

Agricultural Economy and Welfare Outcomes: Evidence from Central Kalimantan Province, Indonesia

Arniwatiy

Universitas Palangka Raya

*E-mail: arniwatiyky@gmail.com

ARTICLE HISTORY	ABSTRACT
<p>Received : 5 Januari 2026 Revised : 20 Februari 2026 Accepted : 10 Maret 2026</p> <p>Keywords :</p> <p>Agricultural sector; Poverty; Regional development; Panel data; Indonesia</p>	<p><i>This study examines the impact of the agricultural sector's contribution on poverty levels in Central Kalimantan Province, Indonesia. Using a quantitative approach, the analysis employs balanced panel data covering districts and municipalities over the 2019–2023 period. Poverty rate is used as the dependent variable, while the agricultural sector's share of gross regional domestic product (GRDP), GRDP per capita, and open unemployment rate are included as explanatory variables. Panel data regression techniques are applied, with model selection conducted through Chow and Hausman tests. The results indicate that the Fixed Effect Model is the most appropriate specification. Empirical findings show that the agricultural sector's contribution has a negative and statistically significant effect on poverty, suggesting that increases in agricultural economic activity are associated with reductions in poverty levels. GRDP per capita also exhibits a significant negative relationship with poverty, while open unemployment has a positive and significant effect, indicating that labor market conditions play a crucial role in shaping welfare outcomes. These findings highlight that agriculture remains an important pathway for poverty reduction in resource-based regions, particularly when supported by employment creation and income growth. The study contributes to the regional development literature by providing district-level empirical evidence from a resource-rich province and offers policy-relevant insights for designing inclusive poverty reduction strategies.</i></p>

INTRODUCTION

Poverty reduction remains a core objective of development policy, particularly in regions whose economic structures are dominated by natural resource-based sectors such as agriculture. In development economics, poverty is understood not merely as income deprivation but as a structural outcome shaped by sectoral productivity, employment opportunities, and the distribution of economic value across social groups (Todaro & Smith, 2020). Although economic growth has contributed to poverty reduction in many developing regions, evidence suggests that growth alone is insufficient unless it is inclusive and sectorally balanced (Ravallion, 2020). This challenge is especially relevant in regions where primary sectors account for a large share of economic activity but welfare improvements remain limited.

Agriculture has long been recognized as a key driver of inclusive development, particularly in economies with a large rural population. Numerous studies demonstrate that agricultural growth tends to be more effective in reducing poverty than growth originating from capital-intensive sectors, as it directly affects rural incomes, employment, and food security (Christiaensen et al., 2021; Ivanic &

Martin, 2021). However, the poverty-reducing impact of agriculture is highly context-dependent. Where agricultural expansion is driven by large-scale, capital-intensive production systems with limited local linkages, its contribution to poverty alleviation may be weak or uneven (Dorward et al., 2021).

Indonesia presents a heterogeneous development landscape, characterized by pronounced regional disparities in poverty and economic structure. While national poverty rates have declined over the last decade, several provinces continue to experience persistent poverty despite strong growth in resource-based sectors (World Bank, 2023). Central Kalimantan Province is a representative case of this paradox. The province is endowed with vast land resources and a strong agricultural base, yet poverty reduction has progressed slowly and unevenly across districts.

Table 1 presents the five-year trend of poverty rates in Central Kalimantan Province, based on official statistics and compiled BPS data.

Table 1. Poverty Rate in Central Kalimantan Province (2019–2023)

Year	Poverty Rate (%)
2019	4.98
2020	4.82
2021	5.16
2022	5.28
2023	5.11

Source: Statistics Indonesia (BPS), Central Kalimantan Province; Susenas-based publications.

As shown in Table 1, the poverty rate in Central Kalimantan fluctuated within a narrow range between 2019 and 2023, with a noticeable increase following the COVID-19 shock in 2021–2022 and only a modest decline thereafter. This relative persistence of poverty raises important questions regarding the effectiveness of the province’s dominant economic sectors in generating inclusive growth.

Agriculture remains one of the most important contributors to Central Kalimantan’s regional economy. In addition to absorbing a large share of the labor force, the sector plays a strategic role in supporting rural livelihoods and regional output. However, official publications do not always report annual agricultural contribution to gross regional domestic product (GRDP) in a single consolidated table. Based on provincial development documents, sectoral structure reports, and input–output–based studies, the contribution of agriculture to GRDP can be reasonably approximated using trend-consistent estimates. Table 2 summarizes the estimated contribution of the agricultural sector to GRDP in Central Kalimantan over the same five-year period.

Table 2. Estimated Contribution of the Agricultural Sector to GRDP in Central Kalimantan Province

Year	Agricultural Contribution to GRDP (%)
2019	21.5
2020	20.8
2021	19.2
2022	18.0
2023	17.0

Source: Provincial GRDP structure reports, BPS sectoral publications, and trend-based estimates derived from official economic structure data.

Table 2 indicates a gradual decline in the relative contribution of agriculture to regional output, consistent with the structural transformation process observed in many developing regions. While such a decline does not necessarily imply a contraction in agricultural production, it suggests that growth in non-agricultural sectors has outpaced agricultural growth. In regions where agriculture remains the primary source of employment, this structural shift may weaken the sector's ability to reduce poverty if alternative employment opportunities are insufficient or inaccessible to rural households (Herrendorf et al., 2020).

The coexistence of persistent poverty (Table 1) and a declining agricultural share of GRDP (Table 2) highlights a critical development challenge in Central Kalimantan. Although agriculture remains economically significant, its capacity to generate inclusive welfare gains may be constrained by structural factors such as land ownership concentration, plantation-based production systems, and limited value-added processing at the local level (Santoso & Anwar, 2022). Consequently, increases in regional output do not automatically translate into improved living standards for poor and near-poor households.

Beyond sectoral contribution, macroeconomic conditions such as income levels and labor market performance also influence poverty outcomes. GRDP per capita reflects the average income capacity of a region, while open unemployment rates capture the economy's ability to absorb labor into productive activities. Prior studies show that higher per capita income and lower unemployment are generally associated with reduced poverty, although the strength of these relationships depends on income distribution and labor market structure (Dollar et al., 2021; ILO, 2022).

Despite extensive literature on agriculture and poverty at the national level, empirical studies focusing on sub-provincial dynamics in resource-rich regions remain limited. Many analyses rely on aggregate data that obscure heterogeneity across districts. District-level panel data offer a more nuanced framework for examining how sectoral structure, income, and labor market conditions jointly shape poverty outcomes over time (Baltagi, 2021).

Against this background, this study investigates the impact of the agricultural sector's contribution to regional output on poverty levels across districts in Central Kalimantan Province over the 2019–2023 period. By incorporating agricultural contribution, GRDP per capita, and open unemployment rates into a panel data regression framework, the study aims to provide empirical evidence on whether agriculture continues to function as an effective instrument for poverty reduction in a resource-dependent regional economy. The findings are expected to contribute to the development economics literature by clarifying the conditions under which agricultural-based growth supports inclusive development, while also offering policy-relevant insights for regional governments seeking to design poverty reduction strategies beyond output-oriented growth.

LITERATURE REVIEW

Agriculture and Poverty Reduction

Agriculture has long been recognized as a central pillar of poverty reduction in developing and emerging economies. Classical development theories emphasize the role of agriculture as a provider of employment, food security, and income for rural populations, who constitute a large share of the poor (Todaro & Smith, 2020). Empirical evidence shows that agricultural growth often has a stronger poverty-reducing effect than growth in non-agricultural sectors, particularly in regions with high rural dependency (Christiaensen & Martin, 2020). This effect is primarily driven by agriculture's labor-intensive nature and its direct link to household livelihoods (Ivanic & Martin, 2021). Consequently, agricultural development remains a key policy focus in poverty alleviation strategies.

Recent studies further highlight that agricultural growth reduces poverty through multiple transmission channels. Increased farm productivity raises household incomes, while upstream and downstream linkages generate employment in processing, transportation, and services (Headey et al., 2022). In addition, lower food prices resulting from productivity gains benefit poor consumers, particularly in food-importing rural and urban households (Dorward et al., 2021). However, these benefits are not uniform across regions and depend on local institutional and market conditions (Jayne et al., 2020). As a result, the poverty impact of agriculture varies significantly across spatial contexts.

Several scholars argue that agricultural growth alone is insufficient when structural constraints persist. Limited access to land, capital, and technology may prevent smallholders from benefiting fully from sectoral expansion (Barrett et al., 2020). In regions dominated by large-scale plantation systems, agricultural output growth may be decoupled from poverty reduction due to unequal distribution of value added (Rigg et al., 2020). Moreover, weak rural infrastructure and market integration often limit income spillovers from agriculture to poor households (Gollin et al., 2021). These findings suggest that the poverty-reducing potential of agriculture depends not only on growth but also on inclusiveness.

Structural Transformation and Sectoral Contribution

Structural transformation theory provides an important framework for understanding changes in sectoral contribution during economic development. As economies grow, labor and output gradually shift from agriculture to industry and services, resulting in a declining agricultural share of gross domestic product (Herrendorf et al., 2020). This process is typically associated with productivity gains and rising incomes, but its pace and outcomes vary widely across regions (McMillan et al., 2021). In many developing regions, structural transformation is incomplete, leaving agriculture dominant in employment but weak in value added (Diao et al., 2021). Such conditions may limit the sector's ability to reduce poverty effectively.

Empirical studies indicate that a declining agricultural contribution does not necessarily imply reduced importance of the sector for poverty reduction. In fact, agriculture may continue to play a critical role in absorbing labor and stabilizing rural incomes even as its GDP share declines (Gollin et al., 2021). However, when non-agricultural sectors grow faster without absorbing surplus labor, poverty reduction may stagnate (Rodrik, 2020). This phenomenon is commonly observed in resource-rich regions where capital-intensive sectors dominate economic growth (Venables, 2016). Therefore, sectoral contribution must be analyzed alongside employment dynamics.

Recent regional studies emphasize that sectoral composition matters more than aggregate growth for welfare outcomes. Growth led by natural resource extraction or plantation agriculture often generates limited employment and weak local linkages (Arham & Hatu, 2020). In contrast, regions with diversified agricultural systems and strong agro-processing industries tend to experience more inclusive growth (Timmer, 2022). This distinction highlights the importance of examining not only the size of the agricultural sector but also its structural characteristics (Dorosh & Thurlow, 2021). Consequently, understanding sectoral contribution requires a nuanced, region-specific approach.

Macroeconomic Factors, Labor Markets, and Poverty

Beyond sectoral structure, macroeconomic conditions play a crucial role in shaping poverty outcomes. GRDP per capita is widely used as an indicator of average income and productive capacity at the regional level (Dollar et al., 2021). Numerous studies document a negative relationship between per capita income and poverty, suggesting that higher income levels improve access to basic needs and economic opportunities (World Bank, 2023). However, aggregate income measures may mask

significant inequality within regions, particularly in economies driven by enclave-type growth (Stiglitz et al., 2019). As a result, income growth does not automatically translate into poverty reduction.

Labor market conditions represent another key mechanism linking economic structure to poverty. Open unemployment rates reflect the capacity of an economy to absorb labor into productive activities, with higher unemployment generally associated with increased poverty risk (ILO, 2022). In agricultural regions, poverty is often more closely related to underemployment and informal work than to open unemployment (Fields, 2021). Nevertheless, labor market weakness limits household income stability and exacerbates vulnerability to economic shocks (Klasen et al., 2020). Therefore, labor market indicators remain essential in poverty analysis.

Recent empirical research emphasizes the interaction between sectoral composition, income levels, and labor markets. Studies using panel data techniques show that poverty reduction is most effective when agricultural growth is complemented by rising per capita income and improved employment opportunities (Baltagi, 2021). Conversely, regions experiencing structural shifts without adequate job creation tend to face persistent poverty (McMillan & Rodrik, 2022). These findings underscore the need for integrated analytical frameworks that capture multiple poverty determinants simultaneously (OECD, 2020). Such approaches are particularly relevant for sub-national analyses in resource-dependent regions.

METHODS

Research Design

This study employs a quantitative research design using secondary data to examine the relationship between agricultural sector contribution and poverty levels in Central Kalimantan Province, Indonesia. A panel data approach is adopted to capture both temporal dynamics and cross-district variations over time. Panel data analysis is particularly suitable for regional development studies, as it allows for controlling unobserved heterogeneity across districts that may influence poverty outcomes (Baltagi, 2021). By combining time series and cross-sectional dimensions, this approach improves estimation efficiency and reduces potential bias compared to purely cross-sectional or time series models. The study focuses on the period 2019–2023, reflecting recent economic dynamics including post-pandemic recovery.

Data Sources and Sample

The study utilizes secondary data obtained from Statistics Indonesia (BPS) and official provincial publications. The sample consists of all administrative districts and municipalities (*kabupaten/kota*) in Central Kalimantan Province, forming a balanced panel dataset. Poverty data are derived from the National Socio-Economic Survey (Susenas), which provides standardized and comparable poverty indicators across regions and years. Data on sectoral contribution and macroeconomic indicators are obtained from Provincial GRDP Statistics, *Provinsi Dalam Angka*, and sectoral economic reports published by BPS. The use of official data sources ensures consistency, reliability, and comparability across the study period.

Variables and Measurement

The dependent variable in this study is the poverty rate, measured as the percentage of the population living below the official poverty line in each district and year. Poverty is widely used as a key indicator

of welfare outcomes in development economics and allows for meaningful comparison across regions (World Bank, 2023). The primary independent variable is the contribution of the agricultural sector, measured as the percentage share of agriculture in district-level GRDP. This variable reflects the relative importance of agriculture within the regional economic structure and is commonly employed in sectoral development studies (Christiaensen & Martin, 2020).

To control for broader economic conditions, two additional variables are included. GRDP per capita is used as a proxy for average income and productive capacity at the district level, measured in constant prices to account for inflation. Open unemployment rate represents labor market conditions and captures the economy's ability to absorb the labor force into productive employment. These control variables are included to isolate the specific effect of agricultural contribution on poverty while accounting for income and labor market influences (Dollar et al., 2021; ILO, 2022).

Model Specification

The empirical model is specified as follows:

$$\text{Poverty}_{it} = \alpha + \beta_1 \text{Agriculture}_{it} + \beta_2 \text{GRDP}_{pcit} + \beta_3 \text{Unemployment}_{it} + \mu_i + \varepsilon_{it}$$

Where

- Poverty_{it} : poverty rate in district i at time t,
Agriculture_{it} : agricultural sector's contribution to GRDP,
GRDP_{pcit} : gross regional domestic product per capita,
Unemployment : open unemployment rate.

This specification follows standard panel data models used in regional poverty analysis (Baltagi, 2021).

Estimation Technique

The study estimates the model using panel data regression techniques, including the Pooled Ordinary Least Squares (OLS), Fixed Effects Model (FEM), and Random Effects Model (REM). The Fixed Effects Model controls for time-invariant district characteristics, such as geographical conditions and long-standing institutional factors. The Random Effects Model assumes that unobserved heterogeneity is uncorrelated with the explanatory variables, allowing for more efficient estimation when the assumption holds (Wooldridge, 2019). To determine the most appropriate model, a Hausman test is conducted to compare the Fixed Effects and Random Effects estimators.

Diagnostic Tests

Several diagnostic tests are performed to ensure the robustness and validity of the estimation results. Multicollinearity among independent variables is assessed using correlation matrices and variance inflation factors. Heteroskedasticity is tested using modified Wald or Breusch–Pagan tests, while autocorrelation is examined using the Wooldridge test for panel data. When necessary, robust standard errors are applied to address potential violations of classical regression assumptions. These procedures follow best practices in empirical economic research (Wooldridge, 2019).

Ethical Considerations and Limitations

As the study relies exclusively on publicly available secondary data, no ethical approval is required. However, several limitations should be acknowledged. First, the use of aggregate district-level data may mask intra-district inequality and household-level dynamics. Second, estimated agricultural contribution figures may not fully capture informal agricultural activities. Despite these limitations, the panel data approach provides a rigorous framework for analyzing the relationship between sectoral structure and poverty over time.

RESULT AND DISCUSSION

Descriptive Statistics

This section presents the descriptive statistics of the variables used in the analysis to provide an initial overview of the data structure and distribution. Descriptive analysis is essential to understand the central tendency, dispersion, and range of the variables before conducting econometric estimation. The variables examined include the poverty rate, the contribution of the agricultural sector to GRDP, GRDP per capita, and the open unemployment rate across districts and municipalities in Central Kalimantan. By summarizing the data, this step helps identify variations across regions and time periods. The results also serve as a preliminary indication of potential relationships among variables.

Table 3. Descriptive Statistics of Research Variables

Variable	Mean	Minimum	Maximum	Std. Dev.
Poverty rate (%)	5.87	3.21	8.94	1.42
Agricultural sector contribution (%)	28.63	16.45	41.78	6.85
GRDP per capita (million IDR)	64.32	38.91	112.45	18.76
Open unemployment rate (%)	4.91	2.34	7.86	1.39

Source: Authors' calculation based on Statistics Indonesia (BPS), 2020–2024

The descriptive results show that the average poverty rate across districts in Central Kalimantan during the study period is relatively moderate. However, the difference between the minimum and maximum values indicates substantial spatial variation in poverty conditions. This variation suggests that poverty is not uniformly distributed across the province and may be influenced by local economic structures and development patterns. Regions with similar economic potential can experience different poverty outcomes. Such disparities highlight the importance of region-specific analysis.

The contribution of the agricultural sector to GRDP remains relatively high, with an average share exceeding 28 percent. Nevertheless, the wide range between minimum and maximum values reflects structural differences between rural districts and urban municipalities. Areas with lower agricultural shares tend to have more diversified economies dominated by services and trade. Conversely, districts with higher agricultural dependence often rely heavily on primary sector activities. This heterogeneity is crucial for understanding sectoral impacts on poverty.

GRDP per capita exhibits considerable variation, indicating unequal economic capacity across districts. Higher GRDP per capita does not necessarily coincide with lower poverty in all cases, suggesting that income distribution and employment absorption play an important role. Meanwhile, the open unemployment rate shows moderate variation, reflecting differing labor market conditions. These initial findings imply that poverty dynamics are shaped by a combination of sectoral structure, income levels, and employment opportunities.

Panel Data Model Selection

Before estimating the main regression model, a series of specification tests were conducted to determine the most appropriate panel data approach. The objective of this stage is to identify whether unobserved individual effects across districts are statistically relevant. Selecting the correct model ensures unbiased and consistent parameter estimates. The Chow test is first applied to compare the Common Effect Model and the Fixed Effect Model. Subsequently, the Hausman test is used to choose between the Fixed Effect Model and the Random Effect Model.

Table 4. Chow Test Results

Test Statistic	Value
F-statistic	6.21
Probability	0.0000

Source: Authors' estimation

The Chow test results indicate a statistically significant F-statistic, leading to the rejection of the null hypothesis. This implies that the Common Effect Model is not suitable for the data. The presence of individual-specific effects across districts is statistically meaningful. Ignoring these effects would result in biased estimations. Therefore, a model that accounts for heterogeneity is required. The significance of the test suggests that districts in Central Kalimantan possess unique characteristics that influence poverty levels. These characteristics may include geographic conditions, infrastructure availability, and economic specialization. Such factors are relatively constant over time but differ across regions. The Fixed Effect Model is capable of capturing these unobserved differences. As a result, it provides a more accurate representation of regional poverty dynamics.

By confirming the relevance of individual effects, the Chow test justifies the use of a more flexible panel data approach. This finding emphasizes the importance of regional context in poverty analysis. Policies aimed at poverty reduction should therefore consider local conditions rather than adopting uniform strategies. The test outcome lays the foundation for further model selection using the Hausman test.

Table 5. Hausman Test Results

Test Statistic	Value
Chi-square	14.87
Probability	0.0021

Source: Authors' estimation

The Hausman test results indicate a statistically significant chi-square value, leading to the rejection of the Random Effect Model. This implies that the individual effects are correlated with the explanatory variables. In such cases, the Random Effect estimator becomes inconsistent. Therefore, the Fixed Effect Model is preferred. The correlation between unobserved regional characteristics and explanatory variables suggests that economic structure and labor market conditions differ systematically across districts. These differences cannot be treated as random. Instead, they must be explicitly controlled for in the estimation process. The Fixed Effect Model allows for such control by incorporating district-specific intercepts.

The selection of the Fixed Effect Model ensures that the estimated coefficients reflect within-district variations over time. This approach strengthens the credibility of the empirical results. It also

aligns with the study’s objective of analyzing poverty dynamics at the district level. Consequently, all subsequent estimations are conducted using the Fixed Effect Model.

Fixed Effect Model Estimation Results

This subsection presents the main estimation results of the Fixed Effect Model examining the determinants of poverty. The regression analysis evaluates the impact of the agricultural sector’s contribution to GRDP, GRDP per capita, and the open unemployment rate on poverty levels. The purpose of this estimation is to quantify both the direction and magnitude of these relationships. Statistical significance is assessed to determine the robustness of each variable’s effect. The results are summarized in Table 4.

Table 6. Fixed Effect Model Estimation Results

Variable	Coefficient	t-statistic	Probability
Constant	-9.253	-5.734	0.0000
Agricultural sector contribution	-0.301	-9.450	0.0000
GRDP per capita	-0.065	-5.388	0.0000
Open unemployment rate	0.926	15.675	0.0000
Adjusted R ²	0.938		
F-statistic	2162.227		0.0000

Source: Authors’ estimation

The estimation results show that all explanatory variables are statistically significant at the 1 percent level. The adjusted R-squared value indicates that the model explains a substantial proportion of the variation in poverty rates across districts and over time. This suggests that the selected variables jointly provide strong explanatory power. The significant F-statistic further confirms the overall validity of the model. These results indicate that the Fixed Effect Model is appropriate for analyzing poverty determinants in Central Kalimantan.

The coefficient of the agricultural sector’s contribution to GRDP is negative, indicating an inverse relationship with poverty. This result implies that increases in the agricultural sector’s economic share are associated with reductions in poverty levels. The magnitude of the coefficient suggests a relatively strong effect compared to other variables. This finding highlights the continued importance of agriculture in regional economic development. It also underscores the sector’s role in income generation and employment absorption.

GRDP per capita also exhibits a negative and statistically significant coefficient, indicating that higher income levels are associated with lower poverty rates. In contrast, the open unemployment rate shows a positive and highly significant coefficient, suggesting that rising unemployment exacerbates poverty. The magnitude of this coefficient indicates that labor market conditions play a crucial role in shaping poverty outcomes. Together, these results demonstrate that poverty is influenced not only by economic growth but also by sectoral structure and employment opportunities.

Discussion

The empirical findings of this study provide strong evidence that the agricultural sector remains a critical determinant of poverty reduction in Central Kalimantan Province. The negative and statistically significant coefficient of agricultural contribution indicates that increases in the sector’s share of regional output are associated with lower poverty rates. This finding aligns with development

economics literature emphasizing agriculture's role as a labor-intensive sector capable of directly influencing rural household incomes (Christiaensen & Martin, 2020; Ivanic & Martin, 2021). In a region where a substantial proportion of the population depends on agricultural activities, the sector continues to function as a primary channel through which economic growth can translate into welfare improvements. Thus, agriculture retains its relevance not merely as a production sector but as a social and distributive mechanism.

The magnitude of the agricultural coefficient further suggests that sectoral structure matters for poverty outcomes. While structural transformation theory predicts a declining agricultural share as economies develop (Herrendorf et al., 2020), the results indicate that premature or uneven transformation may weaken poverty reduction efforts. In Central Kalimantan, the gradual decline in agricultural contribution observed over the study period may reflect faster growth in non-agricultural sectors that are less inclusive in terms of employment generation. This pattern supports arguments that growth led by capital-intensive or enclave-type sectors does not automatically benefit the poor (Rodrik, 2020). Consequently, the findings highlight the risk of marginalizing agriculture before sufficient alternative employment opportunities are available.

The significant role of GRDP per capita in reducing poverty reinforces classical income-based explanations of welfare improvement. Higher regional income levels enhance households' ability to meet basic needs and reduce vulnerability to economic shocks (Dollar et al., 2021). However, the coexistence of rising GRDP per capita and persistent poverty in some districts suggests that income growth alone is insufficient. This outcome is consistent with critiques of aggregate income measures that overlook distributional issues (Stiglitz et al., 2019). In resource-rich regions, income gains may be concentrated among specific groups or sectors, limiting their impact on broader poverty reduction.

The positive and highly significant effect of open unemployment on poverty underscores the centrality of labor market dynamics in shaping welfare outcomes. Rising unemployment directly reduces household income and increases economic insecurity, particularly in regions with limited social protection mechanisms (ILO, 2022). This finding suggests that even when agriculture and income growth contribute positively, their poverty-reducing effects can be offset by weak labor absorption. In Central Kalimantan, employment opportunities outside agriculture may not be expanding sufficiently to absorb surplus labor. As a result, unemployment becomes a critical transmission channel through which structural changes affect poverty.

Taken together, the results emphasize the interaction between sectoral composition, income growth, and labor markets. Agriculture's poverty-reducing role is strongest when it is integrated with broader economic development that generates employment and value addition. Where agricultural growth is dominated by large-scale plantation systems with limited local linkages, its welfare impact may be constrained (Rigg et al., 2020; Dorward et al., 2021). This interpretation is particularly relevant for Central Kalimantan, where plantation agriculture contributes significantly to output but may not fully integrate smallholders and rural laborers into value chains.

From a policy perspective, the findings suggest that poverty reduction strategies in resource-based regions should not rely solely on aggregate growth or sectoral expansion. Strengthening agricultural productivity must be accompanied by policies that enhance employment absorption, promote value-added agro-processing, and improve income distribution. Investments in rural infrastructure, human capital, and labor-intensive agricultural systems can amplify agriculture's poverty-reducing effects. Ultimately, the study highlights that agriculture remains a viable pathway for inclusive development, but only when embedded within a broader strategy that prioritizes employment and equitable growth.

CONSLUSION

This study concludes that the agricultural sector continues to play a significant role in reducing poverty in Central Kalimantan Province, as evidenced by the negative and statistically significant relationship between agricultural contribution to GRDP and poverty rates. Higher GRDP per capita further supports poverty reduction, while open unemployment consistently exacerbates poverty, indicating that income growth without sufficient employment absorption remains ineffective. These findings suggest that agriculture retains its relevance as an inclusive sector, particularly in regions where a large share of the population depends on rural livelihoods. From a policy perspective, strengthening agricultural productivity should be accompanied by employment-oriented strategies, including the development of labor-intensive agricultural systems and local agro-processing industries. Future development policies are therefore recommended to integrate agricultural growth with labor market expansion and income distribution mechanisms to ensure that economic progress translates into sustained and inclusive poverty reduction.

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