



Socio-Economic Determinants of Poverty in Southwest Papua Province: A Panel Data Analysis Using Fixed Effects Model (2014–2023)

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Abstract

Background: The poverty rate is one of the key indicators used to assess the welfare of communities within a region, as poverty issues are influenced by both social and economic factors.

Objective: This study aims to examine poverty levels in Southwest Papua Province and analyze the effects of socio-economic factors on poverty levels in Southwest Papua Province.

Methods: The data used consist of panel data covering the period from 2014 to 2023, including several regencies/cities in Southwest Papua Province. The analytical method employed is panel data regression using the Fixed Effects Model (FEM), which was selected based on model selection tests conducted using Stata 17 software.

Results: The results indicate that the poverty rate in Southwest Papua Province is considerably higher than the national average, with a gap of approximately 7.51 percentage points in 2023. Based on the Fixed Effects Model with Cluster-Robust Standard Errors ($R^2 = 0.8783$; $n = 60$; $F\text{-prob} = 0.0002$), Average Years of Schooling ($\beta = -3.345$; $p = 0.025$) and Per Capita Expenditure ($\beta = -0.001$; $p = 0.037$) have negative and statistically significant effects on poverty rates, while Total Population, Open Unemployment Rate, and the Construction Cost Index have positive but statistically insignificant effects.

Conclusion: These findings imply that local government policies aimed at improving the quality of education and enhancing people's purchasing power may serve as effective strategies for reducing poverty rates. Additionally, efforts to control the unemployment rate and account for construction cost factors should be considered in economic development planning in Southwest Papua Province.

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INTRODUCTION

Poverty is a multidimensional issue because human needs themselves are diverse (Kakwani & Son, 2026; Walker, 2019; Zulkifli & Abidin, 2023). As a result, poverty appears in various forms (Paugam, 2016). Its primary aspects include limited ownership of assets, weak sociopolitical organization, and a lack of knowledge and skills. Meanwhile, the secondary aspects relate to restricted social networks, limited financial resources, and inadequate access to information (Etemadi et al., 2017). These conditions are often reflected in problems such as malnutrition, lack of clean water, poor or unfit housing, inadequate health services, low levels of

education, and limited income (Bisung & Elliott, 2017; Reader, 2022).

In addition to the above, the different dimensions of poverty are closely interconnected, both directly and indirectly. This means that improvements or setbacks in one aspect can influence progress or decline in other aspects. Another aspect of poverty is that poor people are human beings, both individually and collectively (Peeters, 2023). Poverty can be distinguished using two approaches, namely absolute poverty and relative poverty (Aijun, 2025; Decerf, 2021; Zheng & Li, 2024). Absolute poverty refers to a condition in which the number of people living below a certain poverty line is identified (Beycan, 2024). Thus, an individual is considered poor when their income falls below the poverty line and is insufficient to meet basic living needs.

Such a low income cannot adequately cover basic physical needs such as food, clothing, and housing that are necessary for survival. In contrast, relative poverty refers to the portion of national income received by different income groups; in other words, it is closely associated with the distribution of income within society (Jolliffe & Prydz, 2021; Ravallion & Chen, 2019). Thus, a person is considered relatively poor if they are able to meet their basic needs but still have a lower standard of living than other people in the surrounding community.

Economic development represents a complex and multifaceted process that encompasses fundamental transformations in social structures, community attitudes, and national institutions while striving to enhance economic growth, address income inequality, and alleviate poverty (Hariram et al., 2023; Todaro & Stephen, 2000). Essentially, development should embody a holistic transformation of society in both economic and social dimensions, progressing toward an improved quality of life. Furthermore, as noted by Sukirno (2006), economic development is characterized as a sequence of initiatives aimed at enhancing economic activities within an economy, leading to increased infrastructure availability, business growth, higher educational standards, and technological advancement.

Southwest Papua Province is a recently established province that emerged from the administrative division of West Papua Province. Its establishment was formalized through Law Number 29 of 2022 concerning the establishment of Southwest Papua Province, which originated from the Rancangan Undang-Undang (RUU) on the Expansion of Southwest Papua Province. This province consists of five regencies and one city: Sorong Regency, South Sorong Regency, Raja Ampat Regency, Tambrau Regency, Maybrat Regency, and Sorong City.

Southwest Papua Province, as a new autonomous region rich in natural resources, still faces significant challenges in the regional development process, particularly in overcoming poverty. The poverty rate in this region remains higher than the national average despite its substantial economic potential. This condition adversely affects the quality of life of the community and hinders sustainable regional development, as a persistently high poverty rate negatively impacts government performance. Therefore, the Regional Government of Southwest Papua Province seeks to develop and implement strategic poverty alleviation programs to reduce poverty rates, particularly extreme poverty. Eradicating extreme poverty is a key objective of the Sustainable Development Goals (SDGs), which aim to achieve this target by 2030. Through Presidential Instruction Number 4 of 2022 on the Acceleration of Extreme Poverty Eradication (Percepatan Penghapusan Kemiskinan Ekstrem [PPKE]), the Southwest Papua Regional Government is urged to intensify its efforts to accelerate the reduction of extreme poverty, with a target of reaching 0% by the end of 2024, six years earlier than the SDGs deadline of 2030.

Table 1

Poverty Line (GK) by Regency/City in Southwest Papua Province in 2020-2024

No.	Regency/City	2020	2021	2022	2023	2024
1	Raja Ampat	374.000	388.021	464.797	557.107	629.473
2	Sorong	380.000	388.166	466.380	559.363	631.729
3	South Sorong	348.000	358.864	422.694	506.944	579.310
4	Maybrat	384.000	396.386	479.977	515.069	565.725
5	Tambrau	393.000	399.421	485.342	528.817	579.473
6	Sorong City	765.000	791.155	827.339	889.486	902.534
ToTal	Southwest Papua	-	-	-	-	756.237

Province

Source: Central Statistics Agency of West Papua Province (2024)

Based on the data in Table 1 above, the development of the poverty line (*garis kemiskinan* [GK]) across the regencies/cities in Southwest Papua Province over the last five years shows that the lowest poverty line was recorded in South Sorong Regency, whereas in 2024, Maybrat Regency previously had the lowest poverty line. Over the past five years, Sorong City has consistently experienced an increase in the poverty line, indicating that the level of community welfare in Sorong City is better than that of other regencies/cities, as characterized by a higher poverty line, reaching Rp 902,534 in 2024. The conditions of extreme poverty and the poverty percentage in Southwest Papua Province can be observed in Figure 2 below.



Figure. 1. Composition of the Poor Population in Southwest Papua Province in 2023 (Southwest Papua Provincial Government, 2024).

Figure 1 illustrates the composition of poverty levels in Southwest Papua Province in 2023. The blue section represents extreme poverty, defined as per capita expenditure (PCE) below the extreme poverty line (*Garis Kemiskinan Ekstrem* [GKE]) of U.S.\$1.90 PPP (Rp 332,170). Meanwhile, the orange section indicates general poverty based on the poverty line (*Garis Kemiskinan* [GK]), with PCE below Rp 550,458. Data on the number of poor people by district and city over the past five years are presented in Table 2 below.

Table 2

Number of Poor People by Regency/City in Southwest Papua Province 2019-2023 (Thousand People)

No.	Regency/City	2019	2020	2021	2022	2023	2024
1	South Sorong	8,60	8,71	9,16	9,33	9,35	9,4
2	Sorong	25,30	24,89	25,93	26,34	26,27	25,69
3	Raja Ampat	8,29	8,32	8,69	8,69	8,51	8,13
4	Tambrauw	4,67	4,59	5,31	5,20	5,13	5,02
5	Maybrat	13,11	12,80	13,48	13,66	13,57	13,35
6	Sorong City	39,02	38,91	41,75	41,93	41,61	40,68
Total		98,99	98,22	104,32	105,15	104,44	102,27

Source: Indonesian Central Statistics Agency (2024)

Based on Table 2 above, the largest number of poor residents is found in Sorong City and Sorong Regency. This is largely due to the higher population in these areas; although access to

basic services is relatively adequate, income levels remain insufficient to support the population properly. Regarding the poverty rate in Southwest Papua Province by district/city from 2019–2024, Tambrauw Regency and Maybrat Regency recorded the highest percentages. The trend in the percentage of poor residents in Southwest Papua Province by district/city over the past five years is presented in Table 3 below.

Table 3

Percentage of Poor Population by Regency/City in Southwest Papua Province 2019-2024 (percent)

No.	Regency/City	2019	2020	2021	2022	2023	2024
1	South Sorong	18,41	18,28	18,55	18,48	18,11	17,83
2	Sorong	28,61	27,48	27,78	27,58	26,88	25,71
3	Raja Ampat	17,16	17,01	17,50	17,32	16,76	15,83
4	Tambrauw	33,66	32,80	33,86	32,45	31,23	29,88
5	Maybrat	32,20	30,78	31,39	31,14	30,28	29,18
6	Sorong City	15,45	14,99	15,35	14,96	14,41	13,67

Source: Indonesian Central Statistics Agency (2024)

Based on Table 3, there are clear differences in both the number and percentage of poor residents across districts and cities. The largest numbers of poor people are found in Sorong City and Sorong Regency, whereas the highest poverty rates, in percentage terms, occur in Maybrat Regency and Tambrauw Regency. Considering these poverty conditions in Southwest Papua, it is important to examine the key socio-economic factors that most strongly influence poverty levels in the region.

Despite the urgency of addressing poverty in newly established provinces in eastern Indonesia, empirical studies that specifically analyze the socio-economic determinants of poverty in Southwest Papua Province using panel data methods remain limited. Most existing studies focus on more established provinces, such as Java or Papua Province as a whole, leaving a significant research gap regarding the unique poverty dynamics of Southwest Papua. Furthermore, previous studies have rarely employed the Fixed Effects Model (FEM) with cluster-robust standard errors to address heteroscedasticity and autocorrelation in panel data from remote Indonesian provinces. This study aims to fill this gap by: (1) analyzing the comparison between poverty levels in Southwest Papua Province and the national average, and (2) examining the effects of five socio-economic factors—Total Population (TP), Average Years of Schooling (ALS), Per Capita Expenditure (PCE), Open Unemployment Rate (OU), and Construction Cost Index (CCI)—on poverty rates using panel data from 2014 to 2023. The novelty of this study lies in its regional specificity, as it applies rigorous econometric methods to a newly established province where empirical evidence on poverty determinants remains scarce.

METHOD

This study employed a quantitative panel data approach. The analytical procedure consisted of: (1) descriptive statistical analysis, (2) classical assumption tests (heteroscedasticity and autocorrelation), (3) model selection tests, including the Chow Test and Hausman Test, and (4) Fixed Effects Model (FEM) estimation with cluster-robust standard errors. The formal econometric model was specified as follows:

$$\text{Poverty}_{it} = \beta_0 + \beta_1 \text{TP}_{it} + \beta_2 \text{ALS}_{it} + \beta_3 \text{PCE}_{it} + \beta_4 \text{OU}_{it} + \beta_5 \text{CCI}_{it} + \varepsilon_{it}$$

Where: Poverty_{it} = poverty rate of district/city i at time t ; TP = Total Population; ALS = Average Years of Schooling; PCE = Per Capita Expenditure; OU = Open Unemployment Rate; CCI = Construction Cost Index; β_0 – β_5 = regression coefficients; ε_{it} = error term; i = cross-sectional unit (district/city); t = time period (2014–2023).

The study used secondary data from the Central Statistics Agency of West Papua Province. The dataset consisted of time-series data from 2014 to 2023 and cross-sectional data from six regencies/cities in Southwest Papua Province, resulting in a total of 60 observations.

The dependent variable was poverty, while the independent variables were Total Population (TP), Average Years of Schooling (ALS), Per Capita Expenditure (PCE), Open Unemployment Rate (OU), and the Construction Cost Index (CCI). To clarify the variables analyzed in this study, operational definitions were formulated. According to BPS, the poverty rate in 2023

referred to the percentage of people living below the poverty line, which was determined based on the fulfillment of basic needs, including the consumption of at least 2,100 calories per person per day. Meanwhile, the poverty line represented the minimum amount of rupiah required to meet basic food and non-food needs.

TP included all individuals who had lived in the geographical area of Southwest Papua for six months or more, as well as those who had lived there for less than six months but intended to settle in the district or city areas of Southwest Papua Province. The data were obtained from BPS West Papua Province. Average Years of Schooling referred to the average number of years individuals aged 15 years and above spent in formal education. This ALS indicator was calculated based on the highest level of education completed and the level of education currently being pursued. According to the United Nations Development Programme (UNDP) standard, the minimum value was 0 years and the maximum value was 15 years. Data at the district/city level in Southwest Papua Province for the period 2014–2023 were measured in years and obtained from BPS West Papua Province.

PCE referred to per capita expenditure adjusted for the Consumer Price Index (CPI) and declining marginal utility, measured annually in thousands of rupiah at the district/city level in Southwest Papua Province from 2014 to 2023. The data were obtained from BPS West Papua Province. OU referred to individuals who did not have a job and were actively seeking employment, as well as those who were not currently seeking work because they believed it was unlikely that they would obtain employment. In this study, unemployed individuals were defined as members of the labor force aged 15–65 who were seeking employment but had not yet secured a job at the district/city level in Southwest Papua Province during 2014–2023. The data were obtained from BPS West Papua Province.

The CCI represented an index of the cost required to construct one building unit per unit area within a district, city, or province in Southwest Papua Province during 2014–2023. The data were obtained from BPS West Papua Province. The data analysis employed descriptive statistical techniques in tabular form to compare the national poverty rate, the provincial poverty rate, and poverty rates across districts/cities in Southwest Papua Province. Furthermore, the influence of socio-economic factors on poverty rates was analyzed using quantitative techniques through panel data regression analysis with the assistance of the Stata statistical software program.

RESULTS AND DISCUSSION

Results

West Papua's Poverty Level to the National

National poverty rate percentage data, Southwest Papua Province poverty data, and poverty level data by regency/city are used to determine the comparison of poverty levels between Southwest Papua Province and the national level, as presented in the following graph.

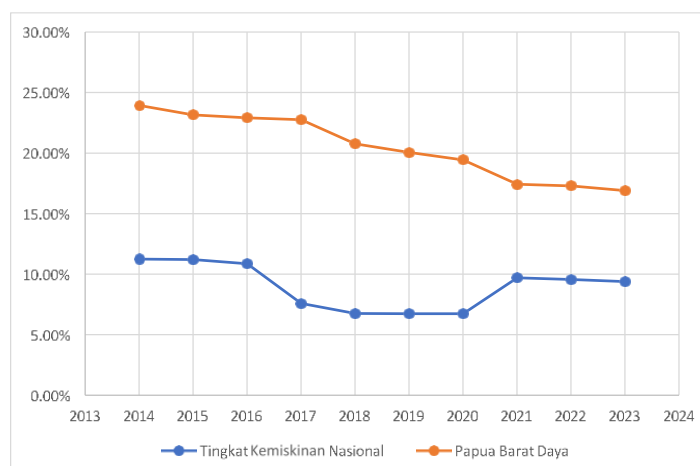


Figure 2. Comparison of the Percentage of the National Poverty Rate and the Poverty Rate in Southwest Papua Province, 2014–2023

The poverty rate in Southwest Papua Province was relatively high compared to the

national poverty rate in 2014, reaching 12.69%, which exceeded the national poverty rate of 11.25%. Over the past 10 years, the poverty rate has shown a downward trend. By 2023, the national poverty rate had declined to 9.4%, while the poverty rate in Southwest Papua Province remained substantially higher at 16.91%, resulting in a difference of 7.51%. The results of the analysis indicate a considerable disparity between the poverty level in Southwest Papua Province and the national poverty rate, with a difference of approximately 10–15% over the past 10 years. The comparison between the national poverty rate and the poverty level in Southwest Papua Province is influenced by the persistently high poverty rates across the regencies and cities in Southwest Papua Province. To examine the comparison between the regency/city poverty rates and the provincial poverty level from 2014 to 2023, see the table below.

Table 4

Comparison of Poverty Rate in Southwest Papua Province and District Poverty Rate in 2014-2023

Year	Raja Ampat	Sorong	South Sorong	Maybrat	Tambrauw	Sorong City	Southwest Papua
2014	20,73	34,30	19,73	35,20	38,35	18,37	23,94
2015	20,94	33,35	20,38	35,31	38,11	17,56	23,16
2016	20,50	33,25	19,92	34,65	36,67	17,85	22,91
2017	20,00	32,86	19,66	34,87	35,99	17,78	22,76
2018	17,80	30,19	19,14	32,89	34,59	15,85	20,78
2019	17,16	28,61	18,41	32,20	33,66	15,45	20,06
2020	17,01	27,48	18,28	30,78	32,80	14,99	19,44
2021	17,50	27,78	18,55	31,39	33,86	15,35	17,43
2022	17,32	27,58	18,48	31,14	32,45	14,96	17,29
2023	16,76	26,88	18,11	30,28	31,23	14,41	16,91

Source: Central Statistics Agency (2024) and Processed in Excel 16 (2025)

Tambrauw Regency and Maybrat Regency were the highest contributors to the poverty rate in Southwest Papua Province over the past 10 years, with poverty rates of around 30%. Meanwhile, Sorong City and Raja Ampat Regency had the lowest poverty rates, followed by South Sorong Regency, with rates ranging from 20% and below.

Socio-Economic Factors Towards Poverty Rate

The results of the classical assumption tests conducted in this analysis showed the presence of autocorrelation and heteroscedasticity. Since the probability value was 0.0253, which is less than the alpha value, autocorrelation was detected. To address heteroscedasticity and autocorrelation, Cluster-Robust Standard Errors were employed. The use of clustered standard errors at the individual level (district/city IDs) helps account for serial autocorrelation and heteroscedasticity within the same group. Therefore, the Fixed Effects Model (FEM) used in this study incorporated Cluster-Robust Standard Errors. The results showed that the coefficient value of the dependent variable, namely the poverty level (*constant*), was 58.1293. This indicates that the population variable has a positive effect on poverty, while average years of schooling and PCE have negative relationships with poverty levels. Meanwhile, OU and the CCI were found to have positive effects on increasing the poverty rate in Southwest Papua Province. The coefficients of the independent variables are explained as follows:

- The population coefficient value of 0.0000158 indicates a positive relationship with the poverty rate. This means that an increase of one person in the total population will increase the poverty rate by 0.0000158. Therefore, a larger population tends to be associated with higher poverty levels.
- The coefficient for average years of schooling is -3.344993, indicating a negative relationship with the poverty rate. This implies that an additional year of schooling can reduce the poverty rate by 3.344993. Thus, higher educational attainment tends to contribute to lower poverty levels.
- The PCE coefficient of -0.0014827 also indicates a negative effect on poverty. This means that if PCE increases by one thousand *rupiah*, the poverty rate will decline by

- 0.0014827. This suggests that higher PCE is associated with lower poverty rates.
- d. The coefficient for the OU rate is 0.1501028, indicating a positive influence on poverty. This means that if the OU rate increases by one person, the poverty rate will increase by 0.1501028. This suggests that higher OU rates are associated with increased poverty levels.
 - e. The CCI coefficient value of 0.0117404 has a positive effect on the poverty level, meaning that if the CCI increases by one index point, the poverty level will increase by 0.0117404. This indicates that higher CCI values are associated with increased poverty rates. Based on the FEM regression results table, the magnitude of the influence of the independent variables—population, ALS, PCE, OU, and the Construction Cost Index—can be interpreted as follows:

Table 5

Determination Coefficient Results

Variable	R square
Total Population (TP)	
Average School Length (ALS)	
Per Capita Expenditure (PCE)	0.8783
Open Unemployment (OU)	
Construction Cost Index (CCI)	

Source: Data processed using Stata 17 (2025)

Table 5 shows that the R^2 value of the panel data regression model is 0.8783, or 87.83%. This coefficient of determination indicates that population size, ALSing, PCE, OU, and the CCI are able to explain 87.83% of the variation in the poverty rate, while the remaining 12.17% is explained by other variables (factors) not included in the model.

F-Simultaneous Test

In the F-test, the statistics use a comparison between the F-test probability and a five percent alpha level. Thus, it can be determined whether the independent variables in the model simultaneously affect the dependent variable.

Table 6

F Test Results

Variable	Probability F
Total Population (TP)	
Average School Length (ALS)	
Per Capita Expenditure (PCE)	0.0002
Open Unemployment (OU)	
Construction Cost Index (CCI)	

Source: Data processed using Stata 17 (2025)

Table 6 shows that the F-value of 0.0002 is smaller than the five percent alpha level ($0.000000 < 0.05$). Therefore, it can be interpreted that the independent variables—population size, *Angka Lama Sekolah* (ALS), per capita expenditure (PCE), open unemployment (OU), and the Consumer Confidence Index (CCI)—simultaneously or jointly affect the poverty rate, with a coefficient of determination of 87.83%.

Partial t-test

The extent to which an independent variable affects the dependent variable can be determined by performing a partial t-test, namely by comparing the p-value of the t-statistic with a five percent significance level ($\alpha = 0.05$), so that it can be determined whether the hypothesis should be rejected or accepted.

Table 7

Hypothesis Testing Estimates

Variable	Coefficients	Prob	Remarks
TP	.0000158	0.240	Insignificant
ALS	-3.344993	0.025	Significant
PCE	-.0014827	0.037	Significant
OU	.1501028	0.180	Insignificant
CCI	.0117404	0.446	Insignificant

Source: Data processed using Stata 17 (2025)

Discussion

Influence of Population

Based on the results, the population variable has a probability value of 0.240, which is greater than the five percent alpha level ($0.240 > 0.05$), with a coefficient value of 0.0000158. This indicates that the population variable has a positive relationship with the poverty rate, but the effect is not statistically significant. Thus, the population variable has a positive yet insignificant effect on poverty levels in Southwest Papua Province.

Influence of Average School Length

Based on the results, the Average Length of Schooling (ALS) variable has a probability value of 0.025, which is less than the five percent alpha level ($0.025 < 0.05$), with a coefficient value of -3.344993. This indicates that the average length of schooling has a negative and statistically significant effect on poverty. Therefore, the variable significantly reduces the poverty rate in Southwest Papua Province by approximately 3%.

Influence of Per Capita Expenditure

Based on the results, the Per Capita Expenditure (PCE) variable has a probability value of $0.037 < 0.05$, with a coefficient value of -0.0014827. This indicates that PCE has a negative and statistically significant effect on poverty. Therefore, an increase in PCE is associated with a decrease in the poverty rate in Southwest Papua Province by approximately 0.14%. This result is consistent with the theory of consumption and welfare, which holds that higher per capita expenditure reflects greater household purchasing power and improved living standards. The finding corroborates Miranti (2017), who demonstrated a significant negative relationship between PCE and poverty across Indonesian regions. In Southwest Papua, policies that stimulate local economic activity, enhance market access, and provide targeted cash transfer programs such as *Program Keluarga Harapan* (PKH) are expected to increase PCE and correspondingly reduce poverty rates.

The Influence of Open Unemployment

Based on the results, the Open Unemployment (OU) variable has a probability value of $0.180 > 0.05$, with a coefficient value of 0.1501028. This indicates that OU has a positive relationship with poverty, but the effect is not statistically significant. Therefore, OU has a positive yet insignificant influence on poverty levels in Southwest Papua Province. The insignificant effect of open unemployment on poverty in Southwest Papua can be explained by the structural characteristics of the local labor market. In newly established remote provinces, the formal employment sector is limited, and a large proportion of the workforce engages in subsistence agriculture, fishing, and informal economic activities that are not captured in official unemployment statistics. This creates a situation in which unemployment figures may not fully reflect actual poverty conditions (Alhudhori, 2017). Furthermore, the presence of government employment schemes and regional civil service recruitment (*Aparatur Sipil Negara* [ASN]) may cushion the impact of unemployment on poverty in this region (Tambunan & Woyanti, 2012).

The Effect of the Construction Cost Index

Based on the results, the Construction Cost Index (CCI) variable has a probability value of 0.446, which is greater than the five percent alpha level ($0.446 > 0.05$), with a coefficient value of 0.0117404. Therefore, it can be concluded that the Construction Cost Index has a positive but statistically insignificant effect on poverty.

Significant poverty reduction efforts in Southwest Papua Province should focus on increasing the Average Length of Schooling and raising Per Capita Expenditure. Efforts to improve the Average Length of Schooling, which in 2023 remained at 8.17 years, equivalent to the second

grade of junior high school, are highly important. Although the education budget constitutes one of the largest portions of regional expenditure alongside the health budget, it has not yet been able to accelerate improvements in ALS significantly. In addition to increasing the budget allocation, more targeted and family-oriented educational policies are needed, particularly through counseling programs that emphasize the importance of education for school-age children to parents and prospective parents. Education broadens perspectives and enhances analytical and problem-solving skills, including those related to health issues. Furthermore, ALS influences the types of employment opportunities individuals can access, which subsequently affects income levels and, ultimately, per capita expenditure.

CONCLUSION

Significant socio-economic factors affecting the poverty rate in Southwest Papua Province are Average Length of Schooling (ALS), which is significantly negative, and Per Capita Expenditure (PCE), which is also significantly negative, while other factors such as population, old-age dependency ratio (ODR), and affordability index have insignificant effects. Theoretically, this study contributes to the body of literature on poverty determinants in newly established provinces in eastern Indonesia, providing empirical evidence that human capital development and household welfare, as reflected by ALS and PCE, respectively, are the most critical levers for poverty reduction. This finding is consistent with human capital theory and welfare economics frameworks.

From a policy perspective, the Regional Government of Southwest Papua Province should prioritize: (1) increasing the education budget allocation with a focus on improving school enrollment and completion rates, particularly at the junior and senior high school levels; (2) implementing social protection programs that enhance household purchasing power, such as the *Program Keluarga Harapan* (PKH) and *Bantuan Pangan Non-Tunai* (BPNT); and (3) developing community-based economic empowerment programs to support rural livelihoods in high-poverty districts such as Tambrau and Maybrat.

This study has several limitations. First, the data period is constrained to 2014–2023 due to the province's recent establishment. Second, the analysis does not capture qualitative dimensions of poverty, such as social exclusion and access to justice. Future research should incorporate additional variables such as infrastructure access indices, health indicators, and social capital measures to provide a more comprehensive understanding of poverty dynamics in Southwest Papua Province.

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AUTHOR CONTRIBUTION STATEMENT

All authors contributed equally to this research. The first author was responsible for conceptualization, data collection, and manuscript writing. The second author contributed to the research methodology, data analysis, and interpretation of results. The third author revised the manuscript critically for important intellectual content. All authors have read and approved the final version of the manuscript.

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