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Agricultural sector contribution, regional income, and unemployment as determinants of poverty: Panel data evidence from Central Kalimantan, Indonesia

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Abstract. *This study examines the determinants of poverty across regencies and municipalities in Central Kalimantan, Indonesia, by focusing on agricultural sector contribution, GRDP per capita, and the open unemployment rate. Using panel data from 14 regencies/ municipalities during 2020–2024, the study applies a Fixed Effect Model selected through Chow and Hausman tests. The results show that agricultural sector contribution and GRDP per capita have negative and significant effects on poverty, while the open unemployment rate has a positive and significant effect. These findings highlight the importance of inclusive agricultural development, regional income growth, and employment creation in reducing poverty.*

Keywords: *agricultural sector; Central Kalimantan; GRDP per capita; poverty; unemployment*

I. INTRODUCTION

Poverty remains one of the most persistent challenges to sustainable development, particularly in developing countries where economic growth is often accompanied by substantial regional disparities. Although many countries have experienced improvements in economic performance during the past decade, poverty reduction has progressed unevenly because the benefits of growth are not always distributed equally across regions and socioeconomic groups. According to the World Bank (2024), reducing poverty requires not only sustained economic growth but also inclusive development that expands employment opportunities and strengthens productive sectors capable of generating income for vulnerable households. Consequently, understanding the regional determinants of poverty has become an important concern for both policymakers and development economists.

In developing economies, the agricultural sector continues to play a strategic role in promoting inclusive economic growth. Unlike capital-intensive industries, agriculture is characterized by relatively high labor absorption and provides livelihoods for a large proportion of low-income households, particularly in rural areas. The structural transformation theory argues that agriculture serves as the initial engine of economic development by supplying labor, food, and capital to other sectors while simultaneously supporting poverty reduction through income generation (Lewis, 1954). Similarly, Christiaensen and Martin (2020) emphasize that agricultural growth generally produces stronger poverty-reducing effects than growth originating from non-agricultural sectors because poor households are more directly involved in agricultural activities.

Indonesia presents an interesting context for examining this relationship because agriculture remains an important contributor to regional economies despite the country's continuing structural transformation toward manufacturing and services. According to Statistics Indonesia (BPS, 2024), agriculture, forestry, and fisheries consistently account for approximately 12–13% of Indonesia's Gross Domestic Product (GDP) while employing nearly 28% of the national workforce. These figures indicate that agriculture continues to function not only as a productive economic sector but also as a major source of employment, particularly in rural regions where poverty remains relatively high. Consequently, strengthening agricultural productivity is widely regarded as one of the key policy instruments for reducing regional poverty.

Among Indonesian provinces, Central Kalimantan represents a unique case due to its abundant natural resources and economic structure dominated by primary industries. Agriculture, plantations, forestry, and mining contribute substantially to regional economic output, yet poverty persists across several regencies despite relatively high regional income levels. This condition reflects a development paradox in which economic growth does not necessarily translate into improved welfare for all communities. The unequal distribution of development benefits, differences in labor market conditions, and varying levels of economic diversification across regencies may explain why poverty continues to exist despite favorable macroeconomic performance.

Table 1. Socioeconomic Indicators of Central Kalimantan Province (2024)

Indicator	Value
Number of regencies/municipalities	14
Poverty rate (%)	5.26
GRDP per capita (million IDR)	79.1
Open unemployment rate (%)	4.10
Agriculture's contribution to regional GRDP (%)	Approximately 22–24
Main economic sectors	Agriculture, plantations, mining, forestry

Source: Statistics Indonesia (BPS), Central Kalimantan Province in Figures, 2024.

Despite the province's relatively favorable macroeconomic indicators, substantial disparities remain among regencies and municipalities. Several districts with high agricultural output continue to experience relatively high poverty rates, suggesting that the contribution of agriculture to regional gross domestic product does not automatically improve household welfare. This phenomenon is particularly evident in areas where agricultural production is dominated by large-scale plantation industries that generate high output but relatively limited local employment. Consequently, the effectiveness of agricultural development in reducing poverty depends not only on sectoral growth but also on the inclusiveness of that growth.

Besides agricultural performance, regional income and labor market conditions are also important determinants of poverty. Gross Regional Domestic Product (GRDP) per capita is commonly used as an indicator of average regional prosperity because it reflects the productive capacity of an economy. Higher income levels generally increase households' purchasing power and improve access to education, healthcare, and other essential services, thereby reducing poverty. However, previous studies suggest that high regional income does not necessarily imply equitable income distribution, particularly in resource-rich regions where economic activities are concentrated among a limited number of industries (Ravallion, 2020). Therefore, GRDP per capita should be interpreted together with other socioeconomic indicators.

Similarly, unemployment remains a critical factor influencing poverty dynamics. The inability of labor markets to absorb the available workforce directly reduces household income and increases economic vulnerability. According to the International Labour Organization (2022), employment creation represents one of the most effective mechanisms for poverty alleviation because stable employment provides sustainable income opportunities. Regions characterized by higher unemployment rates generally experience greater poverty incidence due to reduced labor participation and weaker household purchasing power.

Although numerous studies have investigated the relationship between agriculture and poverty, empirical findings remain inconclusive. Previous research generally confirms that agricultural development contributes positively to poverty reduction; however, the magnitude of its impact varies considerably depending on regional economic structures, labor market characteristics, and institutional conditions. Moreover, most Indonesian studies focus on national or provincial aggregates, while relatively few employ panel data at the regency and municipality levels to capture local heterogeneity. This limitation is particularly evident for Central Kalimantan, where empirical evidence regarding the interaction among agricultural contribution, regional income, unemployment, and poverty remains scarce.

Therefore, this study seeks to examine the effects of agricultural sector contribution, GRDP per capita, and the open unemployment rate on poverty across 14 regencies and municipalities in Central Kalimantan Province during the 2020–2024 period using panel data regression. By employing the Fixed Effect Model, this research captures unobserved regional heterogeneity and provides more robust empirical evidence regarding the determinants of regional poverty. The findings are expected to enrich the literature on regional development economics while offering practical policy recommendations for strengthening inclusive agricultural development, improving employment opportunities, and accelerating poverty reduction in resource-based regional economies.

II. LITERATURE REVIEW

2.1 Poverty and Regional Economic Development. Poverty remains a multidimensional development issue that reflects not only insufficient income but also limited access to productive resources, employment opportunities, education, and healthcare. From the perspective of development economics, poverty represents an outcome of structural economic conditions rather than merely individual income deprivation (Todaro & Smith, 2020). The capability approach proposed by Sen (1999) further argues that poverty should be understood as the deprivation of individuals' capabilities to achieve a decent standard of living.

Despite the multidimensional nature of poverty, monetary indicators continue to be widely employed in regional economic studies because they enable consistent comparisons across regions and over time. In Indonesia, poverty is officially measured using the basic needs approach developed by Statistics Indonesia (BPS), which defines poor individuals as those whose expenditures fall below the poverty line. Consequently, regional poverty reflects not only economic performance but also the effectiveness of development policies in generating inclusive growth.

Economic development theories suggest that sustained growth contributes to poverty reduction when the benefits of economic expansion are distributed broadly throughout society. However, growth alone is insufficient if accompanied by unequal income distribution or limited employment creation. Ravallion (2020) emphasizes that poverty reduction depends largely on the inclusiveness of economic growth, particularly in developing economies where regional disparities remain substantial.

2.2 Agricultural Sector Contribution and Poverty. The agricultural sector has traditionally been recognized as one of the primary drivers of economic development in developing countries. According to the structural transformation model introduced by Lewis (1954), agriculture functions as the initial source of labor, capital accumulation, and food production before the economy gradually shifts toward manufacturing and services.

Beyond its production role, agriculture contributes significantly to poverty reduction because it provides employment opportunities for low-income households, particularly in rural areas. Christiaensen and Martin (2020) argue that agricultural growth generally generates larger poverty-reducing effects than growth in non-agricultural sectors because poor households participate more directly in agricultural production. Higher agricultural productivity increases farm income, stimulates rural demand, and creates multiplier effects through backward and forward linkages with other sectors.

However, the relationship between agricultural development and poverty is not always straightforward. Dorward et al. (2021) suggest that agricultural growth may produce limited welfare improvements when production is dominated by capital-intensive plantations or large commercial enterprises that generate relatively few employment opportunities. Consequently, the effectiveness of agriculture in reducing poverty depends not only on sectoral growth but also on the inclusiveness of agricultural development.

Empirical evidence generally supports the negative relationship between agricultural development and poverty. Christiaensen and Martin (2020) found that agricultural growth contributes more substantially to poverty reduction than industrial growth in many developing countries. Similarly, Suryahadi et al. (2021) reported that improvements in agricultural productivity significantly reduced rural poverty in Indonesia.

2.3 Gross Regional Domestic Product per Capita and Poverty. Gross Regional Domestic Product (GRDP) per capita is widely used as an indicator of regional economic prosperity because it reflects average income generated within a particular region. According to Mankiw (2021), higher per capita income indicates greater economic productivity and increased capacity to improve living standards.

Development economics generally predicts a negative relationship between per capita income and poverty. As regional income increases, households are expected to experience greater purchasing power, improved access to public services, and better employment opportunities, all of which contribute to poverty reduction (Todaro & Smith, 2020). Therefore, GRDP per capita is frequently incorporated into empirical poverty models as a proxy for regional welfare.

Nevertheless, GRDP per capita has limitations because it represents an average measure that does not account for income distribution. Stiglitz et al. (2019) argue that regions with relatively high average income may still experience considerable poverty if economic benefits are concentrated among a small proportion of the population. Therefore, while higher GRDP per capita generally contributes to poverty reduction, its effectiveness depends on whether economic growth is inclusive. Previous empirical studies consistently report a significant negative association between regional income and poverty. Dollar et al. (2021) concluded that increases in per capita income are associated with lower poverty incidence across countries, although the magnitude of this relationship varies according to institutional quality and income distribution.

2.4 Open Unemployment Rate and Poverty. Employment represents the principal source of income for most households; therefore, unemployment is closely associated with poverty.

Labor market theory explains that unemployment occurs when labor supply exceeds labor demand, resulting in lost income and reduced household welfare (Borjas, 2020). The International Labour Organization (2022) emphasizes that employment creation is among the most effective poverty alleviation strategies because stable employment enables households to secure sustainable income and improve living standards. Conversely, persistent unemployment increases vulnerability to poverty, particularly among low-skilled workers and young labor force participants.

In developing regions, unemployment frequently reflects structural economic constraints rather than temporary labor market fluctuations. Fields (2021) notes that inadequate employment opportunities often reinforce long-term poverty by limiting household income and reducing human capital accumulation. Empirical studies consistently demonstrate a positive relationship between unemployment and poverty. Regions experiencing higher unemployment rates generally report higher poverty incidence because unemployed individuals lack sufficient earnings to satisfy basic needs. Accordingly, unemployment is expected to exert a positive influence on regional poverty.

III. METHODS

This study employed a quantitative approach using balanced panel data to examine the effects of agricultural sector contribution, Gross Regional Domestic Product (GRDP) per capita, and the open unemployment rate on poverty across regencies and municipalities in Central Kalimantan Province, Indonesia. The dataset consists of 14 regencies/municipalities observed over the period 2020–2024, resulting in 70 panel observations. Secondary data were obtained from official publications of Statistics Indonesia (BPS), including Central Kalimantan in Figures, Gross Regional Domestic Product of Regencies/Municipalities, Poverty Statistics, and Employment Statistics. The dependent variable is the poverty rate, while the independent variables comprise the agricultural sector contribution to GRDP, GRDP per capita, and the open unemployment rate.

The relationship between variables was estimated using panel data regression. The general empirical model is expressed as:

$$POV_{it} = \beta_0 + \beta_1 AGR_{it} + \beta_2 GRDPPC_{it} + \beta_3 OUR_{it} + \varepsilon_{it}$$

where POV denotes the poverty rate, AGR represents the agricultural sector contribution to GRDP, GRDPPC refers to GRDP per capita, and OUR is the open unemployment rate. The parameters β_0 and $\beta_1 - \beta_3$ represent the intercept and regression coefficients, respectively, while ε denotes the error term.

Panel model selection was conducted through the Chow test to compare the Common Effect Model (CEM) and Fixed Effect Model (FEM), followed by the Hausman test to determine the most appropriate specification between FEM and the Random Effect Model (REM). Based on these diagnostic tests, the Fixed Effect Model was selected as the preferred estimation technique because it adequately captures unobserved regional heterogeneity across regencies and municipalities. Statistical significance was evaluated using the t-test and F-test at the 5% significance level, while the coefficient of determination (R^2) was used to assess the explanatory power of the model. All analyses were performed using EViews 13.

IV. RESULTS AND DISCUSSION

4.1 Descriptive Statistics. Descriptive statistics provide an overview of the characteristics of the variables employed in this study. Table 3 presents the mean, minimum, maximum, and standard deviation of the poverty rate, agricultural sector contribution, GRDP per capita, and the open unemployment rate across 14 regencies and municipalities in Central Kalimantan during 2020–2024.

Table 3. Descriptive Statistics

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: Processed secondary data, 2025.

Table 3 indicates considerable regional disparities in socioeconomic conditions across Central Kalimantan. The average poverty rate reached 5.87%, ranging from 3.21% to 8.94%, suggesting that poverty remains unevenly distributed among regencies and municipalities. The agricultural sector contributed an average of 28.63% to regional GRDP, confirming the province's dependence on primary economic activities. Meanwhile, GRDP per capita varied substantially across regions, reflecting differences in economic capacity and resource endowment. Likewise, variations in the open unemployment rate indicate unequal labor market conditions that may contribute to regional poverty disparities.

4.2 Panel Regression Model Selection. Selecting the appropriate panel data model is an essential step to obtain unbiased and efficient parameter estimates. The Chow test was first employed to compare the Common Effect Model (CEM) and the Fixed Effect Model (FEM), followed by the Hausman test to determine whether the Fixed Effect Model or Random Effect Model (REM) was more appropriate.

Table 4. Panel Model Selection

Test	Statistic	Probability	Decision
Chow Test	6.21	0.0000	Fixed Effect Model
Hausman Test	14.87	0.0021	Fixed Effect Model

The Chow test produced a probability value below 0.05, indicating that the Fixed Effect Model performs significantly better than the Common Effect Model. Furthermore, the Hausman test also yielded a probability value below the 5% significance level, confirming that the Fixed Effect Model provides more consistent estimates than the Random Effect Model. Therefore, the Fixed Effect Model was selected as the final estimation model because it accounts for unobserved regional characteristics that remain constant over time but differ across regencies and municipalities.

4.3 Fixed Effect Regression Results. Table 5 presents the estimation results obtained using the Fixed Effect Model.

Table 5. Fixed Effect Regression Results

Variable	Coefficient	t-statistic	Probability
Constant	9.214	4.870	0.000
Agricultural Sector Contribution	-0.082	-2.940	0.004
GRDP per Capita	-0.037	-3.210	0.002
Open Unemployment Rate	0.215	3.760	0.000

Model Statistics	Value
R^2	0.81
Prob (F-statistic)	0.000

Source: Processed secondary data, 2025.

The regression results indicate that the model explains approximately 81% of the variation in regional poverty across regencies and municipalities, while the remaining 19% is attributable to variables outside the model. The significant F-statistic confirms that the explanatory variables jointly influence regional poverty, indicating that the estimated model possesses strong explanatory power.

4.3 Discussion. **Agricultural Sector Contribution and Poverty**. The empirical results demonstrate that the agricultural sector contributes significantly to poverty reduction in Central Kalimantan. The negative coefficient indicates that an increase in the agricultural sector's contribution to regional economic output is associated with a decline in the poverty rate. This finding confirms that agriculture continues to serve as an important source of income generation and employment, particularly for rural households whose livelihoods remain highly dependent on primary economic activities. Although the province has experienced gradual economic diversification, agriculture continues to play a strategic role in supporting household welfare and mitigating poverty.

This relationship can be explained by the economic structure of Central Kalimantan, where agriculture remains one of the dominant sectors across most regencies. Agricultural activities—including food crops, plantations, fisheries, and livestock—not only generate direct income for farming households but also stimulate economic activities through input supply, transportation, processing industries, and local trade. Consequently, improvements in agricultural performance create multiplier effects that extend beyond farm production, increasing employment opportunities and household purchasing power. These mechanisms enable agricultural growth to contribute to poverty reduction through both direct and indirect channels.

The findings support the Structural Transformation Theory proposed by Lewis (1954), which identifies agriculture as the initial engine of economic development in developing regions. During the early stages of structural transformation, agriculture performs multiple economic functions by providing employment, supplying food, and generating capital for the expansion of other productive sectors. Likewise, the pro-poor growth perspective argues that agricultural growth tends to reduce poverty more effectively than growth originating from capital-intensive sectors because rural poor households participate more directly in agricultural production (Christiaensen & Martin, 2020). Therefore, strengthening agricultural productivity remains an important strategy for promoting inclusive regional development.

However, the relatively modest magnitude of the estimated coefficient suggests that the poverty-reducing capacity of agriculture has not yet reached its full potential. One plausible explanation is that a substantial share of agricultural output in Central Kalimantan is generated by large-scale plantation commodities, particularly oil palm, which contribute significantly to regional GRDP but do not necessarily create proportional employment opportunities for local communities. As a result, increases in agricultural output may improve regional economic indicators without generating equivalent improvements in the welfare of smallholder farmers or low-income rural households. This finding indicates that the inclusiveness of agricultural growth is more important than the size of the sector itself.

The present findings are consistent with those of Christiaensen and Martin (2020), who reported that agricultural growth produces stronger poverty-reducing effects than non-agricultural growth in developing economies because it directly benefits low-income households. Similarly, Suryahadi et al. (2021) found that improvements in agricultural productivity significantly reduced rural poverty in Indonesia through higher farm income and expanded labor absorption. Nevertheless, compared with these studies, the effect identified in the present research is relatively smaller, indicating that the structure of agricultural development in Central Kalimantan differs from regions where smallholder farming dominates economic activity. This distinction highlights the importance of considering regional economic characteristics when evaluating the relationship between agriculture and poverty.

From a policy perspective, these findings imply that increasing agricultural production alone is insufficient to accelerate poverty reduction. Regional development strategies should prioritize productivity improvements among smallholder farmers, strengthen agricultural extension services, facilitate access to financing and technology, and encourage downstream agro-industrial development capable of creating higher value-added activities and productive employment. Such policies would enhance the inclusiveness of agricultural growth and ensure that the economic benefits generated by the sector are distributed more broadly across rural communities.

GRDP per Capita and Poverty. The estimation results reveal that GRDP per capita has a negative and statistically significant effect on poverty, indicating that improvements in regional income contribute to better living standards and lower poverty incidence across regencies and municipalities in Central Kalimantan. This finding suggests that regional economic expansion continues to play an important role in improving household welfare through increased income, consumption, and access to essential public services. As economic capacity grows, households are expected to have greater opportunities to invest in education, healthcare, and productive activities, thereby reducing their vulnerability to poverty.

From an economic perspective, higher GRDP per capita reflects greater production capacity and value creation within a region. Nevertheless, the relationship between regional income and poverty is not solely determined by the magnitude of economic output but also by how the benefits of growth are distributed among the population. Resource-rich regions frequently experience relatively high income levels while simultaneously maintaining pockets of persistent poverty because economic gains are concentrated within specific industries or among a limited number of economic actors. Consequently, regional prosperity measured by GRDP per capita does not automatically translate into inclusive welfare improvements unless accompanied by equitable income distribution and broad employment opportunities.

The findings are consistent with neoclassical growth theory, which argues that sustained economic growth increases income and improves living standards over time (Mankiw, 2021). Likewise, Todaro and Smith (2020) emphasize that higher income enables households to satisfy basic needs more effectively and invest in human capital, thereby reducing poverty. However, development economics also recognizes that growth alone is insufficient when accompanied by widening inequality. Inclusive growth therefore becomes essential to ensure that economic expansion benefits not only high-income groups but also vulnerable households and rural communities.

The economic characteristics of Central Kalimantan provide further insight into these findings. The province records relatively high regional income compared with many other provinces because of its abundant natural resources, including mining, forestry, and plantation commodities. However, these sectors are generally capital intensive and often create limited employment relative to their contribution to regional output. As a result, improvements in GRDP per capita may increase average regional income without proportionally improving household income among lower-income groups. This condition partly explains why poverty persists in several regencies despite relatively strong regional economic performance, illustrating that the quality of growth is as important as its magnitude.

The present findings support previous empirical studies. Dollar et al. (2021) reported that economic growth remains one of the most important determinants of poverty reduction across countries, while Ravallion (2020) argued that the effectiveness of income growth depends on the inclusiveness of the development process. Similar evidence was reported by Prasetyo and Kurniawan (2022), who found that higher GRDP per capita significantly reduced regional poverty in Indonesia. However, compared with previous studies, the current findings suggest that the poverty-reducing effect of regional income in Central Kalimantan is moderated by structural characteristics associated with resource-based economic activities. This indicates that the relationship between economic growth and poverty is more complex than a simple increase in regional income.

These findings imply that regional development policies should focus not only on accelerating economic growth but also on improving its inclusiveness. Investment policies should encourage sectors with high labor absorption, strengthen linkages between large industries and local enterprises, and expand opportunities for community participation in productive economic activities. In addition, improving access to education, vocational training, and entrepreneurship support would enable local communities to benefit more directly from regional economic expansion. Through these measures, increases in GRDP per capita can be translated into broader welfare improvements and more sustainable poverty reduction rather than merely reflecting higher regional output.

Open Unemployment Rate and Poverty. The empirical results indicate that the open unemployment rate has a positive and statistically significant effect on poverty, with the largest coefficient among all explanatory variables included in the model. This finding suggests that unemployment constitutes the most influential determinant of poverty across regencies and municipalities in Central Kalimantan during the study period. Economically, the result implies that the inability of the labor market to absorb the available workforce directly reduces household income, weakens purchasing power, and increases the likelihood of individuals falling below the poverty line. Compared with the agricultural sector contribution and GRDP per capita, employment conditions appear to exert a more immediate and substantial impact on household welfare.

This relationship reflects the fundamental role of employment as the primary source of income for most households. Unlike regional output or sectoral contribution, which influence poverty indirectly through broader economic mechanisms, employment affects household welfare through direct income generation. Individuals who are unemployed not only lose regular earnings but also experience reduced access to savings, credit, and productive investment opportunities. Prolonged unemployment further increases vulnerability to economic shocks and limits the capacity of households to maintain adequate levels of consumption, education, and healthcare expenditure. Consequently, even modest increases in unemployment can substantially increase regional poverty.

The findings support labor market theory, which argues that employment represents the principal mechanism through which economic growth is transmitted to household welfare (Borjas, 2020). Similarly, Fields (2021) emphasizes that persistent unemployment in developing economies often reflects structural rather than cyclical problems, including limited industrial diversification, low labor productivity, and skill mismatches between labor supply and labor demand. The International Labour Organization (2022) also identifies productive employment as one of the most effective instruments for poverty reduction because sustainable jobs provide stable income and improve long-term economic resilience. Therefore, reducing unemployment should be viewed not only as a labor market objective but also as a central component of regional poverty alleviation strategies.

The strong influence of unemployment observed in Central Kalimantan can be understood within the context of the province's economic structure. Although the region possesses abundant natural resources and relatively high GRDP per capita, a considerable share of economic output originates from mining and plantation industries that are relatively capital intensive. These sectors contribute substantially to regional income but generate fewer employment opportunities than labor-intensive industries. Consequently, regional economic growth does not always translate into proportional job creation, creating a situation in which economic expansion coexists with persistent unemployment and poverty. This phenomenon illustrates that growth without sufficient employment generation is unlikely to produce inclusive development outcomes.

Another important consideration is the post-pandemic recovery period covered by this study. During 2020–2024, labor markets across Indonesia experienced significant adjustments following the COVID-19 pandemic. Business closures, declining investment, and slower economic recovery affected employment opportunities, particularly for low-skilled workers and informal sector employees. Although macroeconomic indicators gradually improved, labor market recovery was uneven across regions, causing unemployment to remain a significant challenge in several regencies. These conditions reinforce the argument that labor market performance has become an increasingly important determinant of regional poverty in the post-pandemic era.

The present findings are consistent with previous empirical studies. The International Labour Organization (2022) reported that higher unemployment is consistently associated with increased poverty in developing countries because employment remains the primary channel through which households secure sustainable livelihoods. Likewise, Prasetyo et al. (2023) found that open unemployment significantly increases regional poverty in Indonesia, while Santoso and Anwar (2022) demonstrated that labor market performance explains regional poverty more effectively than aggregate economic growth in resource-based regions. The consistency between the present findings and previous studies strengthens the argument that employment creation should receive greater policy attention than merely pursuing higher regional output.

From a policy perspective, the results suggest that poverty reduction strategies in Central Kalimantan should prioritize employment-oriented economic development. Regional governments should encourage investment in labor-intensive manufacturing, agro-processing industries, tourism, and micro, small, and medium-sized enterprises (MSMEs), which possess greater employment absorption capacity than extractive industries. In addition, strengthening vocational education, expanding workforce training programs, improving digital skills, and enhancing collaboration between educational institutions and industry are essential to reduce labor market mismatches. These measures would improve employment opportunities, increase household income, and ultimately accelerate sustainable poverty reduction throughout the province.

Overall Findings and Regional Development Perspective. The findings collectively demonstrate that poverty reduction in Central Kalimantan is determined by the interaction between sectoral development, regional economic performance, and labor market conditions rather than by a single economic factor. While the agricultural sector contribution and GRDP per capita significantly reduce poverty, their effects are relatively smaller than that of the open unemployment rate. This pattern suggests that economic growth alone is insufficient to alleviate poverty unless it is capable of generating productive employment and improving household income. In other words, employment serves as the primary transmission mechanism through which regional economic growth translates into improved social welfare.

The empirical evidence also highlights that the quality of economic growth is more important than its magnitude. Central Kalimantan is characterized by a resource-based economy where agriculture, plantations, forestry, and mining contribute substantially to regional output. However, these sectors differ considerably in their capacity to create employment and distribute income. Capital-intensive industries may increase GRDP and per capita income but often generate limited direct benefits for low-income households.

Consequently, regional economic expansion does not automatically reduce poverty when economic gains are concentrated within specific sectors or among a limited number of economic actors. This finding reinforces the concept of inclusive growth, which emphasizes that development should be evaluated not only by its contribution to output but also by its ability to improve employment opportunities and income distribution.

Compared with previous studies, this research provides additional evidence that labor market conditions constitute the most influential determinant of poverty in resource-based regional economies. Previous empirical studies generally emphasized the independent role of agricultural development or regional income in reducing poverty. However, the present findings indicate that the effectiveness of both variables depends largely on their ability to create productive employment. Therefore, policies aimed solely at increasing agricultural production or regional income are unlikely to achieve substantial poverty reduction unless accompanied by employment-oriented development strategies. This perspective extends the regional development literature by demonstrating that agriculture, economic growth, and labor markets should be viewed as complementary rather than independent drivers of poverty alleviation.

Overall, the study suggests that sustainable poverty reduction requires a more integrated regional development strategy. Strengthening agricultural productivity, promoting economic diversification, and expanding employment opportunities should be implemented simultaneously to ensure that economic growth is translated into broader welfare improvements. Such an integrated approach is particularly relevant for provinces with abundant natural resources, where high regional income does not necessarily guarantee equitable socioeconomic development.

Policy Implications. The findings of this study provide several important implications for regional development policy in Central Kalimantan. First, agricultural development policies should move beyond increasing production and prioritize improving productivity among smallholder farmers through better access to technology, extension services, financing, and market integration. Strengthening downstream agro-industries and local value chains would further increase value added while creating additional employment opportunities in rural areas.

Second, regional economic development should emphasize inclusive growth rather than focusing solely on increasing GRDP. Local governments should encourage investment in sectors with high employment absorption, particularly labor-intensive manufacturing, agro-processing industries, tourism, and micro, small, and medium-sized enterprises (MSMEs). Such sectors are more capable of translating economic growth into household income and reducing regional disparities.

Third, employment creation should become a central component of poverty reduction strategies. Expanding vocational education, improving workforce competencies, strengthening partnerships between educational institutions and industry, and supporting entrepreneurship development are essential to reduce structural unemployment. These initiatives would improve labor market adaptability while enhancing the capacity of local communities to benefit from ongoing economic transformation.

Finally, poverty alleviation policies should adopt a more integrated approach by simultaneously strengthening productive sectors, improving labor market performance, and ensuring that the benefits of regional economic growth are distributed more equitably. Such an approach would enable Central Kalimantan to transform its abundant natural resources into sustainable and inclusive economic development, thereby accelerating long-term poverty reduction.

V. CONCLUSION

This study concludes that agricultural sector contribution, GRDP per capita, and the open unemployment rate significantly influence regional poverty across regencies and municipalities in Central Kalimantan during the 2020–2024 period. While agricultural sector contribution and GRDP per capita have significant negative effects on poverty, the open unemployment rate exerts the strongest positive effect, indicating that labor market conditions play a more decisive role in determining household welfare than regional economic growth or sectoral contribution alone. These findings suggest that poverty reduction in resource-based regional economies cannot rely solely on increasing agricultural output or regional income but requires development strategies capable of creating productive employment and ensuring that the benefits of economic growth are distributed more inclusively. This study contributes to the regional development literature by highlighting that the effectiveness of agricultural development and economic growth in alleviating poverty depends largely on labor market performance, emphasizing the need to integrate sectoral development, inclusive economic growth, and employment creation within regional development policies. Nevertheless, the study is limited to three macroeconomic determinants and a five-year observation period; therefore, future research is encouraged to incorporate additional variables, such as income inequality, human capital, infrastructure development, and government expenditure, while extending the study period to provide a more comprehensive understanding of regional poverty dynamics.

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