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POVERTY LEVEL TRENDS BASED ON THE PREVALENCE OF INSUFFICIENT FOOD CONSUMPTION AND ITS IMPACT ON ECONOMIC GROWTH IN WEST SUMATRA: A SUSTAINABLE DEVELOPMENT GOALS (SDGS) PERSPECTIVE

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ABSTRACT
This study aims to analyze poverty trends based on the prevalence of food insufficiency and its impact on economic growth in West Sumatra Province from the perspective of the Sustainable Development Goals (SDGs). Using a quantitative approach and the Pearson correlation analysis method, this study evaluates secondary data from 2019 to 2024 obtained from the Central Statistics Agency (BPS). Economic growth is measured by the average Gross Regional Domestic Product (GRDP) as an indicator of financial inclusion. Although GRDP tends to increase annually, the prevalence of food insufficiency also shows an upward trend, with a notable peak in 2023. These findings suggest that economic growth in West Sumatra is not fully inclusive and has not effectively reached poor communities. The implications of this research emphasize the importance of integrating statistical indicators of food security and poverty in SDGs-based regional development planning, in order to realize more just, sustainable, and equitable growth.

Keywords: food poverty; inclusive economic growth, GRDP; economic trends; SDGs; West Sumatra

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ABSTRAK
Penelitian ini bertujuan untuk menganalisis tren tingkat kemiskinan berdasarkan prevalensi ketidakcukupan konsumsi pangan serta dampaknya terhadap pertumbuhan ekonomi di Provinsi Sumatera Barat dalam perspektif Tujuan Pembangunan Berkelanjutan (SDGs). Dengan menggunakan pendekatan kuantitatif dan metode analisis korelasi Pearson, penelitian ini mengevaluasi data sekunder dari tahun 2019 hingga 2024 yang diperoleh dari Badan Pusat Statistik (BPS). Meskipun PDRB cenderung meningkat setiap tahun, prevalensi ketidakcukupan pangan juga menunjukkan peningkatan, dengan puncaknya pada tahun 2023. Temuan ini menunjukkan bahwa pertumbuhan ekonomi di Sumatera Barat belum sepenuhnya bersifat inklusif, dan belum berhasil menjangkau kelompok masyarakat miskin secara efektif. Implikasi penelitian ini menekankan pentingnya pengintegrasian indikator statistik ketahanan pangan dan kemiskinan dalam perencanaan pembangunan daerah berbasis SDGs, guna mewujudkan pertumbuhan yang lebih adil, berkelanjutan, dan merata.

Keywords: kemiskinan pangan; pertumbuhan ekonomi inklusif, PDRB; tren ekonomi; SDGs; Sumatera Barat

INTRODUCTION

The United Nations (UN) has proposed the Sustainable Development Goals (SDGs) framework as a global roadmap to achieve 17 key goals by 2030. This aims to strive for sustainable development. This framework emphasizes the importance of balancing economic growth, social welfare, and environmental preservation, which is a significant challenge for many countries, including Indonesia (Hendratmi et al., 2024). As a developing country with abundant natural resources, Indonesia faces complex challenges in balancing economic development and environmental sustainability (Fatimah et al., 2022; Agustin et al., 2022). Infrastructure development, industrial expansion, and land expansion for agriculture and plantations often clash with the need to preserve ecosystems and biodiversity (Fukuda-Parr, 2023). This challenge is increasingly apparent amidst rapid urbanization, exploitation of natural resources, and the increasingly pronounced impacts of climate change (Yenni et al., 2024). Various evaluation tools have been developed globally to measure progress in achieving the SDGs, such as the SDGs

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Index and Dashboard published by the Sustainable Development Solutions Network (SDSN) (Sachs et al., 2021), and the Statistical Roadmap for the Sustainable Development Goals prepared by the United Nations Economic Commission for Europe (UNECE) (Gong et al., 2025). However, an evaluation approach that only looks at progress on each goal separately without considering the interrelationships and impacts across sectors can hinder the implementation of more comprehensive sustainable development policies (Li et al., 2024). Consequently, decision-making and policy formulation can be less effective because they fail to account for the complex interactions between economic, social, and environmental factors. This can lead to imbalances in development, where progress in one sector has the potential to negatively impact others (Ningrum et al., 2024). In Indonesia, the government has adopted the SDGs into national policy through the 2020-2024 National Medium-Term Development Plan (RPJMN), which emphasizes inclusive development, reduced inequality, and environmental sustainability. However, a key challenge remains how to integrate a holistic and multisectoral development approach, focusing not only on economic growth but also on ensuring environmental sustainability and social well-being for future generations. Therefore, a more integrated and data-driven monitoring system is needed, capable of measuring the interrelationships between various SDG indicators more comprehensively. Thus, Indonesia can take more targeted, adaptive, and evidence-based steps in achieving true sustainable development (Fibriyani et al., 2024).

Simply incorporating the SDGs into the national development plan will not be sufficient. The SDGs must also be incorporated into regional development plans. To this end, Indonesia can develop a national sustainable development plan that highlights relevant considerations, including priorities and challenges. The central and regional governments in Indonesia are required to develop sustainable growth and development strategies within a multi-stakeholder policy priority framework designed to evaluate the systemic linkages among sustainable development issues (Amirya & Irianto, 2023). The national sustainable development plan can serve as a guideline for formulating regional development plans to achieve the global SDGs (Gong et al., 2025).

Inclusive and sustainable economic growth is the main foundation for realizing social welfare and overcoming poverty. In the context of West Sumatra Province, regional economic development cannot be separated from social and demographic dynamics, particularly population growth rates and poverty levels (Gusriantika & Deviani, 2024). These two variables can directly and indirectly influence regional competitiveness, fiscal capacity, and development inequality between regions. Therefore, it is important to examine the extent to which population and poverty dynamics in this region impact regional economic growth within the framework of achieving the Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty) and SDG 8 (Decent Work and Economic Growth) (Hendratmi et al., 2024). West Sumatra Province consists of 19 regencies and cities with varying socioeconomic characteristics. In the period 2019 to 2024, the population increased significantly from 5.44 million to around 5.64 million people (BPS West Sumatra, 2025). Urbanization and the growth of urban areas have led to a concentration of population in cities such as Padang, Bukittinggi, and Payakumbuh, while largely rural areas such as South Solok, Agam, and West Pasaman experience an increasing demographic burden with limited infrastructure and economic access. At the same time, while macroeconomic poverty rates have shown a decline, inter-regional disparities remain a serious problem. Several regions, particularly in the southern and northern parts of West Sumatra, still have high poverty rates due to limited access to education, health care, and decent work (Putri et al., 2019). Research has revealed that household consumption, open unemployment, and education are closely related to regional poverty (Amirya & Irianto, 2023). However, few studies have quantitatively evaluated how these dynamics affect regional economic growth.

Fluctuations in economic growth are also a strategic issue. West Sumatra experienced an economic contraction in 2020 due to the COVID-19 pandemic, with economic growth dropping to -1.6%, before gradually recovering to 4–4.5% in 2022 (Gusriantika & Deviani, 2024). However, this recovery has been uneven. Padang Pariaman and Tanah Datar regencies showed a slow recovery, while Padang City recovered more quickly due to the dominance of the service and trade sectors. This suggests that economic structure plays a significant role in post-crisis resilience and growth (Yulastri et al., 2023) and (Bobylev et al., 2021).

Previous literature has identified a relationship between economic growth and poverty, but the results are still mixed. Economic growth does not always reduce poverty because not all regions enjoy growth equally (Barasa et al., 2025). Household consumption is the main driver of economic growth and poverty alleviation, but its effects are short-term (Setyawati & Hartono, 2025). Increasing labor productivity and life

expectancy is crucial in supporting sustainable economic growth (Dewi et al., 2020).

However, there is a gap in the literature regarding comprehensive, cross-regional panel data-based studies in West Sumatra that examine the simultaneous relationship between population growth, poverty, and economic growth. Most previous studies are macro- and national-scale, while regional characteristics significantly influence the development process. This study aims to fill this gap, focusing on 19 districts/cities over the 2019–2024 period.

The uniqueness of this research can be learned from the integration of quantitative approaches across time and regions in analyzing the relationship between population growth, the number of poor people, and economic growth, while linking them to SDGs indicators in West Sumatra. This approach allows for more accurate identification of patterns, trends, and impacts and provides data- and spatially-based policy recommendations. The impact of this research in the future is very significant for policies that can be recommendations for stakeholders in making decisions. The resulting empirical findings can be used by local governments as a basis for formulating development policies that are more inclusive and responsive to demographic and poverty issues. In addition, this research can be an academic and policy reference in encouraging the integration of SDGs indicators into regional development planning (RPJMD and RPJPD), especially on SDG targets 1 and SDG 8. Strategically, a deeper understanding of the relationship between these three variables can also encourage a model of equitable and sustainable development in the future. Based on the description above, the formulation of the problem in this study is Does the number of poor people based on the prevalence of adequate food consumption significantly influence regional economic growth in West Sumatra? The problem formulation and hypotheses to be answered are detailed based on research findings from 2019 to 2024 in each district/city in West Sumatra. The purpose of this paper is to empirically analyze the trends and relationships between the number of poor people based on the prevalence of adequate food consumption and economic growth in West Sumatra Province, and to identify their contribution to achieving the SDGs indicators at the regional level. This paper also aims to provide a basis for data-driven policy analysis for regional development stakeholders.

METHOD

This study uses a quantitative approach with descriptive and inferential analysis models to explain the relationships between variables. The analysis begins with a description of the variable trends during the observation period to examine the dynamics of each district/city. Next, partial and straightforward linear regression is used annually to measure the relationship between the poverty population and the prevalence of insufficient food consumption, as well as inclusive economic growth. This model was chosen because it is able to show changes in the contribution of each variable to economic growth from year to year (2019-2024). Furthermore, the coefficient of determination (R^2) is calculated to assess the extent to which each independent variable. contributes to the dependent variable in each period. This technique is used to detect the level of relationship and the magnitude of influence that is annual and cross-regional. The conceptual framework of the research variables can be explained as follows:

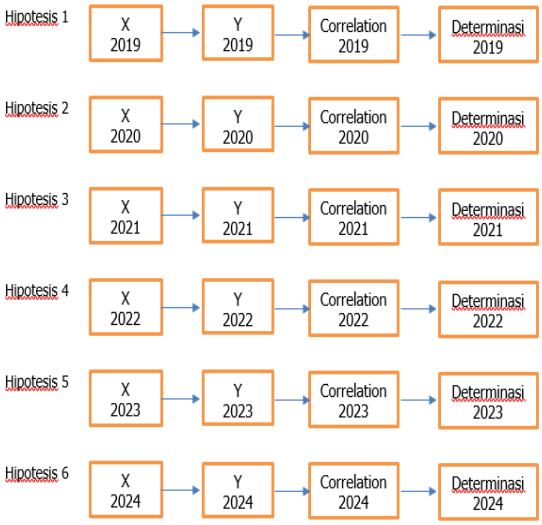

Figure 1. Research Framework

Source: Authors, 2024

Based on the theoretical description and diagrams that have been presented, the hypothesis that will be proven in this research is:

Hypothesis 1: Is Inclusive Economic Growth related to poverty levels based on the prevalence of food insufficiency in West Sumatra in 2019?

Hypothesis 2: Is Inclusive Economic Growth related to poverty levels based on the prevalence of food insufficiency in West Sumatra in 2020?

Hypothesis 3: Is Inclusive Economic Growth related to poverty levels based on the prevalence of food insufficiency in West Sumatra in 2021?

Hypothesis 4: Is Inclusive Economic Growth related to poverty levels based on the prevalence of food insufficiency in West Sumatra in 2022?
Hypothesis 5: Is Inclusive Economic Growth related to poverty levels based on the prevalence of food insufficiency in West Sumatra in 2023?
Hypothesis 6: Is Inclusive Economic Growth related to poverty levels based on the prevalence of food insufficiency in West Sumatra in 2024?

RESULTS AND DISCUSSION

RESULT

West Sumatera GDP Data

This section presents the GDP of West Sumatra from 2019 to 2024, based on the regional average for each year. The basic research data description is as follows:

Table 1. West Sumatera GDP 2019-2024

	N	2019	2020	2021	2022	2023	2024
Mean	19	46.3589	46.3589	45.6713	47.2348	52.3832	56.5607
Median	19	41.6090	41.6090	41.7230	42.3140	50.0190	55.5420
Std. Deviation	19	12.03766	12.03766	12.98068	13.50707	15.18932	16.42890
Minimum	19	30.12	30.12	28.04	29.27	32.08	34.31
Maximum	19	65.90	65.90	71.39	74.00	82.85	89.74

Source: BPS of West Sumatera, 2024

This study uses Gross Domestic Product (GDP) data per district/city in West Sumatra Province for the period 2019 to 2024. The GDP data used has been processed and presented in thousands of rupiah. There are 19 observation areas covering all districts and cities in the province. In general, the average (mean) GDP value has increased from year to year, namely from 46,358.9 thousand rupiah in 2019 and 2020 to 56,560.7 thousand rupiah in 2024. This reflects positive economic growth during that period. The median value also shows a similar pattern, namely from 41,609.0 thousand rupiah at the beginning of the period to 55,542.0 thousand rupiah in 2024, indicating that more than half of the regions experienced an increase in GDP above that value. The continuously increasing standard deviation, from 12,037 in 2019 to 16,428 in 2024, indicates increasing variation between regions in terms of GDP achievement, or in other words, the inequality between regions is widening over time. The lowest (minimum) GDP value during the study period was recorded in Pesisir Selatan Regency, with a value of only 28,040 thousand rupiah in 2021. Conversely, the highest (maximum) value was recorded in Bukittinggi City, which reached 89,740 thousand rupiah in 2024. This indicates a significant inequality in the distribution of GDP between regencies/cities in West Sumatra.

Overall, in 19 regions in West Sumatera, the increase in GDP from 2019 to 2024 can be seen in the Gross Regional Domestic Product (GDP) growth graph, which shows a significant dynamic of economic growth between districts/cities in West Sumatra Province during the period 2019 to 2024. In general, there was an increase in GDP values in almost all regions, indicating a progressive direction of development. However, there is clear spatial inequality in the distribution of GDP values between regions. Bukittinggi City recorded the highest GDP value, with a significant surge reaching almost 90,000 thousand rupiah in 2024. Followed by Padang and Padang Panjang Cities, these cities demonstrate the dominant role of the trade, services, and tourism sectors in driving the economic growth of their regions. Conversely, Pesisir Selatan Regency was the region with the lowest GDP, even recording a value below 30,000 thousand rupiah in 2021, reflecting the dominance of the primary sector and limited economic diversification.

This difference in GRDP figures shows that urban areas tend to grow faster than rural or coastal areas. This highlights the importance of inclusive, locally-based regional development policy interventions to reduce economic disparities between regions in West Sumatra. A general overview of this situation can be seen in the following graph:

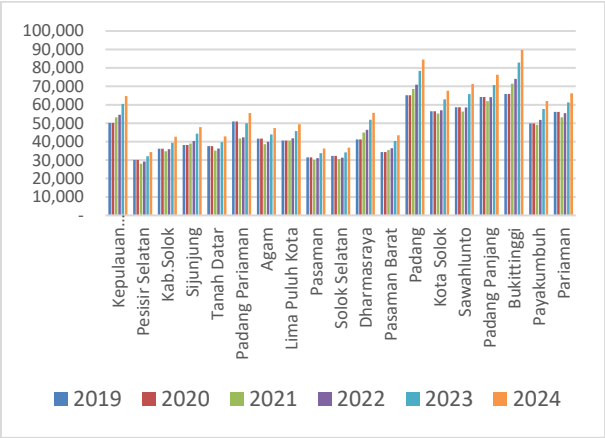

Figure 2. Graph of West Sumatra's GDP Achievements for the 2019-2024 Period

Source: Authors, 2024

Poverty Level Data Based on the Prevalence of Insufficient Food Consumption

This section presents the poverty rate based on the prevalence of inadequate food consumption in West Sumatra from 2019 to 2024 in each region. The basic data description of the study is as follows:

Table 2. Poverty Rate Based on the Prevalence of Insufficient Food Consumption in West Sumatera 2019-2024

	N	2019	2020	2021	2022	2023	2024
Mean	19	402.47	472.47	484.37	657.05	766.74	765.16
Median	19	465.00	555.00	584.00	707.00	721.00	857.00
Std. Deviation	19	224.839	241.053	247.261	287.497	137.643	263.492
Minimum	19	3	52	5	57	588	73
Maximum	19	815	804	836	1119	1062	1095

Source: Authors, 2024

Data on the prevalence of food insecurity in West Sumatra Province from 2019 to 2024 shows an increasing trend in the number of poor people experiencing food insecurity in almost all districts and cities. This figure represents the percentage of the population unable to meet minimum food needs and is an essential indicator in assessing food security at the local level. During the six years of observation, the Mentawai Islands were recorded as the region with the highest prevalence. In 2022, this figure peaked at 11.19 percent before declining to 9.31 percent in 2024. Other regions, such as South Solok, Tanah Datar, and Agam, also showed high rates above nine percent in the final year of observation.

Meanwhile, several cities, such as Bukittinggi, Padang Panjang, and Pariaman, tend to have lower prevalence rates than other regions, although they still fluctuate. Padang, the provincial capital, experienced a significant increase from 3.51 percent in 2019 to 8.57 percent in 2024. Sharp increases in many regions occurred between 2021 and 2022, likely a result of the continued economic disruption caused by the COVID-19 pandemic. This demonstrates that food insecurity is not only a problem in underdeveloped regions but also in urban areas, necessitating inclusive and focused policies to ensure the fulfillment of basic food needs for all levels of society.

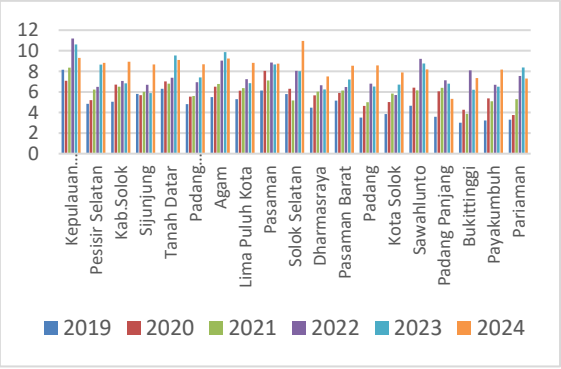

Figure 3. Graph of the prevalence of food insufficiency in West Sumatra 2019 to 2024

Source: Authors, 2024

The bar graph above clarifies the dynamics of the prevalence of food insufficiency among the poor population in each district/city in West Sumatra from 2019 to 2024. Visually, this graph indicates a tendency for an increase in the number of food insufficiencies in most regions, particularly in 2022 and 2024, as evidenced by the higher number of yellow and green bars compared to previous years.

The Mentawai Islands consistently have the highest bars, indicating the highest prevalence rate throughout the period, with a significant spike in 2022. Similarly, South Solok and Agam show a similar peak in 2024. Conversely, several regions, such as Bukittinggi, Padang Panjang, and Pariaman, show relatively shorter bars, reflecting a consistently lower prevalence of food insufficiency. However, despite the lower bars, the graph shows a consistent upward trend across almost all regions. This pattern indicates that food security issues are not only concentrated in peripheral or remote areas but are also beginning to spread to urban areas, underscoring the need for responsive, adaptive, and spatially data-driven policies to address poverty and food insecurity.

Hypothesis Testing

This section presents the results of hypothesis testing aimed at examining the relationship between inclusive economic growth and poverty levels based on the prevalence of food insecurity in West Sumatra from 2019 to 2024. Testing was conducted annually to obtain a dynamic picture of the relationship between the two variables in the context of regional development. Furthermore, further analysis was conducted to determine the extent to which the prevalence of food insecurity, as an indicator of poverty, contributes to inclusive economic growth. The results of this testing are expected to strengthen the theoretical arguments presented previously and provide empirical evidence for the importance of an inclusive approach to equitable economic development. These findings serve as the basis for formulating

relevant policy recommendations, particularly in efforts to reduce food insecurity and accelerate the achievement of sustainable development goals in West Sumatra. A summary of the hypothesis testing results is presented in the following table:

Table 3. Hypothesis and Determinant Testing Results

Analysis	Variable	Mean	SD	N	Pearson	R^2 (%)	Sig
Hip 1 – 2019	X	402.473	224.838	19	-.378	14,3	0.110
	Y	46.3589	12.03766	19			
Hip 2 – 2020	X	472.47	241.053	19	.243	5,9	0.316
	Y	46.3589	12.03766	19			
Hip 3 – 2021	X	484.37	247.261	19	-.294	8,6	.221
	Y	45.6713	12.98068	19			
Hip 4 – 2022	X	657.05	287.497	19	-.357	12,7	.133
	Y	47.2348	13.50707	19			
Hip 5 – 2023	X	766.74	137.643	19	-.295	8,70	.220
	Y	52.3832	15.18932	19			
Hip 6 – 2024	X	765.16	263.492	19	-.197	3,8	.419
	Y	56.5607	16.42890	19			

Source: Authors, 2024

Trend analysis for the period 2019 to 2024 shows an interesting dynamic between inclusive economic growth and poverty levels based on the prevalence of food insufficiency in West Sumatra. Although economic growth has consistently increased since 2021, the prevalence of food insufficiency has actually shown an increasing trend in most observation years. The consistent negative relationship, although not statistically significant, indicates that the economic growth has not been fully inclusive and has not been able to significantly reduce food poverty levels across all districts/cities in the region. The annual trends observed for the period 2019 to 2024 show varying dynamics between the poverty level variable based on the prevalence of food insufficiency (X) and inclusive economic growth as measured by average GDP (Y). An analysis of the changes in the average values of these two variables from year to year provides insight into how the direction of economic growth impacts—or does not directly impact—improving the food security of the poor. Using a longitudinal approach, this observation aims to understand whether the economic growth has been inclusive, reaching vulnerable groups. Interpreting annual fluctuations in X and Y is crucial for assessing the effectiveness of regional development policies in addressing poverty sustainably and equitably. The upward or downward trends of each variable can be seen in the following table:

Table 4. Inclusive Economic Growth Trend (Average GDP)

Year	Mean Y	Changes from Previous Year	Trend
2019	46,36	-	-
2020	46,36	0	stable
2021	45,67	-0,69	down
2022	47,23	+1,56	go on
2023	52,38	+5,15	go on
2024	56,56	+4,18	go on

Source: Authors, 2024

GDP, as an indicator of inclusive economic growth, was relatively stable at the beginning of the period, declined slightly in 2021, and then experienced a significant upward trend from 2022 to 2024. The following is a trend in poverty levels based on the prevalence of insufficient food consumption.

Table 5. Poverty Level (Prevalence of Insufficient Food Consumption)

Year	Mean X	Change from Previous Year	Trend
2019	402,47	-	-
2020	472,47	+70,00	go on
2021	484,37	+11,90	down
2022	657,05	+172,68	rose sharply
2023	766,74	+109,69	go on
2024	765,16	-1,58	stable/down slightly

Source: Authors, 2024

There was a significant upward trend from 2019 to 2023, particularly a large spike in 2022 (possibly due to the impact of the pandemic). It declined slightly in 2024, but remained relatively high compared to the beginning of the period.

During the 2019–2024 period, although inclusive economic growth (Y) increased, particularly starting in 2022, this was not necessarily accompanied by a decrease in the prevalence of food insufficiency (X). In fact, the X trend actually rose sharply when Y began to improve. This indicates a lack of synchrony between economic growth and improvements in the welfare of the poor, strengthening the argument that economic growth is not yet fully inclusive.

2019 served as the baseline year for observation. The average prevalence of food insufficiency (X) was 402.47, while the average GRDP (Y) was 46.36 thousand rupiah. A negative correlation (r = -0.378) indicates that higher food poverty rates lower inclusive growth. Although the relationship is not yet significant (sig = 0.110), this trend signals that development has not reached the poor equally. In 2020, there was a sharp increase in X to 472.47, but the Y value stagnated at 46.36, indicating that although economic growth did not worsen, the level of food insufficiency increased. The correlation changed to a weak positive (r = 0.243), but remained insignificant (p = 0.316), which could mean that economic growth is recovering but has not been able to significantly reduce food vulnerability. In 2021, the average X increased again to 484.37, while Y decreased slightly to 45.67. The correlation is again negative (r = -0.294), indicating that food poverty continues to increase despite declining economic growth. This reflects the continued impact of the COVID-19 pandemic, which weakened people's economic resilience. In 2022, there was a significant spike in X to 657.05, coinciding with the economic recovery, with Y increasing to 47.23. Although the correlation remains negative (r = -0.357), the increase in food insecurity is quite drastic. This can be interpreted as a structural impact of the pandemic, where economic recovery has not been accompanied by equitable distribution of benefits to vulnerable groups. Then, in 2023, X rises again to 766.74, and Y increases sharply to 52.38. The correlation remains negative (r = -0.295), but the relationship is still insignificant. This indicates that despite a faster economic recovery, the level of food poverty has not shown commensurate improvement. And in 2024, X decreases slightly to 765.16, and Y continues to increase to 56.56. The negative correlation weakens (r = -0.197), with a contribution of only 3.8%. Although not yet significant, the decline in X for the first time since 2019 provides an early sign of a positive impact of economic growth on reducing food vulnerability. However, the effect is still very limited. In conclusion, over the six years of observation, the prevalence of food insecurity has increased almost every year, even when the economy shows improving growth. A consistent negative correlation indicates inequality in the distribution of economic growth outcomes. This means that economic growth is not sufficiently inclusive and has not effectively reached the poor, particularly in terms of meeting basic food needs.

DISCUSSION

Data shows GDP disparities between regencies/cities in West Sumatra from 2019 to 2024, with Bukittinggi City recording the highest value while Pesisir Selatan Regency recorded the lowest. This disparity reflects differences in economic structure and production capacity between regions. Urban areas like Bukittinggi are more dominant in the trade and services sectors, which tend to grow faster. Conversely, coastal and rural areas still rely on primary sectors with low added value. This suggests a stronger trend in the trade sector and economic growth in urban areas than in rural areas (Sahut et al., 2021).

The increase in standard deviation during this period confirms a trend of increasing spatial inequality, indicating the need for affirmative policy interventions in regions with low regional incomes (Yuan et al., 2024). This inequality is also correlated with unequal access to infrastructure, education, and public services, suggesting a region-based development approach as a solution to balance economic growth between regions (Humaida et al., 2020).

Thus, a development strategy is needed that not only encourages aggregate growth but also ensures a more equitable distribution of development outcomes. Data and graphical findings indicate that food insecurity in West Sumatra has increased in recent years, particularly in the 2022–2024 period. This finding is consistent with those of Agustanto et al., (2025), which state that areas with limited infrastructure and low food access tend to have higher food vulnerability. The geographically remote Mentawai Islands recorded the highest prevalence, reflecting limitations in food logistics and distribution. Furthermore, the increasing rate of food insecurity in urban areas such as Padang and Padang Panjang suggests that urbanization and food inflation have contributed to worsening access to nutritious food for vulnerable groups (Adelia, 2022). Meanwhile, structural poverty and hidden unemployment significantly contribute to the inability of poor households to meet their minimum energy needs (Apriluana & Fikawati, 2018). The sharp increase in 2022 can be attributed to the continued impact of the COVID-19 pandemic on local economies, according to a report by the FAO (2022) and a study (Yulastri et al., 2023), which highlighted supply chain

disruptions and household income losses. Finally, the importance of area-based interventions through localized social protection and food security programs is crucial to sustainably reduce this prevalence rate. Data-driven policy interventions are necessary to address structural inequalities and ensure that economic growth not only increases in aggregate but also benefits vulnerable groups (Handoyo et al., 2020).

Hypothesis testing results indicate that the relationship between inclusive economic growth and poverty levels, based on the prevalence of food insufficiency in West Sumatra during the 2019–2024 period, tends to be negative, although it is not statistically significant. Pearson correlations across the six years of observation mostly show negative values (r ranging from -0.197 to -0.378), with a relatively low contribution (R^2), ranging from 3.8% to 14.3%. This suggests that the increase in GRDP has not fully offset the reduction in the prevalence of food poverty, indicating that the economic growth has not been inclusive for poor groups. High economic growth does not automatically guarantee poverty reduction, especially when the development is sectoral and spatially uneven. Access to the benefits of growth for the poor depends heavily on the quality of income distribution, social infrastructure, and public services (Asmayawati et al., 2024). The sharp increase in food insecurity figures in 2022 also confirms the FAO (2022) report, which noted that the post-COVID-19 global crisis has worsened food security in developing countries, including Indonesia(Dewi et al., 2025; Ernawati et al., 2022).

The trends observed during the study period reinforce this argument. Although average GDP (Y) has shown a steady increase since 2021, the prevalence of food insecurity (X) has continued to rise, peaking in 2023. The consistent negative correlation indicates an unequal distribution of the benefits of economic growth. A study by Kuncoro (2020) states that without social inclusion and equitable access to economic resources, growth will only widen disparities. Therefore, the results of this study reinforce the urgency of implementing a more equitable economic development strategy that favors vulnerable groups. As suggested by Siregar and Wibowo (2023), an inclusive economic approach must include strengthening local food security, integrating social protection, and investing in areas with the highest levels of vulnerability.

CONCLUSION

Based on the research results, it was found that inclusive economic growth in West Sumatra from 2019 to 2024 exhibits a negative correlation with the poverty rate, as indicated by the prevalence of food insufficiency. However, the relationship is not statistically significant. The correlation value ranges from -0.197 to -0.378, and the low contribution of variable X to Y indicates that the increase in GRDP has not fully contributed to the reduction of food poverty. The annual trend also shows that, although economic growth has increased since 2021, the prevalence of food insufficiency has actually risen, with a peak occurring in 2023. This indicates that the economic growth that has happened has not been evenly distributed and has not effectively reached vulnerable groups. Overall, the results of this study suggest that economic development in West Sumatra has not been inclusive in reducing food consumption-based poverty, so that a more responsive development strategy is needed for the poor.

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