

# The Influence of Social Structure and Behavior and Investment on Poverty In East Kalimantan Province

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## ABSTRACT

*This study aims to analyze and test the influence of 1) Community Structure on Community Behavior and Poverty; 2) Community Behavior and Investment on Poverty; 3) Investment on Community Welfare and 4) Welfare on Poverty in East Kalimantan Province. This study uses a descriptive quantitative approach with panel data of nine (9) districts/cities in East Kalimantan in 2011-2023. The data used are population density, open unemployment rate, Domestic Investment, Foreign Investment, length of schooling, expected length of schooling, PMDN, PMA, life expectancy data, average length of schooling, gross regional domestic product, human development index, percentage of poor population, depth of poverty and severity of poverty in East Kalimantan. Data analysis used SEM ( Structural Equation Modeling ) analysis using WarPLS 8.0 software. The results of the study indicate that population structure has a positive and significant effect on community behavior and a negative and significant effect on poverty. Community behavior has a negative and significant effect on poverty, in contrast to insignificant investment, investment has a positive and significant effect on welfare directly and welfare has a negative and significant effect on poverty.*

**Keywords:** population structure, investment, community behavior, welfare and poverty

## INTRODUCTION

Poverty is the inability of a person to meet basic consumption needs to maintain their quality of life. Poverty is a problem faced by almost all countries, especially in developing countries such as Indonesia. Poverty is multidimensional, because human needs are also very diverse. Poverty also has many primary aspects such as poor assets, socio-political organizations, knowledge and skills and secondary aspects such as poor social networks, financial resources and information.

Poverty is one of the socio-economic problems that is still a major challenge for development in various regions, including in East Kalimantan Province. Although East Kalimantan is known as one of the richest provinces in Indonesia due to its wealth of natural resources, especially oil, gas, and coal, the poverty rate in this province is still quite significant. Data from the Central Statistics Agency (BPS) shows that in 2023, the poverty rate in East Kalimantan reached around 6.11 percent, with several districts/cities such as West Kutai, Mahakam Ulu, and Berau having higher poverty rates.

Table 1. Poverty Level of Regency/City in East Kalimantan Province, 2020 - 2023 (Percent)

Regency/City	Year			
	2020	2021	2022	2023
Passer	9.23	9.73	9.43	9.11
West Kutai	9.29	10.24	10.20	9.72
Kutai Kartanegara	7.31	7.99	7.96	7.61
East Kutai	9.55	9.81	9.28	9.06
Berau	5.19	5.88	5.65	5.54
North Paser Peninsula	7.36	7.61	7.25	6.97
Upper Mahakam	11.44	11.90	11.55	11.38
English	2.57	2.89	2.45	2.31
Samarinda	4.76	4.99	4.85	4.81
Bontang	4.38	4.62	4.54	4.11
<b>East Kalimantan</b>	<b>6.1</b>	<b>6.54</b>	<b>6.31</b>	<b>6.11</b>

Source: BPS East Kalimantan Province 2023 (processed)

Table 1. illustrates in general that the poverty rate in East Kalimantan fluctuated during the 2020-2023 period. In 2020, the province's poverty rate was 6.1%, then increased to 6.54% in 2021. However, in 2022 and 2023, the poverty rate decreased again to 6.31% and 6.11%. This shows that although there was an increase in 2021, poverty reduction efforts began to show results in the following years.

At the Regency/City level, Mahakam Ulu and West Kutai have the highest poverty rates. In 2020, the poverty rate in Mahakam Ulu reached 11.44%, and continued to increase to 11.90% in 2021. Although there was a decrease in 2022 (11.55%) and 2023 (11.38%), this figure is still much higher than other regencies/cities. The same thing happened in West Kutai, which is also an area with a high poverty rate, with a poverty rate above 9% for the past four years. In 2021, the poverty rate in West Kutai peaked at 10.24%, then decreased to 9.72% in 2023. East Kutai and Paser also showed relatively high poverty rates, with figures above 9% in 2020 and 2021, but decreased in 2022 and 2023.

In contrast, Balikpapan is a city with the lowest poverty rate in East Kalimantan. In 2020, the poverty rate in Balikpapan was 2.57%, and continued to decline to 2.31% in 2023. Bontang also showed a low poverty rate, with a figure below 5% during the 2020-2023 period. In 2023, the poverty rate in Bontang reached 4.11%. Samarinda and Berau are also areas with relatively low poverty rates, with figures below 6% in 2023. This data also reveals a significant gap between urban and rural areas in East Kalimantan. Cities such as Balikpapan, Bontang, and Samarinda have much lower poverty rates than districts such as Mahakam Ulu, West Kutai, and East Kutai. This shows that economic development is not evenly distributed and is still concentrated in urban areas. This phenomenon is interesting to study further because there is a paradox between the abundant natural resource wealth and the high poverty rate. The heterogeneous structure of society, with the gap between urban and rural communities, and the behavior of society in responding to economic changes, are thought to be factors that influence poverty. In addition, investment, both from the government and the private sector, which should be able to drive economic growth, has not been fully able to reduce poverty evenly.

As is known, poverty occurs due to the inability to meet basic needs, namely clothing, food, and shelter. This concept is closer to the approach of understanding absolute poverty that ignores social needs (Sen, 1976 and 1997; Townsend 1985; Spicker, 1993; Field and Kabur 2005; Pantazis, 2006). However, on the other hand, poverty is understood as limited access to income and public services so that the approach to understanding is a relative poverty approach, by prioritizing social needs (Chenye and Belgrave, 1998; Assamoi, 2007), then continue Marx's analysis in his work entitled *The Poverty Philosophy*.

Poverty is a social problem that has always existed and until now is difficult to solve. Poverty is explicitly a social symptom, namely how the efforts made by the community to meet their life needs, and how these efforts can achieve what is expected. If this thinking develops, then poverty alleviation programs will not be able to solve the real problem, because the program is only directed at meeting needs, and not helping to solve the problem itself (Rosana, 2019). The consequences of poverty are not only that the community becomes miserable, but it can also make people's lives even more difficult because it can cause unemployment, hunger, ignorance, and so on, which are other impacts of poverty.

Several previous studies have examined the factors that influence poverty, both in terms of social structure, behavior, and investment. For example, research by Saputra and Hidayat (2020) found that social structure, including education level and access to employment, has a significant influence on poverty in rural areas. Meanwhile, research by Wijaya and Nugroho (2019) shows that social behavior, such as consumption patterns and saving habits, also plays a role in determining the level of welfare.

On the other hand, a study by Prasetyo and Utami (2021) revealed that investment, especially in the infrastructure and education sectors, can significantly reduce poverty. However, the study also highlighted that the distribution of investment benefits is often uneven, so that not all groups in society feel the impact. In addition, research by Sari and Fitriani (2018) in East Kalimantan found that investment in the mining sector actually creates a greater economic gap between people who are directly involved in the industry and those who are not.

The phenomenon found based on data from the BPS of East Kalimantan Province, that the creation of poor people per day as many as 8 (eight) people, is the basis for the research in the form of this dissertation. Structural Factors of Society, in this case Demographics and Employment, as well as Community Behavior Factors, are analyzed towards the occurrence of Poverty in East Kalimantan Province. The solution to the problem of poverty, namely eradicating poverty, is also analyzed with the increase in welfare resulting from investment in East Kalimantan Province.

Macroeconomic theory is no longer the basis for economic policy, this is because no one knows what will happen in the future. The economy of the future must do what economists cannot do: integrate the domestic and global spheres. Marxist economics is a contradiction, but it has no analytical or predictive power, but has extraordinary appeal, based on a value and defining the creators of wealth, humans, and labor (Drucker, 2020).

Research on the causes of poverty can largely be productively categorized into three broad groups: behavioral, structural, and political. Behavioral theories concentrate on individual behavior driven by incentives and culture. Structural theories emphasize the demographic and labor market contexts that cause both behavior and poverty. Political theories argue that power and institutions cause policies, which cause poverty and moderate the relationship between behavior and poverty (Davis & Sanchez-Martinez, 2015).

According to Gallup & Sachs, (2000), the tropics continue to be a belt of poverty. Tropical countries, almost all have low or middle incomes, with a few minor exceptions, such as countries that have or are rich in natural resources. The causes of poverty in tropical countries are more complex, involving the endowment of natural wealth and geographic isolation.

East Kalimantan Province, which is rich in natural resources and is located on the equator, also became the basis for research thinking. This is associated with a paradoxical phenomenon, and in the research environment it is called the Natural Resource Curse ( *The resource curse* ), also known as *the paradox of plenty* or the poverty paradox, is a phenomenon that countries with an abundance of natural resources (such as fossil fuels and certain minerals), will have less economic growth, less democracy, or worse development outcomes than countries with fewer natural resources (Smith & Waldner, 2021).

The largest contribution to the Gross Regional Domestic Product (GRDP) of East Kalimantan Province, on average per year during the period 2011 to 2020, came from the Mining and Quarrying sector, which contributed more than 70% to GRDP. This is very worrying, considering the results of research conducted by (Mandishekwa, 2021), that considering all the negative effects of mining, the benefits adopted from mining activities may not be obtained. Therefore, a very serious rethink is needed about mining as a strategy to stimulate economic growth.

The dependence of East Kalimantan Province on the Mining and Quarrying sector is a necessity to be replaced by other sectors, such as agriculture, fisheries, services, or environmentally friendly industries. Research conducted by (Mandishekwa & Mutenheri, 2020), that the consequences of post-mining displacement, and its relationship to economic activities and life satisfaction, then the resettlement of residents in mining areas or around mines, has the potential to be carried out.

There is an asymmetric pattern of regional income changes in low-income areas, which is due to the relatively small population and the low urbanization economy (Lee & Kim, 2020). These low-income areas can increase their income levels if they succeed in developing a symmetrical relationship with national economic fluctuations. The Economic Base Pattern of East Kalimantan Province, which is highly dependent on the Mining and Quarrying sector, results in a low population, so that economic activities due to migration from outside the region do not have a significant impact, this is due to the symmetrical relationship with national economic fluctuations in the decentralization pattern.

The essence of controlling population growth is because it can hinder economic growth and poverty alleviation. The government is obliged to invest in improving health and education and stimulating the economy to create jobs, which can ultimately encourage growth so that poverty alleviation and economic growth can be realized (Lee & Kim, 2020).

The current external conditions, which also affect poverty, are the COVID-19 pandemic, which has increased the number of poor people to frightening levels (Cuesta & Pico, 2020). During the current pandemic, which has been marked by a very rapid and large-scale decline in demand and oil prices, as a result of the sudden cessation of economic activity. Demand and prices of other goods show smaller declines, as they are less affected by quarantine measures. As the pandemic continues and the economic downturn deepens, demand and prices of metals may also be reduced. The impact of the 2020 economic downturn on the economy could be long-lasting. A deepening crisis could reduce demand for industrial goods. The global financial crisis of 2020, caused by the COVID-19 outbreak, could cause long-term changes in global commodity markets. The growth of substitution between goods has an impact on changes in consumer behavior. Further changes in people's behavior could lead to shifts in the structure of demand for goods. Increasing *teleworking* could reduce demand for travel and fuel (Vitenu-Sackey & Barfi, 2021). Reducing fuel consumption will provide environmental benefits, but will cause unemployment and ultimately poverty. Economic variables and health variables have a negative and significant effect on poverty (Kusuma *et al.*, 2021).

Ahmad *et al.*, (2019), confirmed that there is a positive and highly significant relationship between net inflows of FDI (*foreign direct investment*) and poverty reduction in Asia. However, it shows significant differences between South and Southeast Asia. In general, FDI has a greater impact on welfare in SAARC countries than in ASEAN countries. This result holds for both the Human Development Index (HDI) and real gross domestic product (GDP).

Different results were presented by Magombeyi & Odhiambo, (2018a), that FDI has a positive impact on poverty reduction in the short term and a negative impact in the long term, when life expectancy is used as a

measure of poverty reduction. When infant mortality is used as a proxy for poverty reduction, the relationship recorded is not significant in both the long and short term. The negative impact of FDI on poverty reduction is confirmed in the short term when household consumption expenditure is used as a proxy for poverty reduction, while in the long term an insignificant relationship is reported. This can be concluded that the impact of FDI on poverty reduction is sensitive to the poverty reduction proxy used.

Foreign Direct Investment (FDI) can contribute to poverty alleviation, as stated by (Niarachma *et al.*, 2021), that three elements of governance that have a positive relationship with FDI inflows in ASEAN countries are regulatory quality, rule of law, and control of corruption. A different thing was stated by (Magombeyi & Odhiambo, 2018b), that the impact of FDI on poverty reduction is sensitive to the poverty reduction proxy and the time considered, namely whether the analysis is carried out in the short term or in the long term.

When infant mortality is used as a proxy for poverty reduction, FDI has a positive impact on poverty reduction in the long run and a negative impact on poverty reduction in the short run. However, when poverty reduction is proxied by household consumption expenditure and life expectancy, there is no significant relationship between FDI and poverty reduction.

Akbar *et al.*, (2020), that there is an inverse and significant relationship between Public Spending and Poverty directly and indirectly. The direct impact of public spending on poverty alleviation programs shows a strong impact on poverty reduction. The indirect impact of public spending on poverty through education turns out to be inversely proportional and very significant. High population growth rates, high unemployment and inflation cause poverty in Asian countries.

Research on poverty alleviation in Mahakam Hulu Regency, East Kalimantan Province, conducted by Aslan *et al.*, (2019), that the allocation of village funds resulted in a significant positive and village spending was significant and negative on economic growth. The allocation of village funds was significant positive, village spending was significant and negative, and economic growth was significant negative on the poverty rate. The indirect effect proves that the allocation of village funds was significant negative and village spending was significant and positive on the poverty rate through economic growth in Mahakam Ulu Regency.

Between 2000 and 2010, the rural poor population on degraded agricultural lands increased, in low-income countries and in sub-Saharan Africa and South Asia. Although degradation threatens the livelihoods of the poor, these interactions are complex and conditioned by key economic, social and environmental factors. These factors also limit the poverty-reducing impacts of economic growth and broad economic reforms. A comprehensive development strategy requires investments that improve the livelihoods of affected people and areas, and facilitate out-migration in severely affected areas (Barbier & Hochard, 2018).

## RESEARCH METHODS

This study uses a quantitative approach with descriptive and causal designs. The data used are secondary data from the Central Statistics Agency (BPS) of East Kalimantan. Descriptive design aims to understand the relationship between independent variables (community structure and investment) with dependent variables (community behavior, welfare, and poverty). Meanwhile, causal design is used to examine the causal relationship between these variables.

The population in this study is the Regency/City in East Kalimantan Province, with a sample of 9 out of 10 Regencies/Cities, referring to panel data for 2011-2023. The research variables consist of independent variables (community structure and investment) and dependent variables (community behavior, welfare, and poverty), each of which has a measurement indicator.

Data were collected through documentation studies from the official website of BPS Kaltim. Data analysis was carried out using the Structural Equation Modeling (SEM) method with WarpPLS software. The analysis process includes designing structural and measurement models, constructing path diagrams, converting to a system of equations, and evaluating validity, reliability, and Goodness of Fit. Hypothesis testing was carried out using the resampling method (bootstrapping) to measure the strength and direction of the relationship between variables in this study.

## RESULTS AND DISCUSSION

The results of this research analysis provide answers regarding the influence of community structure and behavior and investment on poverty in East Kalimantan province. Population structure has a positive and significant effect on community behavior directly, Population structure has a negative and significant effect on poverty directly. Community behavior has a negative and significant effect on poverty directly, investment has a

negative and insignificant effect on poverty directly, investment has a positive and significant effect on welfare directly and welfare has a negative and significant effect on poverty directly.

### 1.1.1 The Influence of Social Structure on Social Behavior

The results of the study show that population structure has a positive and significant effect on community behavior. The positive path coefficient indicates that the higher population density in the population structure causes higher community behavior as reflected in the average length of schooling and expected length of schooling. The results of the analysis show that the path coefficient is 0.61 and the p-value is 0.001, can be stated as significant and the hypothesis is accepted. This condition reflects that higher population density tends to encourage competition to gain access to education and employment, thereby increasing public awareness of the importance of education.

Table 5.1 and Table 5.7, East Kalimantan data shows that cities with high population density such as Balikpapan (1393 people/km<sup>2</sup>) and Samarinda (1187 people/km<sup>2</sup>) have a high average length of schooling (ALS), which is 10.93 years in 2023, compared to areas with low density such as Mahakam Ulu (2 people/km<sup>2</sup>) which has a lower ALS (8.85 years). Likewise, a higher open unemployment rate (TPT) can increase people's motivation to extend their schooling in order to increase competitiveness in the labor market. For example, Bontang with a TPT of 7.74% in 2023 has an ALS of 10.92 years, indicating that people tend to choose to continue their education when faced with limited employment opportunities. The increase in ALS in East Kalimantan from 12.06 years (2011) to 14.02 years (2023) shows people's hopes of achieving higher education, along with increasing population density and labor market dynamics.

This finding is supported by empirical data, Population Density and RLS, Cities with high population density such as Balikpapan (1393 people/km<sup>2</sup>) and Samarinda (1187 people/km<sup>2</sup>) have higher RLS and HLS compared to districts with low density. Studies in East Kalimantan show that urban areas tend to have more complete educational facilities, which increases public access to education. Unemployment and Education, Penajam Paser Utara experienced a decrease in TPT from 8.44% (2011) to 2.07% (2023), along with

RLS increase from 7.07 years (2011) to 8.53 years (2023). This supports the finding that efforts to improve education can help reduce unemployment in the long term.

This finding is supported by the theory of demography and education (d'Iribarne & Easterlin, 1970) which states that higher population density often encourages the development of better educational facilities. This is because population concentration provides economic justification for building more schools and increasing access to education. It is also supported by *human capital theory* (Becker, 1975; Schultz, 1971) which explains that education is an investment in human resources that increases individual productivity. Areas with high population density tend to have better access to formal education, which increases RLS and HLS.

The results of this study are in line with (Hanushek and Woessmann, 2007) who explained that education is a key factor in increasing labor productivity, especially in areas with high unemployment rates. This study is relevant to the findings in East Kalimantan, where areas with high TPT encourage people to extend their education. In line with (Barro, 1991) education, especially at the secondary and tertiary levels, plays an important role in increasing economic growth by improving workforce skills. These findings are also supported by (Harraka, 2002) who stated that higher levels of education tend to produce people who are more socially active and have greater collective awareness, which is relevant to the behavior of people in urban areas of East Kalimantan.

Population density can affect average years of schooling and expected years of schooling, especially in densely populated rural and urban areas. (Zhang & Rozelle, 2022) In developing countries, low population density is often the reason for low school enrollment in rural areas. Studies show that education policies are more effective in densely populated areas, increasing the likelihood of rural children enrolling in lower secondary school. In line with (Luyten & de Wolf, 2011) Stability of Educational Outcomes, changes in student population characteristics can affect average school test results. However, the impact of these changes is often mitigated by past school outcomes, suggesting that student population characteristics have long-term effects on educational outcomes.

Overall, population density plays a significant role in determining educational access and outcomes. In denser areas, educational policies tend to be more effective, increasing participation and potential educational attainment. However, changes in student populations can affect educational outcomes, although these effects are often tempered by past performance.

Population density is related to educational access and infrastructure. High population density can support the establishment of more educational facilities because the costs of establishing schools can be more easily covered. This allows for higher educational attainment and increased literacy (Boucekkine et al., 2011). In dense urban areas, there is more choice of schools and competition between nearby education providers, which can improve the quality of education (Gibbons & Silva, 2021). Education policies tend to be more effective in areas

with high population density, as seen in the increase in school enrollment in dense rural areas in China (Zhang & Rozelle, 2022).

Differently, Carlos and Anadon (2017) found that in areas with high population density, there is greater inequality in test scores, mainly due to school segregation based on socioeconomic status. This can widen the educational gap between rich and poor groups. In addition, with density causing stress and social behavior, high classroom density can affect students' academic achievement and social behavior, especially among girls and boys who experience higher psychological stress (Maxwell, 2003). In rural areas with low population density, school participation tends to be lower, and this problem can worsen with rapid urbanization (Ms. Savita Shivanand & Dr. Surekha F Ksheerasagar, 2022). Romanillos & García-Palomares (2018), showed significant differences between the four cities with different levels of population density in terms of accessibility to schools, there was a significant spatial imbalance from the impact of population density.

The results of the study are also different from (S Todaro M. & Smith, 2015), excessive population density without being supported by adequate educational facilities can cause social pressure and a decline in the quality of education. This finding can be a recommendation for cities such as Balikpapan and Samarinda to maintain the quality of education even though population density is increasing. The same thing is explained (Jhingan, 2016) High unemployment rates in certain areas can actually reduce interest in education because people do not see the added value of education in increasing job opportunities in a saturated labor market.

Population density affects education in complex ways. On the one hand, high density can improve access to and quality of education through better infrastructure and school competition. On the other hand, it can also exacerbate educational inequalities and increase stress among students. Conversely, low density can hinder school participation, especially in rural areas.

This finding confirms that the population structure in East Kalimantan has a positive influence on people's behavior, especially in improving formal education (RLS and HLS). Empirical data shows that areas with high population density have better education levels because of more adequate educational facilities and access. High unemployment rates encourage people to extend their schooling as a form of adaptation to job competition.

### 1.1.2 The Influence of Social Structure on Poverty

The results of the study show that population structure has a negative and significant effect on poverty. The negative path coefficient indicates that the higher the population density in the population structure, the lower the poverty rate, which is reflected in the percentage of poor people, the level of poverty depth and the level of poverty severity. The results of the analysis show that the path coefficient is 0.34 and the p-value is 0.001, which can be stated as significant and the hypothesis is accepted. This condition reflects that areas with high population density tend to have lower poverty rates because access to infrastructure, education, and economic opportunities is better.

Empirically depicted in Tables 5.1 and 5.11 Balikpapan City with a population density of 1393 people/km<sup>2</sup> in 2023 has a poverty rate of 2.31 percent, which is the lowest poverty rate in East Kalimantan. In contrast, districts with low density such as Mahakam Ulu (2 people/km<sup>2</sup>) have higher poverty rates, although specific data for Mahakam Ulu are not available in some indicators.

A negative relationship is also presented in high unemployment rates driving poverty reduction in the long term because the government often adopts policies to create jobs and provide social assistance in areas with high TPT. For example, Bontang City has a TPT of 7.74 percent in 2023 but a relatively low poverty rate of 4.11 percent. The same thing happened in Penajam Paser Utara Regency, the TPT decreased from 8.44 percent in 2011 to 2.07 percent in 2023, in line with the decline in the poverty rate from 8.67 percent (2011) to 6.97 percent (2023).

Regarding the poverty depth level (P1), High population density areas such as Balikpapan have a low depth level (0.25 in 2023), compared to West Kutai (1.29 in 2023). Poverty Severity Level (P2), Areas with better access such as Berau recorded the lowest severity (0.01 in 2023), reflecting a more even distribution of income. Balikpapan City, High population density (1393 people/km<sup>2</sup>) contributes to a low poverty rate (2.31 percent in 2023), because the city has adequate infrastructure and more economic opportunities. Kutai Kartanegara Regency, TPT decreased from 7.68 percent (2011) to 4.05 percent (2023), which is in line with the decrease in the poverty rate from 7.21 percent (2011) to 7.61 percent (2023), although not significant.

The results of this study have strong relevance to the Structural Theory proposed by Brady (2019). According to Brady (2019), Structural Theory emphasizes that poverty is caused by external factors beyond the control of individuals, such as economic conditions, demographics, and public policy. The structure of society, including population density and unemployment rates, are part of the structural factors that influence poverty. High population density can put pressure on resources, such as employment, housing, and infrastructure. This can worsen the economic conditions of the community and increase poverty. Likewise with the open unemployment rate, unemployment is a key indicator in Structural Theory. A high unemployment rate indicates the inability of the economy to absorb labor, which ultimately leads to low income and poverty.

In the context of East Kalimantan, the findings of this study indicate Population density, Areas with high population density, such as large cities (e.g., Samarinda and Balikpapan), may have greater pressure on economic resources, thereby increasing the risk of poverty. On the other hand, areas with low population density but minimal employment opportunities (such as Mahakam Ulu) may also experience poverty due to lack of economic activity. High unemployment rates in several districts, such as West Kutai and East Kutai, indicate that the existing economic structure is unable to absorb adequate labor. This is in line with Brady's Structural Theory, which highlights the importance of employment and economic opportunities in reducing poverty.

Theoretically, this finding strengthens Brady's (2019) argument that structural factors play an important role in explaining poverty. By showing that population density and unemployment have a significant effect on poverty, your research supports the view that poverty is not only caused by individual factors (as in Behavioral Theory), but also by broader structural conditions.

The results of this study are also in line with Todaro and Smith (2015), Areas with high population density often have more developed economic and social facilities, thus helping to reduce poverty. In line with Barro (1991), the level of education and urbanization that often occurs in areas with high population density has a negative correlation with poverty levels. (LEWIS, 1954) stated that areas with high population density tend to experience faster economic growth due to the concentration of labor, infrastructure, and economic opportunities, which ultimately reduces poverty levels. The same thing was stated by (Krugman, 1991) in *Spatial Economic Theory* stating that the concentration of population in certain areas creates an agglomeration economy, which increases economic efficiency and productivity, thereby reducing poverty.

This finding is also supported by Wang et al., (2018) In some areas, such as Guizhou Province in China, population density was found to have a negative effect on rural poverty. This means that areas with higher population densities tend to have lower poverty rates.

Hanushek and Woessmann (2012), found the same thing unemployment encourages people to improve their skills, so in the long term reducing poverty through increasing the competitiveness of the workforce. Suryahadi et al. (2012) Show that increasing employment opportunities and access to infrastructure in urban areas can reduce the depth and severity of poverty.

However, Jhingan (2016) explained that high population density without equitable development can actually increase poverty due to greater social and economic pressures. This can occur in areas that are less economically integrated, such as West Kutai. Dewi and Amir (2018) explained that high unemployment can worsen poverty in rural areas that are less accessible to government policies.

In Indonesia, population density has a significant influence on the number of poor people. A study in East Java showed that population density is positively related to the number of poor people (Noviana Pratiwi & Maria Jefin Paput, 2022). In addition, in Aceh Province, population density also affects the percentage of poverty (Rusyana et al., 2021). Rapid population growth without being balanced by rapid economic growth can increase the density of the poor. This can be seen in Indonesia, where rapid population growth increases the density of the poor (Rahayu et al., 2021).

In addition to other factors that influence the age structure of the population, changes in the age structure of the population, such as an increase in the proportion of the working age population, can increase per capita economic growth and reduce poverty (Cruz & Ahmed, 2018). Urbanization can play a role in poverty reduction, especially in countries experiencing rapid urbanization growth such as Indonesia and countries in Southeast Asia (Chen et al., 2019)

Overall, population density can affect poverty levels in different ways depending on the geographic and economic context. In some areas, higher density can reduce poverty, while in other areas, especially those that are not accompanied by economic growth, it can increase poverty. Poverty alleviation policies need to consider these factors to achieve effective results. High-density areas in East Kalimantan show a negative relationship with poverty because of better access to education, health, and economic facilities. Open Unemployment Rate (TPT). Although high TPT initially presents a challenge, in the long term it can be a driver of government policies to improve people's welfare and reduce poverty. Dimensions of Poverty Depth and Severity: Large cities such as Balikpapan and Samarinda recorded low levels of depth and severity, while rural districts such as West Kutai still face major challenges.

### 1.1.3 The Influence of Community Behavior on Poverty

The results of the study show that community behavior has a negative and significant effect on poverty. The negative path coefficient indicates that the higher the average length of schooling and the expected length of schooling in community behavior causes lower poverty as reflected in the percentage of poor people, the level of poverty depth and the level of poverty severity. The results of the analysis show that the path coefficient of 0.48 and the p-value of 0.001 can be stated as significant and the hypothesis is accepted. This condition reflects a higher

RLS reflects better educational attainment in the community. Higher education is often associated with increased skills and job opportunities, thus contributing to poverty reduction. Empirically, it is depicted in Tables 5.7 and 5.11 that Balikpapan City has an RLS of 10.93 years in 2023 and a very low poverty rate of 2.31 percent. In contrast, districts such as Paser, with an RLS of 8.91 years in 2023, have a higher poverty rate of 9.11 percent.

HLS reflects people's expectations for the future of education. Areas with higher HLS tend to have better education infrastructure, which can help increase income and reduce poverty. As illustrated in Table

5.8 and 5.11 Samarinda City has an HLS of 15.39 years in 2023 and a low poverty depth rate of 0.75. In contrast, West Kutai with an HLS of 13.25 years has a higher poverty depth rate of 1.29.

Percentage of poor population, areas with higher education tend to have lower poverty rates. Poverty Depth and Severity, Education increases people's ability to get better jobs, so that the gap between their income and the poverty line becomes smaller. This shows that areas with higher RLS and HLS have lower poverty rates, poverty depth, and poverty severity.

This finding has strong relevance to the behavioral theory proposed by Brady (2019). According to Brady (2019), behavioral theory focuses on individual and cultural factors that influence poverty. Community behavior, such as education level and expectations for the future, are part of the behavioral factors that can influence poverty. Average Years of Schooling, higher levels of education tend to improve individuals' skills and knowledge, allowing them to get better jobs and earn higher incomes. This can reduce poverty. Expected Years of Schooling, Expectations to complete longer education reflect people's aspirations and motivations to improve their quality of life. People with high educational expectations tend to be more proactive in seeking economic opportunities.

The findings explain that both of these factors have a negative and significant effect on poverty in line with Brady's Behavioral Theory, which states that individual behavior and culture (such as education level and aspirations) can play an important role in reducing poverty. In the context of East Kalimantan, Average Years of Schooling: Areas with higher average years of schooling, such as large cities (e.g., Balikpapan and Samarinda), tend to have lower poverty rates because their people have better skills to compete in the labor market. Expected Years of Schooling, Communities with high expected years of schooling, especially in rural areas, show a motivation to improve their quality of life through education. This can be an important factor in reducing poverty in these areas.

This finding strengthens Brady's (2019) argument that behavioral factors play an important role in explaining poverty. By showing that average years of schooling and expected years of schooling have a significant effect on poverty, your research supports the view that poverty is not only caused by structural factors (as in Structural Theory), but also by individual behavior and aspirations. Education is a way to save oneself from poverty.

Education is a fundamental development goal. Which education plays a key role in shaping a country's ability to absorb modern technology and to develop capacity to create sustainable growth and development (Todaro and Smith, 2015). Education has the highest influence on poverty compared to other development variables such as population, GRDP, and inflation rate (Hermanto and Dwi, 2007).

Education is an effort to improve the skills and productivity of individuals, which ultimately helps them escape from poverty.

poverty. RLS and HLS are important indicators to measure investment in human capital. As stated by (Becker, 1975; Schultz, 1971) in *human capital theory*. *Capability approach* (Sen, 1999) explains that education provides the ability for individuals to expand their life choices, including increasing income and reducing poverty.

Education (formal and non-formal) can play an important role in reducing poverty in the long term, both indirectly through improving productivity and efficiency in general, and directly through training the poor with the skills needed to increase their productivity and in turn increase their income (Arsyad, 2004). The higher a person's level of education, the more knowledge and expertise will increase, which will encourage an increase in a person's productivity. Companies will get more results by employing workers with higher productivity, so that companies will be willing to provide higher wages/salaries to those concerned. Ultimately, someone who has high productivity will get better welfare, which can be shown through increased income and consumption. Education has a significant influence in reducing poverty.

Research shows that increasing levels of education can substantially reduce a person's chances of living in poverty.

The Impact of Education on Poverty can be seen in three important things, namely 1) poverty reduction, education has been proven to significantly reduce poverty levels. Each additional year of education can reduce the likelihood of a person being classified as poor, both objectively and subjectively (Alamelu & Revathy, 2022; Hofmarcher, 2021; Liu et al., 2021); 2) poverty reduction mechanisms, education increases labor force participation and full-time employment opportunities, as well as better health, all of which contribute to poverty reduction (Hofmarcher, 2021; Liu et al., 2021); 3) higher education is more effective, higher education has a more



significant impact on reducing poverty compared to lower levels of education (Alamelu & Revathy, 2022; Awan et al., 2011)

The findings are in line with Hanushek and Woessmann (2007) higher education increases labor productivity and employment opportunities, thus directly reducing poverty. Relevant to the findings in East Kalimantan, where cities with higher education have lower poverty rates. (Barro, 1991) education contributes to economic growth and poverty reduction through increased skills and innovation.

Duflo (2005) also found the same thing that educational interventions, such as subsidies and free education access, have a major impact on improving welfare and reducing poverty in poor communities. Related to the relationship between education and the depth of poverty (Suryahadi et al., 2012) Education helps reduce the gap between the income of poor people and the poverty line, thereby reducing the depth of poverty.

Todaro and Smith (2015) emphasized that education alone is not enough to reduce poverty if it is not accompanied by equal distribution of infrastructure and access to the labor market. In rural areas of East Kalimantan such as West Kutai, higher education is not always followed by a decrease in poverty because access to jobs is limited. (Jhingan, 2016) Higher education levels do not necessarily reduce poverty if the quality of education is low or not relevant to the needs of the labor market.

RLS and HLS have a negative and significant relationship to poverty, covering the dimensions of the percentage of poor people, depth, and severity of poverty in East Kalimantan. Areas with higher RLS and HLS, such as Balikpapan and Samarinda, have better poverty indicators than rural areas such as West Kutai and East Kutai. This finding is in line with global research that education is a major tool for reducing poverty. However, its effectiveness depends on the equity of infrastructure and the relevance of education to the labor market.

Education plays a critical role in reducing poverty by improving employment opportunities and health. However, to maximize the benefits of education, public policies are needed that address equity and address the barriers faced by the poor, especially in urban areas. Higher education has been shown to be more effective in reducing poverty, but access to and quality of basic education must also be improved to break the cycle of poverty.

#### **1.1.4 The Impact of Investment on Poverty**

The results of the study show that investment has a negative and insignificant effect on poverty. The negative path coefficient indicates that the higher domestic investment and foreign investment in investment causes lower poverty as reflected in the percentage of poor people, the level of poverty depth and the level of poverty severity. The results of the analysis show that the path coefficient of 0.11 and the p-value of 0.121 can be stated as significant and the hypothesis is rejected. In theory, investment should create jobs, increase people's income, and ultimately reduce poverty. However, in the context of East Kalimantan, the effect of investment on poverty tends to be insignificant because of the concentration of certain sectors, Investment focuses more on capital-intensive sectors (oil and gas, mining) than labor-intensive sectors, so that its impact on job creation and poverty alleviation is limited and the inequality of benefit distribution, Large investments often benefit investors and certain groups, while the poor do not directly enjoy the benefits.

Empirically, PMDN and PMA increased significantly during 2011–2023, but the poverty rate and its depth indicators did not show a significant decline. PMA declined sharply in 2020 (378,027 thousand USD), but the poverty rate did not increase significantly, indicating that PMA does not directly affect the welfare of the poor.

The results of this study have relevance that can be linked to political theory and structural theory proposed by Brady (2019). According to Brady (2019), Political Theory emphasizes that poverty is influenced by the distribution of power and public policy, including investment policy. Meanwhile, Structural Theory highlights the role of external factors, such as economic conditions and market structure, which can be influenced by investment. The finding that investment has a negative effect on poverty is in line with theoretical expectations that investment can create jobs, increase income, and drive economic growth, which can ultimately reduce poverty. However, the finding that this effect is not significant indicates that investment (PMDN and PMA) may not be effective in achieving its goals of reducing poverty. This can be caused by several factors, such as the uneven distribution of investment benefits or the mismatch between the type of investment and the needs of the poor.

In the context of East Kalimantan, the uneven distribution of benefits, Investment in East Kalimantan, especially in the mining and energy sectors, may benefit certain companies and groups more than the poor. This causes the benefits of investment not to be felt evenly. Mismatch of Investment Types, incoming investments may not be in accordance with the needs of the poor. For example, investment in capital-intensive sectors (such as mining) may not create many jobs for local communities. And Investment may take longer to have a significant impact on poverty, especially if supporting infrastructure (such as education and health) is inadequate.

This finding strengthens Brady's (2019) argument that political and structural factors play an important role in explaining poverty. Although investment is expected to reduce poverty, its effectiveness depends heavily on policies and structures that support equitable distribution of benefits.

Investments focused on capital-intensive sectors such as mining and oil and gas often do not create enough jobs for local communities, so their impact on poverty alleviation is limited (LEWIS, 1954). In line with (Ram & Frank, 1973) in *Dependency Theory*, it is explained that foreign investment (PMA) tends to support the interests of investors rather than local communities, creating an imbalance in the distribution of benefits.

The cause of the insignificant influence is due to the dominance of the extractive sector, most of the investment in East Kalimantan is concentrated in the extractive sector such as oil and gas and mining, which tends to be capital intensive and does not create many jobs for local communities. For example, Balikpapan received large investments in the oil and gas sector, but its poverty rate only decreased slightly from 3.39% (2011) to 2.31% (2023). In addition, due to the geographical inequality factor. Investment is often concentrated in large cities such as Balikpapan, Samarinda, and Kutai Kartanegara, while rural districts such as West Kutai and Mahakam Ulu receive fewer benefits. This creates economic disparities that limit poverty reduction in disadvantaged areas.

In addition, dependence on foreign labor, most large investments use labor from outside the region because local people lack skills that match the needs of the industry. As happened in Kutai Kartanegara, foreign investment was followed by foreign labor (Table 5.5).

The results of this study are in line with (Suryahadi et al., 2012), in their research found that large investments in the mining sector often only provide short-term economic impacts and have less significant impact on poverty alleviation due to the limited distribution of benefits to the poor. Todaro and Smith (2015), explained that investment will not be significant in reducing poverty if it is not accompanied by the development of social infrastructure, such as education and health. Barro (1991) emphasized that investment focused on capital-intensive sectors will generate economic growth, but its impact on poverty alleviation is highly dependent on the distribution of benefits. Akita and Miyata's research (2020), In a case study of Indonesia, they found that large investments often increase income inequality if not accompanied by strong redistribution policies.

The findings of this study differ from Jhingan (2016) who explained that investment has a direct and significant impact on poverty reduction through job creation, especially in labor-intensive sectors. However, this is more relevant to the manufacturing sector, not extractives such as in East Kalimantan. Pramu & Hutajulu (2023) stated that PMA can have a significant impact on poverty alleviation in urban areas, but its impact is smaller in rural areas that are less economically integrated. Surya et al., (2018), that domestic investment (PMDN) and foreign investment (PMA), have an impact on poverty.

In general, Investment can have a significant impact on poverty reduction, although the results can vary depending on the context and type of investment made. Multisectoral Investment: In Enrekang Regency, increasing multisectoral investment was shown to have a significant negative effect on poverty rates, suggesting that investment focused on labor-intensive sectors can reduce poverty (Suwandi, 2022). Portfolio Investment, In Pakistan, portfolio investment and democratic accountability were found to reduce poverty in the short and long term. However, the role of portfolio investment in reducing income inequality was insignificant (Hassan et al., 2021). Labor Investment, Labor investment programs that provide income to previously unemployed individuals show a modest impact on poverty rates, as increasing labor supply can lower the wages of workers who are already employed (Kraybill & Weber, 2001). Finally, human capital investment, Investment in human capital, such as education and job training, can significantly increase incomes and reduce poverty, especially in poor countries. However, these effects take time to fully materialize (Collin & Weil, 2020). For Foreign Direct Investment (FDI), In developing countries, FDI shows a negative relationship

significantly with poverty, although the results vary across regions. In Africa, for example, FDI has a significant positive impact on poverty reduction in some regions, but not in others (Dhrifi et al., 2020; Gohou & Soumaré, 2012).

Overall, investment can play an important role in reducing poverty, but its effectiveness depends on the type of investment and the local context. Investments that focus on improving human capital and labor-intensive sectors tend to be more effective in reducing poverty. However, the results can vary based on the economic and social conditions in each region.

Investment (PMDN and PMA) in East Kalimantan has a negative effect on poverty, but it is not significant due to several factors including: 1) concentration of capital-intensive sectors that do not create many jobs; 2) Uneven distribution of investment benefits, more focused in large cities than rural districts and 3) Dependence on labor from outside the region, so that local people do not get direct benefits from large investments. To increase the effectiveness of investment in reducing poverty, policies are needed that encourage the development of labor-intensive sectors, equal distribution of investment, and increase the capacity of local workers.

#### **1.1.5 The Impact of Investment on Welfare**

The results of the study show that investment has a positive and significant effect on welfare. The positive path coefficient indicates that the higher domestic investment and foreign investment in investment causes

increased community welfare as reflected in the Gross Regional Domestic Product (GRDP) and the Human Development Index (HDI). The results of the analysis show that the path coefficient is 0.48 and the p-value is 0.001, it can be stated as significant and the hypothesis is accepted.

This shows that investment drives economic growth by increasing the output of productive sectors, both in the mining, industrial, and service sectors. In East Kalimantan, large investments in the mining, oil and gas, and plantation sectors have contributed significantly to GRDP. Tables 5.4 and 5.9 clearly show that PMDN increased from IDR 14.78 trillion (2011) to IDR 52.17 trillion (2023), followed by East Kalimantan's GRDP also increasing significantly from IDR 529.84 trillion (2011) to IDR 958.29 trillion (2023).

The relationship between Investment and HDI also shows a positive relationship, where Investment creates jobs, increases per capita income, and supports the development of social infrastructure (education, health) which ultimately increases HDI. East Kalimantan's HDI increased from 72.01 (2011) to 77.44 (2023), entering the "high" category.

Regions such as Balikpapan and Samarinda with large investment realizations have the highest HDI, at 80.12 and 79.45 respectively in 2023. The increase in PMDN and PMA is in line with the increase in GRDP, indicating a direct relationship between investment and economic growth. The HDI which increased from 72.01 (2011) to 77.44 (2023) shows the positive impact of investment on people's welfare, especially through education and health.

This finding is in line with *Endogenous Growth Theory* (Romer, 1997) Domestic and foreign investment encourages capital accumulation, technological innovation, and productivity increases, which have a positive impact on economic growth and welfare. Supported by *Modernization Theory* (Corbett & Rostow, 1960) Investment is one of the main drivers of economic and social transformation, which improves welfare indicators such as the HDI.

Investment plays an important role in improving people's welfare by influencing economic growth and resource distribution. Research shows that investment, both from the public and private sectors, can have direct and indirect impacts on people's welfare. Public and private investment directly affect economic growth and indirectly improve people's welfare through economic growth (Siregar, 2019). However, domestic investment does not always have a significant direct impact on people's welfare, although it can affect unemployment and poverty rates. Economic growth driven by investment has a positive effect on people's welfare. However, uneven distribution of investment can lead to disparities in welfare between regions (Nyoman et al., 2021; Siregar, 2019)

However, there are still challenges and investment strategies, including imbalances in investment distribution and inappropriate allocation of government spending that can lead to inequality in welfare. Therefore, regulatory improvements are needed to facilitate licensing and equalize infrastructure development (Nyoman et al., 2021). The social investment approach emphasizes the allocation of resources for productive and investment-oriented social programs, which can increase economic participation and contribute positively to development and the implementation of social investment policies in various countries shows that this approach can improve welfare by mobilizing the productive potential of citizens from an early age and through labor market activation.

Investments, both from the public and private sectors, have great potential to improve people's welfare. However, their effectiveness depends heavily on equitable distribution and targeted policies. Social investment approaches and community initiatives can be effective strategies to achieve more equitable and sustainable welfare.

The findings of this study are in line with Barro (1991) who explained that investment, both domestic and foreign, contributes significantly to economic growth and improving people's welfare through increasing per capita income. Todaro and Smith (2015) stated the same thing that direct investment has an effect on improving economic and social infrastructure, which ultimately improves people's welfare.

Dunning (1993) explains in the context of Foreign Direct Investment (FDI), Dunning explains that foreign investment brings technology, managerial skills, and international market access, which can significantly improve people's welfare. Hanushek and Woessmann (2012) Investment in the productive sector has a positive chain effect on people's welfare through job creation and improving the quality of education.

This finding is in line with Iftikhar et al., (2010) in Pakistan, who studied the impact of globalization and economic reforms on human development: a case study in Pakistan, found that FDI has a positive and significant relationship with human development in both the short and long term. This implies that Pakistan should continue to liberalize its foreign investment sector to enhance human development efforts in addition to gaining other benefits from FDI in terms of technology transfer and foreign exchange contribution, etc. The significance of this study is in line with what Aigheyisi (2013) studied. In his study entitled *Economic Growth and Human Development Effect of Globalization in Nigeria: Evidence in the Democratic Era*.

In line with the findings of Djokoto & Wongnaa (2023), revealing a significant positive relationship between FDI and human development, with a stronger effect seen in developing countries than in developed countries. In particular, the impact of the FDI-HDI relationship is greater in countries with fairly high-quality institutions, regardless of their income level. In addition, good governance plays an important role in improving human development, as developing countries with high governance quality experience a greater impact of FDI on HDI compared to other countries. The findings of this study suggest that attracting FDI can be beneficial for improving HDI, especially in developing countries. In addition, this study highlights governance as a moderating factor in the relationship between FDI and HDI. Improving the quality of governance can increase the positive impact of FDI on human development in host countries, especially in developing countries.

This finding is different from Akita and Miyata (2020) who found that although investment increases GRDP, its impact on people's welfare is not always evenly distributed, especially in rural areas with limited infrastructure access. Jhingan (2016) stated that large investments concentrated in capital-intensive sectors (such as oil and gas and mining in East Kalimantan) more often benefit capital groups and have less significant impact on the poor. Suryahadi et al. (2012): Emphasize that investment can increase GRDP but is not always significant in reducing inequality or increasing welfare indicators directly.

Ullah & Azim (2015) empirically investigated the impact of globalization on human development in selected Asian countries from 1990 to 2016, explained that in terms of FDI, it is significant and negative in all the models which is a worrying situation for Asian countries and policy makers should focus on the direction of FDI, its impact and how Asian countries can use FDI for human welfare. Almost all investors want to invest in sectors where they earn maximum profit and when there is institutional problem then the focus shifts from human welfare to non-problems. So policy makers should convince foreign investors to invest in projects that are profit oriented as well as human welfare perspective.

Investment drives the development of physical infrastructure such as roads, ports, and airports, which accelerate economic growth and improve people's welfare. Example: Infrastructure development in Penajam Paser Utara related to the National Capital City (IKN) project. Investment also provides strengthening of human resource capacity, Foreign investment often brings technology transfer and increased skills of the local workforce, as seen in industrial cities such as Bontang. In addition, it can have an impact on economic diversification. Although the mining sector dominates, investment in other sectors such as agribusiness and tourism is starting to grow, providing a positive impact on people's welfare in certain areas.

Investment (PMDN and PMA) has a positive and significant impact on the welfare of the people in East Kalimantan, as measured by the increase in GRDP and HDI during 2011–2023. GRDP has increased consistently, indicating a direct contribution from investment to economic growth. HDI has also increased, reflecting the impact of investment on social development, especially in education and health. However, it is important to pay attention to the distribution of investment benefits, especially for people in rural and remote areas.

De Groot found the same. Because there are budget constraints that affect policy makers and influence some of their spending decisions. Given this, spending to attract FDI such as financing incentives and the resulting loss of tax revenues from these incentives can lead to reduced spending on health and education, which in turn leads to a negative relationship between attracting FDI and low HDI levels. The weak relationship found by De Groot becomes stronger when FDI takes place in the presence of low inflation and policy discrimination that favors indigenous investors (De Groot, 2014). Significant negative effects have also been reported (Afoakwa, 2016; Nakouwo, 2019 and Ranjkeshan, 2021). Ranjkeshan explains that Sub-Saharan African countries do not have sufficient social capacity to do so to claim the benefits of FDI, while high levels of corruption prevent the impact of FDI from being transmitted to the poor, thus causing negative impacts. Bayar & Gunduz (2020) use data on 11 transitions for the European Union countries between 1995 and 2018, based on a panel regression analysis find the impact of FDI inflows on human resource development is weak and negative. They do not provide reasons for their findings.

There are several literatures that show that FDI inflow causes profit outflow from developing countries, second, the trend of FDI is in infrastructure, construction, pharmaceutical industry, banking and telecommunications sectors, developing countries. countries cannot convert FDI from profit-oriented sectors to sustainable sectors such as health and education. Sniegocki (2008) claims that countries that try to attract FDI by providing subsidies and tax breaks can result in a large reduction in government revenue that could otherwise be used to invest in education and other service provision. Lipsey, Purvis & Courant (1994); and Krugman, Paul R.; Maurice, Obstfeld; Melitz, (2015) explain that the characteristic of FDI is that it involves not only the transfer of resources but also the acquisition of control. In some cases, the expansion of control is the main purpose of foreign capital entry. This implies the need to filter investment on the basis of economics, military, and politics. The

empirical experience and literature above prove that FDI inflows require a more in-depth study and decisions regarding FDI policies should not be made directly.

#### 1.1.6 The Impact of Welfare on Poverty

The results of the study show that welfare has a negative and significant effect on poverty. The negative path coefficient indicates that the higher the Gross Regional Domestic Product and Human Development Index in community welfare, the lower the poverty rate, which is reflected in the percentage of poor people, the level of poverty depth and the level of poverty severity. The results of the analysis show that the path coefficient of 0.12 and the p-value of 0.09 can be stated as significant and the hypothesis is accepted. This indicates that the increase in GRDP reflects economic growth which is usually accompanied by an increase in people's income, which can directly reduce the poverty rate. In line with the GRDP of East Kalimantan, it increased significantly from IDR 529.84 trillion (2011) to IDR 958.29 trillion (2023). During the same period, the poverty rate decreased from 6.77 percent (2011) to 6.11 percent (2023). These findings are supported by (Mahatma Avigna et al., 2022); (Lilik Andrietya et al., 2020); explains that GRDP has a significant negative effect on poverty, meaning that an increase in GRDP contributes to a decrease in poverty levels. This is found in various regions such as Central Java and East Java Provinces.

The increase in the HDI also shows an increase in the quality of life of the community through access to education, health, and better living standards, which contributes to poverty reduction. The HDI of East Kalimantan increased from 72.01 (2011) to 77.44 (2023). The level of depth

poverty decreased from 0.75 (2011) to 0.77 (2023), reflecting a reduction in the gap between the income of the poor and the poverty line. Percentage of Poor Population: Higher GRDP and HDI reflect an improvement in economic distribution, which reduces the number of poor people. depth and severity of poverty, Increased economic and social welfare helps reduce income disparities among poor groups, thereby reducing the depth and severity of poverty.

The results of this study have strong relevance to the Structural Theory and Political Theory put forward by Brady (2019). According to Brady (2019), Structural Theory emphasizes that poverty is influenced by external factors, such as economic conditions and social structure. Meanwhile, Political Theory highlights the role of public policy and resource distribution in influencing poverty. GRDP (Gross Regional Domestic Product), high GRDP reflects strong economic growth, which can create jobs, increase income, and reduce poverty. This is in line with Structural Theory, which states that good economic conditions can reduce poverty. HDI (Human Development Index), a high HDI indicates a good level of education, health, and income, which are indicators of community welfare. This is in line with Political Theory, which emphasizes the importance of public policy in improving welfare and reducing poverty.

This finding explains that both factors have a negative and significant effect on poverty in line with Brady's argument that structural and political factors play an important role in explaining poverty. In the context of East Kalimantan, GRDP, Regions with high GRDP, such as large cities (e.g., Balikpapan and Samarinda), tend to have lower poverty rates due to greater economic activity and more employment opportunities. Likewise, HDI. Regions with high HDI, which reflects good levels of education and health, tend to have more prosperous communities and are able to overcome poverty.

This finding strengthens Brady's (2019) argument that structural and political factors play an important role in explaining poverty. By showing that GRDP and HDI have a significant effect on poverty, your research supports the view that poverty can be reduced through economic growth and public policies that improve people's welfare.

HDI consistently shows a significant negative effect on poverty, indicating that improving quality of life and education can reduce poverty. This is true in areas such as Central Java, East Java, and Kedu (Rodliyah, 2023); (Lunawati & Sasana, 2022); (Mahatma Avigna et al., 2022); (Qurrata & Ramadhani, 2021); (Lilik Andrietya et al., 2020).

The increase in GRDP and HDI is in line with the decline in poverty in East Kalimantan, although the decline in poverty is relatively slow compared to economic growth. A more significant decline occurred in the depth and severity of poverty, reflecting the positive impact of improving welfare on poor community groups.

The findings of this study are in line with Todaro and Smith (2015) who explained that economic growth represented by GRDP contributes significantly to poverty reduction through increasing community income. Barro (1991) also explained the same thing. This study emphasizes the importance of human resource development (achieved through increasing the HDI) in driving significant poverty reduction. Suryahadi et al. (2012) illustrate that inclusive economic growth and increasing access to social services help reduce multidimensional poverty, including its depth and severity. Duflo (2011) Interventions in education and health (main components of the HDI) have a direct impact on reducing poverty, especially in areas with high poverty rates. *Pro-Poor Growth Theory*

(Ravallion & Chen, 2003) suggests that inclusive economic growth and increasing welfare indicators such as the HDI directly reduce poverty levels, depth, and severity.

However, Akita and Miyata (2020) found that although GRDP increased, this study found that economic growth can increase income inequality if it is not accompanied by equal distribution of benefits. This is relevant in East Kalimantan, where large investments in the oil and gas and mining sectors tend to benefit certain groups. Jhingan (2016) reminds us that economic growth does not always reduce poverty significantly if income distribution is uneven. In line with (Ravallion & Chen, 2003) explaining that poverty reduction through economic growth is highly dependent on the structure of the local economy and how the benefits of growth are distributed.

Several factors that indicate the welfare of the community is able to reduce poverty in East Kalimantan, this is inseparable from the improvement of economic infrastructure, the increase in GRDP in East Kalimantan is largely supported by investment in infrastructure that accelerates economic activity and creates job opportunities. This is also inseparable from the increase in social access, components of the Human Development Index, such as education and health, have a direct impact on increasing community productivity, thereby reducing poverty. Economic Diversification has also been attempted by the government to reduce dependence on the mining sector and expand the agricultural, tourism, and light industry sectors to have a positive impact on poverty reduction.

GRDP and HDI have a negative and significant impact on poverty in East Kalimantan. Improvement in economic and social welfare during the period 2011–2023 helps reduce the percentage of poor people and reduce the depth and severity of poverty. Focus on the distribution of benefits is essential to ensure that economic growth reflected in GRDP and HDI has a direct impact on poor communities.

## CONCLUSION

Based on the results of hypothesis testing and discussion, the conclusion of this study can be presented. The conclusion is the answer to the hypothesis proposed and gives meaning both theoretically and empirically to the findings in this study.

1. The population structure in East Kalimantan has a positive influence on people's behavior, especially in improving formal education (RLS and HLS). This shows that areas with high population density have better education levels because of more adequate educational facilities and access.
2. Population structure has a negative and significant effect on poverty. This condition reflects that areas with high population density tend to have lower poverty rates because of better access to infrastructure, education, and economic opportunities.
3. Community behavior (measured by RLS and HLS) has a negative and significant effect on poverty, covering the dimensions of the percentage of poor people, depth, and severity of poverty in East Kalimantan. Areas with higher RLS and HLS have better poverty indicators than rural areas. This finding is in line with global research that education is the main tool for reducing poverty. However, its effectiveness depends on the equity of infrastructure and the relevance of education to the labor market.
4. Investment has a negative and insignificant effect on poverty. In theory, investment should create jobs, increase people's incomes, and ultimately reduce poverty. However, in the context of East Kalimantan, the impact of investment on poverty tends to be insignificant because of the concentration of certain sectors, Investment focuses more on capital-intensive sectors (oil and gas, mining) than labor-intensive sectors, so that its impact on job creation and poverty alleviation is limited and the distribution of benefits is unequal, Large investments often benefit investors and certain groups, while the poor do not directly enjoy the benefits.
5. Investment (PMDN and PMA) has a positive and significant impact on the welfare of the people in East Kalimantan, as measured by the increase in GRDP and HDI. GRDP has increased consistently, indicating a direct contribution from investment to economic growth. HDI has also increased, reflecting the impact of investment on social development, especially in the fields of education and health.
6. Welfare (GRDP and HDI) has a negative and significant impact on poverty in East Kalimantan. Increasing economic and social welfare helps reduce the percentage of poor people and reduces the depth and severity of poverty. Focusing on the distribution of benefits is essential to ensure that economic growth reflected in GRDP and HDI has a direct impact on poor communities.

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