Nusa Tenggara Province (Ntb)

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Abstract

This study analyzes factors influencing labor productivity at the district and city level in West Nusa Tenggara Province during the 2019–2024 period. The variables examined include District/City Minimum Wage (UMK), Open Unemployment Rate (TPT), and Percentage of Poor Population (PPM). The research employs panel data from 10 districts/cities and analyzes them through panel data regression using EViews 12. Model selection was conducted using the Chow Test and Hausman Test, which established the Fixed Effect Model as the best model. Research findings indicate that UMK has a negative and insignificant effect on labor productivity. TPT has a negative and significant effect, while PPM has a positive and insignificant effect on labor productivity. Simultaneously, these three variables have a significant effect on labor productivity. These findings demonstrate that despite UMK increases across all districts/cities, labor productivity remains influenced by labor market conditions and variations in poverty levels across regions. The research results emphasize the need for employment policies based on regional characteristics through human resource quality improvement, productive employment creation, and strengthening of value-added sectors to promote increased labor productivity in West Nusa Tenggara Province.

Keywords: *poverty, labor productivity, open unemployment rate, minimum wage.*

A. INTRODUCTION

Economic growth serves as a primary indicator for measuring national development success, with the employment sector being the government's central focus in efforts to achieve national development objectives (Rizma, 2023). Nevertheless, Indonesia currently faces a crucial issue low labor productivity (Mahfuds & Yuliana, 2022). Labor productivity plays a vital role in driving economic growth because most national economic sectors remain heavily dependent on labor as the primary production factor. Productivity improvement leads to more efficient resource utilization, enhanced production efficiency, and cost reduction (Maulana, 2023).

Todaro & Smith (2020) explain through Neo-Classical economic growth theory that economic progress can be achieved through developing three main production factors: capital enhancement, technological advancement, and improvements in labor quality and quantity. Labor productivity serves as one of the important indicators closely related to competitiveness and economic growth rates. This term describes the extent of labor's ability to produce output during a specific time period. Productivity measurement is conducted to assess labor efficiency

levels in the production process, while simultaneously providing insights into human resource quality, opportunities and challenges faced, and contributions to economic development (Andriani & Wijaya, 2024).

West Nusa Tenggara Province (NTB) ranks 36th out of 38 provinces in Indonesia regarding labor productivity in 2023. Its labor productivity is recorded at IDR 35.92 million per worker per year, far lower than the national average of IDR 87.96 million. With this achievement, NTB only ranks above East Nusa Tenggara (IDR 25.98 million) and Papua Pegunungan (IDR 13.20 million), indicating that this province still faces major challenges in increasing labor productivity. This low productivity aligns with employment conditions reflected through the Employment Development Index (IPK). In 2018, NTB's IPK value was 50.55, ranking 32nd out of 34 provinces, or third from the bottom after West Sulawesi and East Nusa Tenggara.

One factor influencing labor productivity levels is wage policy (Andriani & Wijaya, 2024). According to efficiency wage theory, wage increases can enhance labor productivity by motivating workers to perform better and attracting high-quality workers (Mankiw, 2007). Wages serve as compensation or remuneration provided by companies for labor contributions. When workers receive wages considered fair and commensurate with their efforts, motivation to work optimally increases. This encouragement ultimately improves individual work quality and enhances overall productivity (Chairunnisa & Juliannisa, 2022). In this research context, the wage referred to is the District/City Minimum Wage (UMK) in West Nusa Tenggara Province. Based on UMK data in NTB Province from 2019-2024, average UMK increases reached 4-5% per year, with the highest increase occurring in Mataram City.

The open unemployment rate represents the percentage of the labor force without employment but actively seeking work compared to the total labor force. The open unemployment rate (TPT) in NTB continuously shows decline during the research period. In 2021, TPT was recorded at 3.01%, declining to 2.89% in 2022, then 2.80% in 2023, and decreasing again to 2.73% in 2024. The achievement of 2.73% in August 2024 places NTB as the province with the fourth-best national performance, indicating fairly good labor absorption.

The relationship between unemployment and labor productivity can be explained using Okun's Law, which demonstrates a negative relationship between economic growth as a representation of aggregate productivity and unemployment rates. Altunöz (2024), using the Panel Autoregressive Distributed Lag (ARDL) approach in OECD countries, shows that real output growth has a negative and significant effect on unemployment rates in the long term. Research by Mohamed (2024) also indicates that Okun's Law application in developing countries produces a negative relationship between GDP growth and unemployment rates, although the magnitude of this effect varies due to differences in labor market structures. These results indicate that economic growth plays a role in reducing unemployment rates, reflected in consistently negative coefficient directions, despite varying significance levels. Thus, declining Open Unemployment Rates (TPT) are theoretically related to increased labor productivity.

The percentage of poor population serves as a welfare indicator showing the proportion of population with average per capita expenditure per month below the poverty line. The Central Statistics Agency establishes poverty lines based on minimum food needs equivalent to 2,100 kilocalories per capita per day and basic non-food needs such as housing, education, and health (BPS, 2024). This approach is considered more stable and capable of reflecting actual household welfare conditions, especially in regions with large informal sector portions.

In *Development as Freedom* (Sen, 1999), poverty is understood as capability deprivation that limits individual access to education, health, and economic opportunities, thereby hindering productive participation in social and economic activities. Macroeconomically, poverty dynamics relate to the poverty trap concept as explained by Nurkse (1953): low income causes low savings and investment, including investment in

education and health, so productivity remains low and poverty recurs over time. World Bank analysis (2023, 2024) shows that although Indonesia's national poverty figures decline, gaps in human capital quality between regions remain large. Regions with high poverty levels tend to experience obstacles in productivity improvement due to limited access to education, nutrition, health, and social infrastructure.

Based on data on the percentage of poor population in NTB Province by District/City from 2019-2024, North Lombok Regency is recorded as the region with the highest percentage of poor population throughout this period, namely 29.03% (2019), 26.99% (2020), 27.04% (2021), 25.93% (2022), 25.8% (2023), and 23.96% (2024).

Various previous studies analyze that labor productivity is influenced by combinations of economic factors and human resource quality. From the wage policy side, Coviello et al. (2022) and Andriani & Wijaya (2024) found that minimum wage increases can enhance labor productivity through increased output per worker and improved worker performance. Furthermore, the Open Unemployment Rate (TPT) also plays an important role, as high unemployment reflects labor matching inefficiency and can reduce economic productive capacity, as shown by Ball et al. (2017) and confirmed in the job matching model by Crawley & Welch (2021). Health and nutrition quality closely related to poverty also determines workers' physical and cognitive abilities. Umaini et al. (2024) and Bara et al. (2024) show that malnutrition and poor health conditions significantly reduce labor productivity. These findings indicate that labor productivity results from interactions between wage policies, labor market conditions, and workers' socioeconomic conditions, making these three variables relevant for analysis in the West Nusa Tenggara Province context.

Based on this explanation, this research aims to examine factors affecting labor productivity at the district/city level in West Nusa Tenggara Province, covering West Lombok Regency, Central Lombok Regency, East Lombok Regency, North Lombok Regency, Sumbawa Regency, West Sumbawa Regency, Dompu Regency, Bima Regency, Mataram City, and Bima City through analysis of district/city minimum wage (UMK), open unemployment rate (TPT), and percentage of poor population variables. This research uses panel data from 2019–2024 covering the COVID-19 pandemic period, economic recovery stage, and post-pandemic normalization phase, thus providing a more comprehensive picture of employment dynamics. Research results are expected to serve as input and evaluation material for the West Nusa Tenggara Provincial government in formulating employment policies, particularly policies related to labor productivity improvement.

B. METHODOLOGY OF RESEARCH

This research employs a quantitative approach utilizing panel data from 2019–2024 covering 10 districts/cities in West Nusa Tenggara Province. Analysis was conducted to examine the effects of UMK, TPT, and PPM on labor productivity using panel data regression models. Data sources used are secondary data obtained from official publications of the Central Statistics Agency (BPS) and NTB Satu Data.

The dependent variable in this research is Labor Productivity (Y), measured based on the ratio between Gross Regional Domestic Product (GRDP) at constant prices and the number of employed persons. Independent variables consist of District/City Minimum Wage (UMK) (X_1), Open Unemployment Rate (X_2), and Percentage of Poor Population (PPM) (X_3).

Data analysis was conducted using panel data regression models to identify the effect of each independent variable on labor productivity. Tests employed include the Chow test, Hausman test, and Lagrange Multiplier (LM) test to determine the best model among Common Effect Model (CEM), Fixed Effect Model (FEM), or Random Effect Model (REM). Data processing was performed using EViews 12 software.

The analytical model used is panel data regression with the following equation form:

$$Y_{it} = \beta_0 + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + \varepsilon_{it}$$

Where:

- **Y** = Labor Productivity
- **X1** = Regency and Municipal Minimum Wage
- **X2** = Open Unemployment Rate
- **X3** = Percentage of the Poor Population
- **i** = Regency/Municipality
- **t** = Year
- β_0 = Constant term
- $\beta_1 - \beta_3$ = Regression coefficients
- ε = Error term

Labor Productivity (Y) and Regency and Municipal Minimum Wage (X1) variables are transformed into natural logarithm form to obtain a more linear model and reduce data heterogeneity across regions (Puspasari & Handayani, 2020). The equation is as follows:

$$LogY_{it} = \beta_0 + \beta_1 LogX1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + \varepsilon_{it}$$

Where:

- **Y** = Labor Productivity
- **X1** = Regency and Municipal Minimum Wage
- **X2** = Open Unemployment Rate
- **X3** = Percentage of the Poor Population
- **i** = Regency/Municipality
- **t** = Year
- β_0 = Constant term
- $\beta_1 - \beta_3$ = Regression coefficients
- ε = Error term

In determining the best panel data model to be used, there are three possible models Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Model selection is conducted through several testing stages, including the Chow test, Hausman test, and Lagrange Multiplier (LM) test. The Chow test is used to compare suitability between CEM and FEM models, where probability values (p-values) smaller than 0.05 indicate that FEM is the more appropriate model, while p-values greater than 0.05 indicate that CEM is more suitable. Subsequently, the Hausman test is conducted to determine the choice between FEM and REM models. If the p-value is less than 0.05, then FEM is selected as the most suitable model, while if the p-value is greater than 0.05, then REM is considered more appropriate. The Lagrange Multiplier (LM) test is then used to compare CEM and REM models, where p-values smaller than 0.05 indicate that REM is the more suitable model.

After obtaining the best model, this research continues with classical assumption testing to ensure the validity of the regression model used. Multicollinearity testing is conducted to detect very strong relationships among independent variables that can affect estimation result stability. Multicollinearity testing is performed using the Tolerance method, which is a measure showing how much variation of an independent variable is not explained by other independent variables. Tolerance values are obtained from the calculation $1 - R^2$, where R^2 is the proportion of independent variable variation explained by other independent variables in the model. The criterion used is that Tolerance values must be above 0.10 for the model to be declared free from multicollinearity. Subsequently, heteroscedasticity testing determines the presence of heteroscedasticity by observing regression coefficient significance probability values, where significance values less than 0.05 indicate heteroscedasticity, while

significance values greater than 0.05 show no heteroscedasticity.

The next stage is statistical testing in the regression model including the t-test, F-test, and coefficient of determination (R^2). The t-test is used to test the effect of each independent variable, namely District/City Minimum Wage (UMK), Open Unemployment Rate (TPT), and Percentage of Poor Population (PPM) on the dependent variable Labor Productivity (PTK) partially. The F-test is used to determine the effect of these three independent variables simultaneously on PTK. Meanwhile, the coefficient of determination (R^2) is used to determine the extent to which variations in labor productivity changes can be explained by independent variables in the model. All testing series were conducted using EViews software with a significance level of 5 percent ($\alpha = 0.05$).

C. RESULT AND DISCUSSION

The initial stage in panel data regression analysis is determining the selected model from the three existing approaches. To obtain the selected model, a series of tests must be conducted including the Chow Test, Hausman Test, and Lagrange Multiplier Test.

Table 1. Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	290.980118	(9,47)	0.0000
Cross-section Chi-square	242.287187	9	0.0000

Source: EViews 12, processed data (2025)

Based on Chow Test results in Table 1, it appears that the Cross-Section F probability significance value is smaller than the 5% or 0.05 significance level (0.0000 < 0.05). Thus, H_0 is rejected and H_1 is accepted. This decision indicates that the appropriate model is the Fixed Effect Model. Therefore, analysis continues by conducting the Hausman Test to determine whether the most suitable model is the Fixed Effect Model or Random Effect Model in this research.

Table 2. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.977035	3	0.0296

Source: EViews 12, processed data (2025)

The Hausman test is used to select the most appropriate panel data regression model between Fixed Effect Model and Random Effect Model. Model determination is based on Cross-section random probability values. Based on Hausman Test results, a Cross-section random probability value smaller than the 5 percent significance level (0.0296 < 0.05) was obtained. Therefore, H_0 is rejected and H_1 is accepted. Thus, the selected model is the Fixed Effect Model.

Based on results from both tests, the Fixed Effect Model is established as the selected model, so Lagrange Multiplier testing is unnecessary. Considering the entire series of tests conducted, the model used in this research is the Fixed Effect Model. Subsequently, panel data regression test results using the Fixed Effect Model are presented.

Table 3. Panel Data Regression Results Using the Fixed Effects Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.410458	3.207947	1.686580	0.0983
LOG(X1)	-0.146404	0.205978	-0.710773	0.4807
X2	-0.037828	0.017777	-2.127929	0.0386
X3	0.039341	0.020423	1.926361	0.0601

Source: EViews 12, processed data (2025)

The explanation of estimation results can be presented through the following regression equation:

$$\boldsymbol{Log(Yit) = 5\,410458 - 0\,146404 Log(X1it) - 0\,037828 X2it + 0\,039341 X3it + \mu i + \varepsilon it}$$

Based on the estimation model and equation obtained, it can be explained that:

1. Results show that the district/city minimum wage (X1) coefficient value is -0.146404. The district/city minimum wage variable has a negative effect on labor productivity. If the district/city minimum wage increases by 1%, labor productivity will decrease by 0.146404%, assuming the open unemployment rate (X2) and percentage of poor population (X3) variables are constant.
2. Results show that the open unemployment rate (X2) coefficient value is -0.037828. The open unemployment rate variable has a negative effect on labor productivity. If the open unemployment rate increases by 1%, labor productivity will decrease by 0.037828%, assuming the district/city minimum wage (X1) and percentage of poor population (X3) variables are constant.
3. Results show that the percentage of poor population (X3) coefficient value is 0.039341. The percentage of poor population variable has a positive effect on labor productivity. If the percentage of poor population increases by 1%, labor productivity will increase by 0.039341%, assuming the district/city minimum wage (X1) and open unemployment rate (X2) variables are constant.

Subsequently, classical assumption tests are conducted to ensure that the regression model used meets estimation feasibility criteria. In panel data regression analysis, there are several classical assumption tests such as normality, autocorrelation, heteroscedasticity, and multicollinearity. Basuki (2015) explains that autocorrelation testing is not mandatory in panel data because its characteristics are more dominant in cross-section data, whereas autocorrelation usually appears in time series data. Additionally, normality testing is also not an absolute requirement in panel regression.

Since the selected model is the Fixed Effect Model, classical assumption testing is focused on multicollinearity and heteroscedasticity tests. Multicollinearity testing is conducted to see whether there are strong linear relationships among independent variables. If correlation coefficient values among variables exceed 0.80 (> 0.80), the regression model indicates multicollinearity, and vice versa. Meanwhile, heteroscedasticity testing is used to determine the presence or absence of residual variance differences across observations in the regression model by observing each variable's probability values. The regression model is considered to meet feasibility criteria if free from multicollinearity and heteroscedasticity symptoms, so estimation results produced are valid. Testing results are presented as follows:

Table 4. Multicollinearity Test Results

	LOG(X1)	X2	X3
LOG(X1)	1	-0.1375003…	-0.1600313…
X2	-0.1375003…	1	-0.5774965…
X3	-0.1600313…	-0.5774965…	1

Source: EViews 12, processed data (2025)

Based on multicollinearity test results in Table 4, coefficient values among independent variables indicate no multicollinearity, as all correlation coefficients among independent variables are below 0.80 (< 0.80).

Table 5. Heteroscedasticity Test Results

Variable	Prob.
C	0.7368
LOG(X1)	0.7347
X2	0.2550
X3	0.6569

Source: EViews 12, processed data (2025)

Based on heteroscedasticity test results in Table 5, it appears that all independent variables have probability values greater than the 5% (0.05) significance level. Thus, it can be concluded that the regression model does not experience heteroscedasticity problems.

Subsequently, statistical testing is conducted to identify independent variable effects on dependent variables. The coefficient of determination (R^2) test is used to determine the extent to which independent variables can explain variation changes in dependent variables in a regression model.

Table 6. Results of the coefficient of determination (R^2) test

R-squared	0.987677
Adjusted R-squared	0.984531

Source: EViews 12, processed data (2025)

Based on Table 6, coefficient of determination test results show R-squared values of 0.987677 or 98.76% and Adjusted R-squared of 0.984531 or 98.45%. The Adjusted R-squared value of 0.984531 indicates that independent variables in this research model, namely District/City Minimum Wage (UMK), Open Unemployment Rate (TPT), and Percentage of Poor Population (PPM) together can explain Labor Productivity (PTK) variations in West Nusa Tenggara by 98.45%, while the remaining 1.55% is explained by other variables outside this research model.

To analyze the effect of each independent variable individually (partially) on dependent variables in the regression model, a partial test (t-test) is conducted.

Table 7. Partial test results (t)

Variabel	t-Statistic	t tabel	Keterangan
LOG(X1)	-0.710773	2.00324	Tidak siginifikan
X2	-2.127929	2.00324	Siginifikan

X3	1.926361	2.00324	Tidak siginifikan

Source: EViews 12, processed data (2025)

For the t-table value in t-statistic testing, with significance level α = 5% (0.05) and degrees of freedom df = (60 – 4 = 56), the t-table value obtained is 2.00324. The t-test results are as follows:

1. Partial test results for the district/city minimum wage variable (X1) on labor productivity variable based on t-statistic of 0.710773 with t-table of 2.00324 show that t-statistic is smaller than t-table (0.710773 < 2.00324), meaning H_0 is accepted and H_1 is rejected. This means the district/city minimum wage variable has a negative and insignificant effect on labor productivity.
2. Partial test results for the open unemployment rate variable (X2) on labor productivity variable based on t-statistic of 2.127929 with t-table of 2.00324 show that t-statistic is greater than t-table (2.127929 > 2.00324), meaning H_0 is rejected and H_1 is accepted. This means the open unemployment rate variable has a negative and significant effect on labor productivity.
3. Partial test results for the percentage of poor population variable (X3) on labor productivity variable based on t-statistic of 1.926361 with t-table of 2.00324 show that t-statistic is smaller than t-table (1.926361 < 2.00324), meaning H_0 is accepted and H_1 is rejected. This means the percentage of poor population variable has a negative and insignificant effect on labor productivity.

To analyze the effect of all independent variables together (simultaneously) on dependent variables in the regression model, a simultaneous test (F-test) is conducted. Simultaneous hypothesis testing is performed by observing significance probability values at a 5% significance level (α = 0.05).

Table 8. Results of simultaneous test (f test)

Weighted Statistics	Score	α
F-Statistic	313.9203	0,05
Prob(F-Statistic)	0.000000	0,05

Source: EViews 12, processed data (2025)

F-test results in Table 8 show that Prob(F-statistic) value of 0.000000 is smaller than the 5% significance level (α = 0.05). Thus, district/city minimum wage, open unemployment rate, and percentage of poor population variables together have a significant effect on labor productivity.

Effect of District/City Minimum Wage on Labor Productivity

Research results indicate that District/City Minimum Wage (UMK) has a negative and insignificant effect on labor productivity in 10 Districts/Cities in West Nusa Tenggara Province during 2019–2024. Theoretically, these results are not aligned with efficiency wage theory proposed by Mankiw (2007), which states that wage increases can encourage labor productivity.

These research results are also not aligned with Chairunnisa and Juliannisa (2022) and Maharani and Woyanti (2022), who state that wages have positive and significant effects on labor productivity. Chairunnisa and Juliannisa (2022) found that minimum wage increases can significantly encourage labor productivity, especially in regions with high economic activity

levels. Similarly, Maharani and Woyanti (2022) show that minimum wages have positive and significant effects on labor productivity at the provincial level, indicating that minimum wage increase policies are effective in enhancing labor productivity at broader regional scales.

Findings in this research are not aligned with some previous research due to relatively limited UMK increases in NTB, averaging only about 4–5 percent per year, so these wage changes have not been strong enough to provide significant encouragement for labor productivity improvement.

The insignificant effect of UMK is also influenced by the employment structure by district/city in NTB Province dominated by the informal sector. Central Statistics Agency data by district/city in NTB Province shows that most workers work in agriculture, small trade, and simple services sectors that in practice do not fully implement minimum wage provisions. Under these conditions, UMK policy is de jure but not fully applicable de facto for informal workers (BPS NTB, 2023). The World Bank (2020) explains that in regions with high informality levels, minimum wage policies do not reflect actual wages received by workers, thus not serving as direct incentives for productivity improvement.

Additionally, NTB's business structure is dominated by micro and small enterprises that tend to use simple technology and are labor-intensive with relatively low productivity levels (ILO, 2021). Under these conditions, UMK increases are more often responded to by business actors through working hour reductions, workforce reductions, or shifts to the informal sector compared to increasing output per worker. This situation causes the relationship between UMK and labor productivity to be negative and statistically insignificant, as also found by Suryahadi et al. (2019) and Meer & West (2020). These findings indicate that minimum wage effects on labor productivity are influenced by wage policy dynamics and regional economic conditions, so productivity responses to minimum wage increases differ across regions.

Effect of Open Unemployment Rate on Labor Productivity

Research results indicate that the Open Unemployment Rate (TPT) has a negative and significant effect on labor productivity in West Nusa Tenggara Province. TPT reflects the proportion of the labor force not yet absorbed in employment despite actively seeking work, thus serving as an important indicator of labor market inefficiency (BPS, 2024). According to job search theory, unemployment occurs due to search friction and skill mismatches between job seekers and market needs, causing delays in labor absorption (Belot et al., 2024).

Employment conditions in NTB during the research period show that TPT increases, especially in 2020 due to the Covid-19 pandemic, directly impacted declining labor productivity. All districts/cities experienced unemployment increases due to declining economic activity and employment terminations, with implications for weakened output and labor efficiency. Although TPT tended to decline during 2021–2024 following economic recovery, this improvement did not occur evenly. Urban areas such as Mataram City still recorded relatively high unemployment levels due to high labor market competition, while several other regions showed lower unemployment levels due to agriculture and informal sector dominance.

Theoretically, these research results align with Keynes' (1936) view that high unemployment levels will reduce aggregate demand, thus impacting production and economic productivity decline. Large TPT encourages labor shifts to informal sectors or underemployment that generally have lower productivity levels (BPS NTB, 2023; Asian Development Bank, 2020). This condition is strengthened by small-scale and informal business dominance in NTB that tends to use simple technology and has low production efficiency.

From a human capital perspective, high unemployment also hinders labor skill formation and development. The World Bank (2024) confirms that skill disparities and low investment in job training contribute to low labor productivity in developing regions. Thus, high Open Unemployment Rates not only reflect limited labor absorption but also negatively impact labor efficiency and productivity in the long term. These findings align with research by Muscatelli and Tirelli (2001) showing that unemployment has negative and significant effects on labor productivity. These findings are also reinforced by Widiyasari et al. (2022) research results explaining that unemployment rate variables have negative and significant coefficients on labor productivity. Increasing unemployment causes declining labor ability to contribute to regional output. This condition shows that when unemployment is high, the labor market is not optimally absorbed, so aggregate productivity declines. Findings in these proceedings strengthen your research results that increasing unemployment directly impacts declining labor productivity.

Effect of Percentage of Poor Population on Labor Productivity

Research results indicate that the percentage of poor population has a positive and insignificant effect on labor productivity in West Nusa Tenggara Province (NTB) during 2019–2024. These findings are not aligned with the Vicious Circle of Poverty Theory proposed by Ragnar Nurkse (1953), which states that poverty causes low income, limited ability to invest in education, health, and physical capital, thus reducing labor productivity and ultimately strengthening poverty conditions themselves.

Astutik & Aisyah (2023) show that variables reflecting welfare conditions, including poverty levels, do not provide significant effects on labor productivity in the manufacturing sector. Limited access to education, health, and skill improvement in poor community groups is not strong enough to encourage work capacity changes, so impacts on productivity become weak. Research in the ASEAN region also shows similar patterns where increasing poverty levels tend to hold back labor performance because low-income communities have limited access to human resource quality improvement facilities. These conditions cause poverty to potentially suppress productivity but do not always produce statistically significant effects (Ramadhani et al., 2023).

Differences in research results can be explained through Ministry of Manpower RI data in 2025 showing that NTB has a decent living cost of IDR 3,410,833, placing it in 33rd position out of 38 provinces. This figure is far below the national average and very contrasting with provinces with the highest living costs such as DKI Jakarta (IDR 5,898,511), East Kalimantan (IDR 5,735,353), and Riau Islands (IDR 5,717,082). NTB's relatively low position in decent living costs indicates objectively lower living standard needs in NTB compared to developed provinces, so economic pressures experienced by poor populations may not be as strong as in regions with high living costs.

NTB's economic structure still dominated by informal and traditional agriculture sectors allows poor communities to have alternative survival mechanisms not fully reflected in formal poverty indicators. The Central Statistics Agency NTB (2023) records that poor populations tend to increase work intensity through adding working hours or multiple jobs as survival strategies. Economic pressures encourage poor households to remain actively working, so quantitatively positive relationships between percentage of poor population and aggregate labor productivity can be reflected, although such relationships are weak and statistically insignificant. This condition aligns with International Labour Organization (ILO, 2022) findings stating that poor workers generally work harder to maintain minimum income but operate within capital, technology, and skill limitations.

Although work intensity increases, labor productivity does not experience meaningful improvement. This aligns with Todaro and Smith's (2020) view confirming that poverty not accompanied by human resource quality improvement will limit work efficiency. Limited access to education, health, adequate nutrition, and job training causes output per worker to

remain low, so increased work activity does not automatically increase productivity.

The capability approach developed by Sen (1999) also confirms that poverty is not merely a matter of low income but rather individual capability limitations to develop valuable basic life functions, including productive capabilities. Empirical evidence shows that health problems and malnutrition experienced by poor households correlate with low physical productivity, high work absenteeism rates, and cognitive ability limitations (Tompa et al., 2022). In the NTB context, relatively high and varying poverty levels across districts/cities strengthen the poverty trap phenomenon, where low human capital accumulation hinders long-term labor productivity improvement (World Bank, 2024).

During 2019–2024, the percentage of poor population in West Nusa Tenggara Province generally shows declining trends, although it temporarily increased in 2020 due to the COVID-19 pandemic that suppressed economic activity and employment opportunities. Mataram City and Bima City consistently recorded the lowest poverty levels, aligned with urban area characteristics having better infrastructure, broader public service access, and relatively more diverse employment opportunities. Conversely, North Lombok Regency continues recording the highest poverty levels, influenced by primary economic structures, infrastructure limitations, and long-term impacts of the 2018 earthquake disaster that eliminated many household productive assets.

Thus, these research results indicate that in the West Nusa Tenggara Province context, the percentage of poor population does not directly reduce labor productivity through low work participation but rather through limited job quality, skills, and production efficiency. Therefore, although regression coefficients show positive directions, these effects are not statistically significant, confirming that poverty reduction efforts need to be accompanied by human resource quality improvement to sustainably encourage labor productivity.

D. CONCLUSIONS

Based on research results conducted during 2019–2024 in West Nusa Tenggara Province, it can be concluded that District/City Minimum Wage has a negative and insignificant effect on labor productivity, Open Unemployment Rate has a negative and significant effect on labor productivity, and Percentage of Poor Population has a positive and insignificant effect on labor productivity. Simultaneously, district/city minimum wage, open unemployment rate, and percentage of poor population have significant effects on labor productivity.

Based on the dynamics of District/City Minimum Wage (UMK), Open Unemployment Rate (TPT), and percentage of poor population in districts/cities of West Nusa Tenggara Province, local governments need to direct employment policies contextually and based on regional characteristics. Relatively consistent UMK increases, particularly in urban areas such as Mataram City, need to be balanced with productivity improvement through labor skill strengthening, business efficiency improvement, and support for high value-added sectors so that wage policies are not merely administrative but also drive regional economic performance. Efforts to reduce TPT should be prioritized in regions with relatively high unemployment rates such as Mataram City and Bima City through productive employment creation, market-based job training strengthening, and investment encouragement in service and creative industry sectors.

Meanwhile, for regencies with lower unemployment rates but still limited productivity, productivity improvement can be achieved through agricultural and informal sector modernization and local product value-added enhancement. Additionally, poverty reduction, particularly in North Lombok Regency which still records the highest percentage of poor population, needs to be focused on household productive asset recovery, basic infrastructure

development, and expanded access to education and health to enhance labor capabilities and their contributions to regional economic productivity.

E. REFERENCES

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