Vol. 18 No.1. FEBRUARI 2025 ISSN : 2301-8968

JURNAL EKONOMI KUANTITATIF TERAPAN

Does Public Debt Affect Economic Growth? An Empirical Investigation Of Upper-Middle-Income Countries
Nita Viviani Nurhanifah, Romi Bhakti Hartarto, Diah Setyawati Dewanti

Spatial Analysis Of Inclusive Economic Development In Indonesia In 2019, 2020 And 2021
Kadek Aris Prasetya, Idaayu Nyoman Saskara, Putu Ayu Paramitha Purwanti

The Impact Of Tourism Special Economic Zones (Sezs) In Encouraging Regional Economic Growth
Nurdiana Kholida Oktaviana

Financial Literacy, Performance, And Welfare Of Msmes In Gianyar Regency
Gde Bagus Brahma Putra, Putu Yenny Astiti, Ni Putu Lisa Ernawatiningsih, Made Ika Prastyadewi

Socio-Economic Determinants Of Crime In Central Java: Spatial Econometrics Analysis
Muhammad Farhan Fadhillah, Diah Setyorini Gunawan, Bambang

Determinants Of Tourism Village Development On Communitywelfare In Tabanan District
I Putu Herry Mahendra Putra, Made Suyana Utama

Measuring Welfare Equality: Essential Factors Supporting Inclusive Economic Growth In West Nusa Tenggara Province 2021-2025
Siti Fatimah

The Effect Of Financial Literacy On Household Interest In Utilizing Insurance Financial Products
Kadek Ayu Santhi Novitasari, Ni Putu Wiwin Setyari

The Effect Of Intellectual Capital On Competitive Advantage And Company Performance As A Moderating Variable
Ahmad Badawi, Lucky Nugroho, Nurul Hidayah, Anees Jane Ali

Political And Health Influences On Demand Indonesian Tourism
Andaru Rachmaning Dias Prayitno

JEKT Volume 18 Nomor 1 Halaman 1-149 Denpasar FEBRUARI 2025 ISSN 2301-8968

JEKT ♦ 18 [1] : 113-127 pISSN : 2301 – 8968
eISSN : 2303 – 0186

Measuring Welfare Equality: Essential Factors Supporting Inclusive Economic Growth in West Nusa Tenggara Province 2021-2025

ABSTRACT

Inclusive economic growth is a new paradigm in measuring the success of economic development in the current era. This study aims to analyze and identify the essential factors that support inclusive economic growth in the regency/city of NTB Province for the next five years (2021-2025). This research uses the semi-averaging method in calculating data projections for 2024-2025. The data analysis technique used in this research is panel data regression. The findings of this study indicate that over the next five years (2021-2025), inclusive economic growth in NTB regencies/cities is predicted to be in the medium category. The findings of this study also show that a decrease in poverty levels, income inequality, and unemployment rates are important factors that support inclusive economic growth in Regency / City in NTB Province in the next five years (2021-2025).

Keywords: Inclusive Economic Growth, Poverty Rate, Income Inequality, Unemployment Rate

Introduction

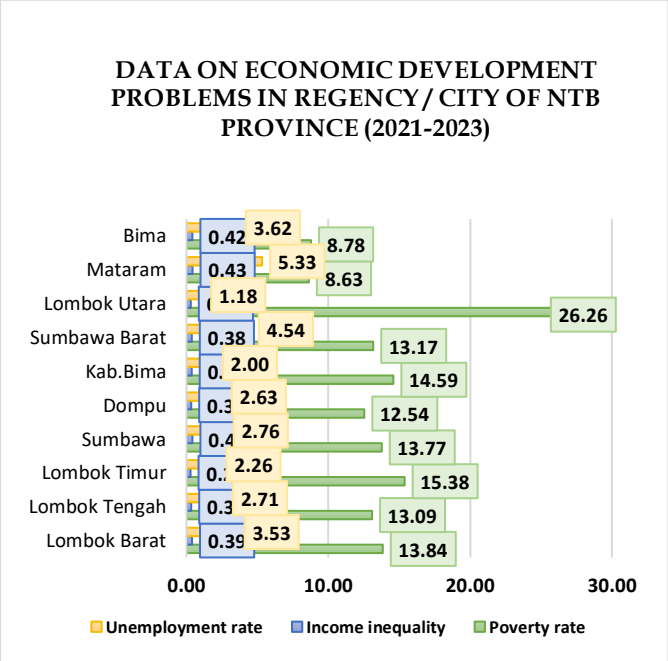
The success of a region is closely related to the welfare of its people. The main objective of implementing regional economic development is to achieve community welfare through increased economic growth and income equality, which includes income equality between regions (Todaro & Smith, 2020). This development goal should have been achieved already, but in reality until now the main problems of economic development in the regions such as poverty levels, income inequality and employment are still not really effectively resolved, so that it is still a crucial issue that hinders the process of achieving these economic development goals (BPS, 2023).

West Nusa Tenggara Province is one of the provinces in Indonesia located in the eastern archipelago, which consists of eight regencies and two cities. West Nusa Tenggara has geographical advantages and abundant natural resources that can be used as capital in increasing its economic growth. One indicator that is usually used as a measure of economic growth in a region would be the growth rate of PDRB ADHK 2010. High economic growth is expected to reduce the three main problems in economic development, such as

poverty, income inequality and labor absorption. The average economic growth of NTB Province, based on data released by the West Nusa Tenggara Statistics Center (BPS) during the last three years (2021-2023) was 3,67%. The highest economic growth was in 2022 at 6,95%, and this achievement was higher than the national average. In terms of regency/city, West Sumbawa Regency has the highest economic growth of 24.14% in 2022, this achievement increased significantly from the year before, which is 2021, with economic growth of -0,33%. This regency still dominates economic growth in NTB Province. Furthermore, the lowest economic growth in 2022 was in Bima City, which was 2,70%, an increase from the year before (BPS, 2023).

Economic growth that reflects the welfare of the community must be seen from the low level of poverty and income inequality and the absorption of labor as seen from the low level of unemployment in each regency / city. Based on the data presented in the graph below, seen from the poverty rate, North Lombok Regency ranks first with the highest average poverty rate over the last three years (2021-2023), which is 26,26%. This was followed by East Lombok Regency at 15,38%. West Sumbawa Regency, with the highest economic growth, still has an average poverty rate of more than 10%, which is 13,17%. Meanwhile, Bima City, which has the lowest economic growth, in the last three years ranks second after Mataram City as the city with the lowest poverty rate, with an average of only 8.78%. Furthermore, in terms of income inequality, the regency/city with the highest income inequality from 2021-2023 is Mataram City with an average of 0.43, followed by Bima City with 0.42, while West Sumbawa ranks as the fifth highest with an average income inequality of 0.38. The Regency/City with the lowest income inequality is East Lombok with an average of 0.29 over the last three years, followed by North Lombok with 0.31. Based on labor absorption, the district with the lowest rate of unemployment is North Lombok Regency with an average of 1.18%, most of the labor force in North Lombok Regency is absorbed in the agricultural sector. Meanwhile,

Mataram City has the highest rate of unemployment with an average of 5.33%, followed by West Sumbawa Regency at 4.54%.



Source : NTB Central Bureau of Statistics, 2023

The gap between economic growth, poverty rate, income inequality, and labor absorption that has not been maximized in each regency / city illustrates that there is no income equality in the regency / city of NTB Province, even though it has a high economic growth. According to Pratiwi and Kurniasari (2023), economic growth is not enough to solve the three problems of economic development. This is because the calculation of economic growth is only based on PRDB without looking at the problem of poverty reduction, income inequality and unemployment rates that show an increase in labor absorption later. Because of that, it is important to change the economic development indicator perspective from economic growth that relies heavily on abundant natural resources and people's income to economic growth that includes the three main problems of economic development into the calculation, which consist of poverty, income inequality and unemployment rates as a proxy for absorbed labor. This makes the economic growth indicator more inclusive (Pratiwi and Kurniasari, 2023).

Inclusive economic growth is part of one of the Sustainable Development Goals (SDGs), which is to achieve inclusive and sustainable economic growth, productive and comprehensive employment opportunities and decent work for all. The World Economic Forum (WEF) defines inclusive economic growth as a form of improving economic performance by expanding economic opportunities and prosperity, and providing broad opportunities for all levels of society. Inclusive economic

growth does not only focus on the creation of new economic opportunities, but also focuses on economic growth that provides equal opportunities for all levels of society (Ali and Son, 2007). The main objective of inclusive economic growth is poverty in all forms, this is contained in the first point of sustainable development goals, in addition to poverty reduction, it also reduces inequality and unemployment rates by expanding employment, which is contained in the tenth and eighth points in the sustainable development goals (SDGs).

Research on inclusive economic growth has been conducted at domestic and international level. Ozughalu and Ogwumike (2015) stated that the reason why there has been no inclusive growth in Nigeria for several years is because poverty, inequality and unemployment are still very high in the country. Pratiwi and Kurniasasi (2023) concluded that most of the inclusive economic growth rates in Indonesia are in the middle class category. The factors that support inclusive economic growth in Indonesia from 2012-2020 in their research findings are Information and Communication Technology (ICT), Labor Force Participation Rate (TPAK), and Regional Original Income (PAD). Afriliana and Wahyudi (2022) from the results of their research show that inclusive growth in Indonesia still tends to be inconsistent. In his research, he suggested that the focus should be on equitable distribution of economic growth rather than just pursuing the highest economic growth, because high economic growth alone is not enough to solve economic development problems such as poverty, income inequality and unemployment.

Zhu et al., (2022) concluded that the negative impact of poverty and inequality on inclusive growth in Vietnam seems to be concentrated at high poverty levels. Purwanti and Rahmawati (2021) found that government spending on health and education was a significant supporting factor for inclusive economic growth in Indonesia in 2010-2019. Furthermore, the unemployment rate shows a negative influence on inclusive economic growth in Indonesia in that

year. Amponsah et al., (2023), found that inequality has a negative impact on poverty and will further worsen inclusive growth.

To achieve a golden Indonesia in 2045, every region in Indonesia has a big role to play in achieving the national development plan. The vision of the golden Indonesia of 2045 includes 0% poverty and reduced inequality. Therefore, inclusive economic growth is a very appropriate indicator in seeing and measuring current regional economic development. This research will examine inclusive economic growth in the regency / city of NTB Province for the next five years (2021-2025). To the author's knowledge, this research is the first in NTB Province to examine the essential factors that support inclusive economic growth in the regency / city of NTB Province over the next five years, so that this research can fill the literature gap related to inclusive growth. This study aims to identify and analyze the key determinants of inclusive economic growth in the regencies and cities of West Nusa Tenggara Province from 2021 to 2025. Specifically, this research examines the impact of poverty rate, income inequality, and unemployment rate on economic inclusivity using panel data regression analysis. By understanding these determinants, this study provides empirical evidence on the factors influencing inclusive growth and offers policy recommendations to enhance poverty reduction, equitable income distribution, and labor market efficiency in NTB. Although various studies have analyzed inclusive economic growth, most focus on national or cross-country levels, leaving a gap in understanding regional-level economic inclusivity, particularly in West Nusa Tenggara (NTB). Previous research has often emphasized GDP growth as the primary economic indicator, without fully integrating poverty reduction, income distribution, and employment absorption as determinants of inclusivity. This study fills that gap by specifically examining NTB's inclusive economic growth from 2021 to 2025, identifying its key determinants through panel data regression analysis, and projecting future trends using the semi-averaging method. The selection of this research period aligns with the

Regional Development Plan (RPD) of NTB for 2024-2026, which prioritizes human development, environmental sustainability, and community welfare. This study offers a novel regional-level perspective on inclusive growth by incorporating poverty, inequality, and employment into one analytical framework, allowing for a comprehensive assessment of economic inclusivity. The findings provide data-driven policy recommendations to help local governments formulate targeted poverty alleviation programs, income distribution policies, and employment expansion strategies, ensuring NTB's development is both sustainable and inclusive.

Research Methods

This research uses quantitative research methods. The type of data used in this research is secondary data, which is data published by the Central Statistics of Indonesia and West Nusa Tenggara Province. The calculation of research data projections for 2024 and 2025 was carried out using the semi average method. This method is one of the objective forecasting methods that produces projection data by calculating the formula of the trend line formed from previous data (Saryanti et al., 2021). Furthermore, in calculating the value of inclusive economic growth in each regency/city, this study adopted the calculation formulated by Ramos et al., (2013) using three components, namely the poverty rate, income inequality and employment rate. In this study, the author uses the unemployment rate to see the size of the absorbed labor force. In this study, the formula for min-max normalization used to calculate inclusive economic growth follows Pratiwi and Kurniasari (2023) and is structured as follows:

1. Normalization formula for poverty rate and income inequality:

$$X' = \frac{x-min}{max-min}\ (max^* - min^*) + min^*$$

2. Normalization formula for unemployment rate:

$$X'' = \frac{x-min}{max-min}\ (max^* - min^*) + min^* + max^*$$

3. Inclusive Economic Growth (IEG) Index formula:

$$X'' = \frac{Poverty\ rate + X' Income\ Inequality + X'' Unemployment\ rate}{3}$$

Description :

X' : min-max normalized values of poverty and inequality

X'' : min-max normalized value of unemployment rate

min : minimum value in the research data group

max : maximum value in the research data group

min*: the smallest desired value (min* = 0)

max*: the largest desired value (max* = 1)

The achievement of inclusive economic growth values is classified as below (Ramos et al., 2013):

$0 < PEI \leq 0.2$: Very high inclusive level

$0.2 < PEI \leq 0.4$: High inclusive level

$0.4 < PEI \leq 0.6$: Medium inclusive level

$0.6 < PEI \leq 0.8$: Low inclusive level

$0.8 < PEI \leq 1$: Very low inclusive level

This study employs panel data regression analysis to identify the essential factors influencing inclusive economic growth in the regencies/cities of West Nusa Tenggara Province from 2021 to 2025. Panel data regression is chosen because it allows for a more comprehensive analysis by combining cross-sectional data (regency/city) and time-series data (2021-2025) (Gujarati, 2011). This method is particularly advantageous as it captures both individual and temporal variations, reducing the risk of biased estimations compared to purely cross-sectional or time-series approaches. However, panel data regression also has limitations, such as the complexity of selecting the appropriate model (Common Effect, Fixed Effect, or Random Effect), potential autocorrelation issues, and data availability constraints.

Unlike previous studies that often use national or macro-level data, this research focuses on the regional level (NTB Province), making it more relevant for local policymakers. The study also integrates poverty, income inequality, and unemployment into a single framework, which is rarely done in similar studies.

Additionally, the semi-averaging method is applied to project economic growth for 2024-2025, providing future-oriented insights that distinguish this study from prior research.

The selection of the 2021-2025 research period is based on economic dynamics in NTB following the COVID-19 pandemic, which had a significant impact on poverty rates, income distribution, and employment levels. During this period, NTB experienced a sharp economic contraction in 2020, followed by a strong recovery in 2022, with economic growth reaching 6.95%—higher than the national average (BPS, 2023). However, disparities in poverty and inequality remained significant, highlighting the need for a more inclusive economic growth approach. Furthermore, this research aligns with NTB's 2024-2026 Regional Development Plan (RPD), ensuring its relevance to ongoing policy planning.

Given these considerations, the model specifications used in this study are as follows:

$$IEG_{it} = \beta_0 + \beta_1 PR_{it} + \beta_2 II_{it} + \beta_3 UR_{it} + \varepsilon_{it}$$

Description:

$\beta 0$ = Constanta

$\beta_{1,2,3,4}$ = Coefficient

IEG_{it} = Inclusive Economic Growth in district/city i at year t.

PR_{it} = Poverty Rate in district/city i at year t

II_{it} = Income Inequality in district/city i at year t

UR_{it} = Unemployment Rate in district/city i at year t

ε = error term

i = Cross Section

t = Time Series

To estimate the impact of the poverty rate, income inequality, and unemployment rate on inclusive economic growth, a panel data model was employed using the EViews 10 application as the analytical tool, following a series of steps. The panel data regression comprises three primary estimation models: the Common Effects Model (CEM), Fixed

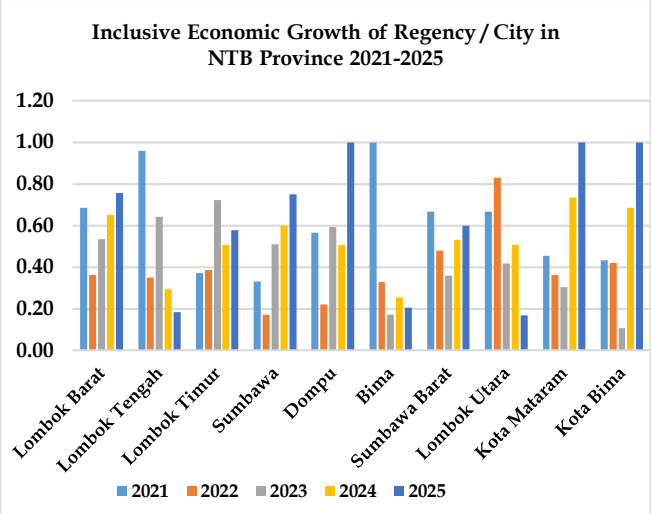
Effects Model (FEM), and Random Effects Model (REM). The selection of the best model was determined through the Chow Test to compare the suitability of FEM with CEM, the Hausman Test to assess the consistency of FEM versus REM, and, if necessary, the Lagrange Multiplier (LM) Test to choose between CEM and REM.

Results and Discussion

1. Description Data

a. Inclusive Economic Growth

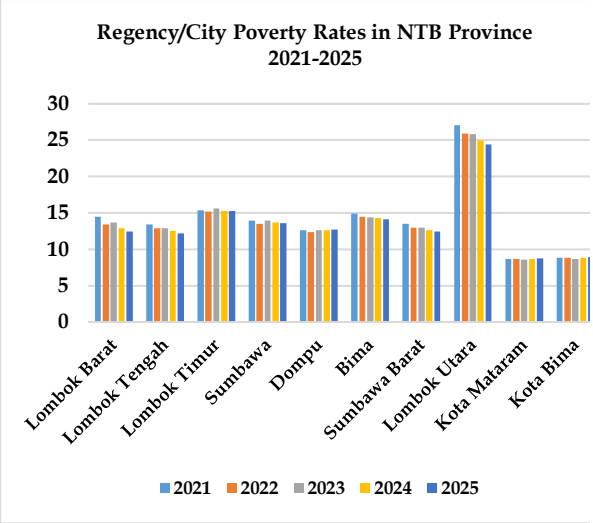
The achievement value of inclusive economic growth ranges from 0 to 1.00, with values closer to 1.00 indicating lower achievement. Bima Regency is the only area in NTB with high inclusive economic growth over the next five years (0.39), while others fall into the medium category. In 2024–2025, Central Lombok, Bima, and North Lombok are expected to experience medium to very high growth, while West Lombok, East Lombok, Sumbawa, Dompu, and West Sumbawa may see medium to very low growth. Mataram and Bima City are predicted to have low to very low growth.



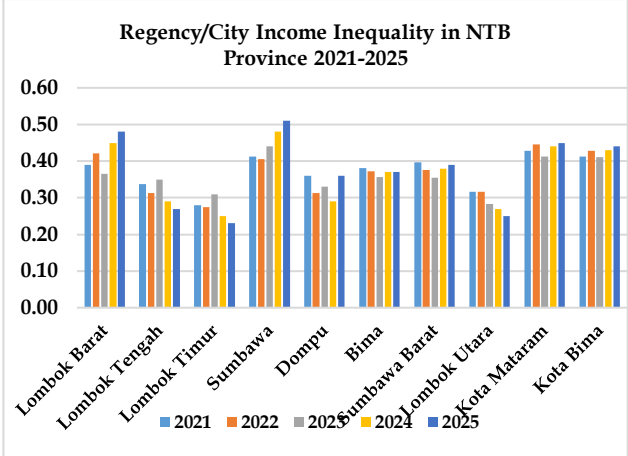
Source: data processed by the author

b. Poverty Rate

Almost all regencies in NTB Province will still have poverty rates of more than 10 percent in the next five years. The regency with the highest poverty rate is North Lombok, which has a poverty rate of more than 20 percent and is estimated to still have a high poverty rate in North Lombok in 2025. The regency that is predicted to have lower poverty rates in 2024 and 2025 are West Lombok, Central Lombok, and West Sumbawa. Mataram City and Bima City have a very low poverty rate of under 10 percent, which is expected to increase in 2024 and 2025 but still under 10 percent.



Source: data processed by the author



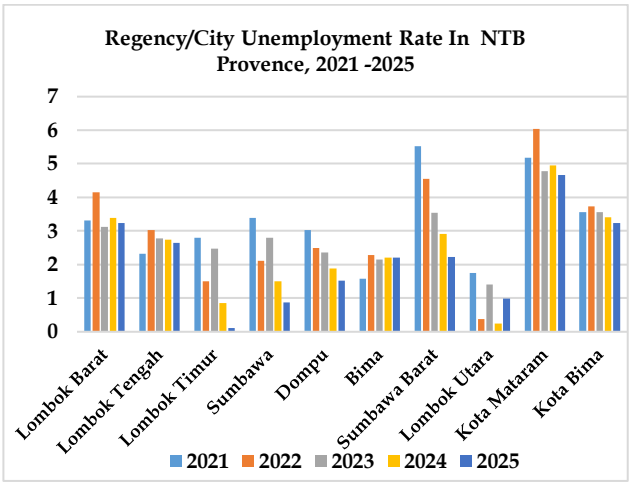
Source: data processed by the author

c. Income Inequality

The regency with the lowest income inequality, expected to continue declining until 2025, is East Lombok (0.27), followed by North Lombok (0.29). Meanwhile, other areas show an increasing trend. Sumbawa has the highest average inequality (0.45) and is projected to rise to 0.51 in 2025. Mataram City ranks second with an average of 0.44.

d. Unemployment Rate

North Lombok has the lowest unemployment rate in NTB, expected to decline to 0.99% by 2025. Meanwhile, Mataram City has the highest average rate (5.12%), with a projected decrease to 4.96% in 2024 and 4.66% in 2025.



2. Panel Data Regression

Panel data regression models shown in the table below:

Variabel	CEM	FEM	REM
Poverty Rate	0.003465	0.257271***	0.003465
Income Inequality	1.514914	5.109151***	1.514914***
Unemployment Rate	-0.044637	-0.161514***	-0.044637
F-statistik	2.181599	10.98605***	2.181599
Adjusted R-Square	0.067462	0.709772	0.067462
Chow test Cross-section F-stat df (9,95)		49,929088***	
Hausman test *Cross-section random:* *Chi-Sq stat df 5*			58,711338***

Source: data processed by the author
***p < 0,1 **p < 0,05 ***p < 0,001**

The Fixed Effects Model (FEM) was selected as the most appropriate estimation model for this study based on the results of model selection tests, including the Chow Test and Hausman Test. FEM was chosen as it provides consistent and reliable estimates by accounting for unobserved heterogeneity across regencies/cities in NTB Province.

The estimation results reveal that the poverty rate has a coefficient of 0.257, indicating a significant positive effect on inclusive economic growth. This means that a one-unit increase in the poverty rate is associated with an increase of 0.257 units in the inclusive economic growth index in the regencies/cities of NTB Province during 2021–2025. While counterintuitive, this result may suggest that areas with higher poverty rates attract targeted government interventions, such as social programs or economic assistance, which could temporarily boost economic inclusivity.

Similarly, income inequality has a coefficient of 5.109, showing a significant positive effect on inclusive economic growth. This suggests that a one-unit increase in income inequality contributes to a rise of 5.109 units in the inclusive economic growth index. Although this might imply that inequality fosters growth, it likely reflects the economic activity driven by wealthier groups rather than an equitable distribution of benefits. This underscores the need for redistributive policies to ensure that economic gains are shared across all societal segments.

The analysis also highlights that most regencies and cities in NTB Province are projected to experience moderate levels of inclusive economic growth over the next five years, aligning with Pratiwi and Kurniasasi (2023), who found that inclusive economic growth in

Indonesia predominantly falls into the middle category. Notably, only Bima Regency is categorized as having high inclusive growth. Conversely, several regions, including West Lombok, Sumbawa, Dompu, Mataram City, and Bima City, are predicted to have low or very low inclusive growth in 2024 and 2025, indicating a pressing need to address poverty and inequality to improve community welfare.

In line with the Sustainable Development Goals (SDGs), particularly the first goal of eradicating poverty and the tenth goal of reducing inequality, improving societal welfare must remain a top priority for inclusive development. These findings are consistent with Ozughalu and Ogwumike (2015), who identified poverty and inequality as major barriers to inclusive growth in Nigeria. Similarly, Zhu et al. (2022) and Amponsah et al. (2023) emphasized that poverty and inequality negatively affect inclusive growth, with these impacts being most pronounced in areas with high poverty levels.

The unemployment rate, with a coefficient of -0.162, exhibits a significant negative effect on inclusive economic growth. This implies that a one-unit increase in the unemployment rate leads to a decrease of 0.162 units in the inclusive growth index. Interestingly, this finding suggests that as unemployment rises, inclusive growth becomes more attainable, which is contrary to expectations. Such a scenario may occur due to shifts in labor absorption across sectors. For instance, while one sector may see increased employment, another may experience a decline, resulting in a net increase in the unemployment rate despite improved inclusivity in certain sectors. However, this imbalance indicates unequal labor distribution, making the achieved inclusivity temporary and unsustainable. Therefore, addressing structural issues in labor absorption is crucial to fostering long-term inclusive growth. This result aligns with Purwanti and Rahmawati (2021), who noted that unemployment negatively affects

inclusive economic growth in Indonesia.

CONCLUSION

This study concludes that over the period 2021-2025, inclusive economic growth in the districts/cities of NTB Province is generally in the medium category, except for Bima Regency and Central Lombok, which are projected to experience high inclusive growth, while West Lombok, Mataram City, and Bima City fall into the low to very low category, requiring urgent policy intervention. The findings confirm that poverty reduction, income inequality, and employment absorption are critical determinants of inclusive economic growth, where higher poverty and inequality rates contribute to increased inclusive growth, while higher unemployment negatively affects inclusivity. This suggests that reducing poverty and inequality must be accompanied by policies that expand job opportunities and improve labor absorption. The study provides practical implications for policymakers by emphasizing the need for targeted poverty alleviation programs, income redistribution policies, and employment expansion strategies, particularly in low-inclusive-growth areas. However, this research has limitations, including the inability of panel data regression to fully capture external shocks such as climate change, political instability, or global economic downturns, and the semi-averaging method used for projections may not fully reflect future economic fluctuations. Future research should explore alternative forecasting methods, qualitative approaches, or mixed-method designs to enrich the analysis. To achieve NTB's 2024-2026 Regional Development Plan (RPD) goals, several policy actions are recommended, including strengthening poverty reduction programs through targeted social assistance and skill development, implementing progressive income distribution policies, expanding employment opportunities through sectoral diversification and labor-intensive industries, enhancing labor market flexibility with vocational training aligned with industry

demands, and developing inclusive growth monitoring mechanisms that integrate multidimensional indicators into local economic planning. By implementing these policies, NTB's economic growth can become more inclusive, sustainable, and resilient, ensuring that economic progress benefits all segments of society.

REFERENCES

Afriliana, S. N., & Wahyudi, S. T. (2022). Analisis Pertumbuhan Ekonomi Inklusif: Studi Komparasi Antar Provinsi Di Indonesia. *Journal of Development Economic and Social Studies*, *1*(1). https://dx.doi.org/10.21776/jdess.2022.01.1.5

Ali, I., & Zhuang, J. (2007). *Inclusive growth toward a prosperous Asia: Policy implications* (No. 97). ERD working paper series. http://hdl.handle.net/10419/109299

Amponsah, M., Agbola, F. W., & Mahmood, A. (2023). The relationship between poverty, income inequality and inclusive growth in Sub-Saharan Africa. *Economic Modelling*, *126*, 106415. https://doi.org/10.1016/j.econmod.2023.106415

Gujarati, Damodar N dan Porter, Dawn C. (2011).“Dasar-Dasar Ekonometrika”. Selemba Empat, Jakarta.

Ozughalu, U. M., & Ogwumike, F. O. (2015). Inclusive growth and poverty reduction in Nigeria. *Bullion*, *39*(4),2. https://dc.cbn.gov.ng/bullion/vol39/iss4/2

Pratiwi, K. D., & Kurniasari, D. (2023). Penerapan Model Panel: Determinan Tingkat Pertumbuhan Inklusif Indonesia. *Bappenas Working Papers*, *6*(1), 60-78. https://doi.org/10.47266/bwp.v6i1.163

Purwanti, S. D., & Rahmawati, F. (2021). Pengaruh Pengeluaran Pemerintah Dan Tingkat Pengangguran Terbuka (TPT) Terhadap Pertumbuhan Ekonomi Inklusif Indonesia. *Ecoplan*, *4*(1), 32-44. http://ecoplan.ulm.ac.id/index.php/iesp/article/view/231

Ramos, R. A., Ranieri, R., & Lammens, J. W. (2013). *Mapping inclusive growth*. IPC-IG. http://www.ipc-undp.org/

Saryanti, I. G. A. D., Hadi, R., & Kusuma, I. G. N. A. (2021). Purwarupa Aplikasi Peramalan Kebutuhan Persediaan Barang Dagang Berbasis Website dengan Semi Average Method. *JTIM: Jurnal Teknologi Informasi dan Multimedia*, *3*(2), 70-77. https://doi.org/10.35746/jtim.v3i2.157

Zhu, Y., Bashir, S., & Marie, M. (2022). Assessing the relationship between poverty and economic growth: does sustainable development goal can be achieved?. *Environmental Science and Pollution Research*, *29*(19), 27613-27623. https://doi.org/10.1007/s11356-021-18240-5