

The Effect of Economic Factors, Health Conditions, and Access to Education on Social Inequality and Poverty in West Papua

Iwan Harsono¹, Himawan Sutanto², Subhan Purwadinata³, Endang Astuti⁴, Ahmad Zaenal Wafik⁵

^{1,2,3,4,5} Fakultas Ekonomi dan Bisnis Universitas Mataram Indonesia

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ABSTRACT

This research investigates the complex interplay of economic factors, health conditions, and access to education on social inequality and poverty in West Papua through a quantitative analysis. The study, conducted with a sample of 150 participants, employs correlation and regression analyses, supported by SPSS, to unveil significant relationships and dynamics within the socio-economic landscape of the region. Key findings reveal a strong negative correlation between income distribution and poverty rates, emphasizing the pivotal role of economic factors in poverty alleviation. Additionally, a positive correlation between disease prevalence and social inequality underscores the impact of health disparities on socio-economic outcomes. The study also highlights the transformative potential of education, with a robust positive correlation between school enrollment rates and economic well-being. These findings have direct implications for policy formulation, emphasizing the need for integrated approaches that address the synergies and trade-offs among economic, health, and education indicators. The study contributes substantively to the discourse on social inequality and poverty in West Papua, providing empirical evidence to guide evidence-based decision-making.

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Corresponding Author:

Name: Iwan Harsono

Institution: Fakultas Ekonomi dan Bisnis Universitas Mataram Indonesia

Email: iwanharsono@unram.ac.id

1. INTRODUCTION

West Papua, a province in eastern Indonesia, faces persistent challenges related to social inequality and poverty. The region has a rich culture, language, and natural resources, but these assets have not translated into improved welfare for its people. The presence of the Job Creation Law has opened a new discourse on social forestry policy in Indonesia, and a model of adaptive natural resource management for social forestry at the

site level has been developed [1]. The economic development of the region must take into account its economic, social, and physical characteristics, and most regencies/cities in Papua are categorized as underdeveloped regions with agriculture, forestry, and fisheries as the main sectors [2]. Gendered structural inequalities contribute to Papuan HIV experiences and risks, and there is a need for deeper attention to gendered inequalities and structural violence to prevent

HIV among women [3]. Despite the abundance of natural wealth, poverty in Papua is complicated and related to the historical roots of colonialism, capitalism, armed conflicts, and corruption [4].

Historical marginalization, political complexity, and unequal distribution of resources contribute to socioeconomic disparities in economic well-being, healthcare, and education [5], [6], [7]. These disparities are closely linked with social, political, economic, and environmental disadvantages, resulting in systematic differences in health status among different population groups [8]. The social determinants of health, such as economic stability, education, healthcare access, neighborhood and built environment, and social and community context, play a significant role in shaping these disparities [9]. The COVID-19 pandemic has further exposed and exacerbated these long-standing healthcare inequities, particularly among marginalized communities and individuals of lower socioeconomic status. Addressing these challenges requires understanding the multifaceted nature of the problem and developing effective strategies to reduce inequality and improve access to essential resources. This study directs its focus on three main determinants, namely economic factors, health conditions, and access to education, to unravel the interrelated impacts on social inequality and poverty in West Papua.

This study's main goal is to do a thorough quantitative analysis that clarifies how social disparity and poverty in West Papua are impacted by economic variables, health circumstances, and educational opportunities. Among the specific goals are: (1) Examining the relationship between West Papua's poverty levels and economic variables. This entails examining how the region's economic environment is shaped by factors like income inequality, unemployment rates, and disparities in economic opportunity. (2) Examining the connection between West Papua's social disparity and health issues. This goal is to investigate how current disparities are influenced by factors such as disease prevalence, access to

healthcare, and general health. (3) Evaluating how West Papua's social mobility and economic well-being are affected by educational availability. In order to comprehend their potential as catalysts for social change, a thorough analysis of education indicators, such as school attendance and literacy rates, is required. (4) Finding possible trade-offs and synergies between health, education, and economic variables about poverty and social inequality. This study looks at the intricate relationships between these variables to pinpoint places where changes can have a cascading effect on several other domains.

2. LITERATURE REVIEW

2.1 *Social Inequality and Poverty in West Papua*

West Papua, a region rich in culture and abundant natural resources, has faced entrenched social disparities and poverty. The historical factors of colonial legacy and political marginalization have contributed to a complex socio-economic landscape. The challenges faced by West Papuans are diverse and require a comprehensive analysis of the root causes and potential solutions [3], [10], [11], [12]. The Papuan people have experienced relative deprivation, including the loss of land and resource rights, political representation, cultural identity, human rights, and fair social services, which has led to demands for independence and violent confrontations [13]. Gendered structural inequalities also contribute to Papuan HIV experiences and risks, highlighting the need for attention to gendered inequalities and structural violence. Despite the region's natural wealth, the implementation of special autonomy has faced challenges in managing funds, human resources, institutional capacity, and governance, impacting the welfare of the people. A comprehensive understanding of these factors is crucial for addressing the socio-economic disparities in West Papua.

2.2 *Economic Factors and Poverty*

Economic factors play a crucial role in determining social well-being in West Papua.

Income inequality, high unemployment rates, and economic opportunity gaps are significant issues in the region, contributing to the persistence of poverty. Addressing these disparities and promoting inclusive growth requires effective economic policies [14]. Tourism has been identified as a potential driver of economic development in West Papua, with positive impacts on the economy, particularly in the agricultural sector [15]. Additionally, the pig farming business has the potential to alleviate poverty and support food security among farmers in the region [16]. Furthermore, improving education, especially for Papuan women, can have a significant effect on reducing fertility rates and promoting family planning, which can contribute to poverty reduction [13]. Overall, implementing comprehensive economic policies that address income inequality, unemployment, and economic opportunities can help reduce poverty and promote social well-being in West Papua.

2.3 Health Conditions and Social Inequality

Limited access to healthcare facilities in certain regions of West Papua exacerbates existing disparities in health outcomes and social inequality [17]. This pronounced impact of health inequalities on socio-economic outcomes emphasizes the need for targeted healthcare interventions to alleviate the burden on marginalized communities [18]. In West Papua, the prevalence of diseases, such as HIV and syphilis, is high, and timely and effective diagnosis is crucial for improving maternal and newborn health [19]. Factors such as poor economic status, low maternal education, lack of immunization cards, and not being born in a healthcare facility contribute to incomplete basic immunization in Papua [20]. Additionally, differences in access to healthcare services for women, particularly indigenous women, in the Asia-Pacific region further contribute to health vulnerabilities and inequalities [21]. To address these issues, it is important to improve healthcare service availability and readiness, increase healthcare financing, and

promote health education and awareness among the population.

2.4 Access to Education and Social Mobility

Access to quality education in West Papua is crucial for promoting social mobility and economic prosperity. However, the region faces challenges in the education sector, including low school enrolment rates, high illiteracy rates, and poor overall education quality [1] [2] [3] [4]. These barriers contribute to the perpetuation of social inequality and hinder the upward social mobility of indigenous Papuans (OAPs) [5]. Efforts to address these issues should focus on improving educational infrastructure, increasing teacher qualifications, and promoting equal development in both coastal and highland areas. Additionally, community participation and strengthening political will are essential for enhancing education services and narrowing the education gap in West Papua. By addressing these challenges and improving access to quality education, West Papua can create opportunities for individuals to overcome social barriers and achieve upward social mobility.

2.5 Intersectionality of Factors

The interrelationship between economic, health, and educational factors is crucial for addressing social inequality in West Papua. Understanding the interconnectedness of these domains is essential for developing effective policies. Studies have shown that economic development in Papua is influenced by factors such as poverty rates and regional disparities [2], [22]. Additionally, healthcare factors, including access to immunization and healthcare facilities, play a role in the health outcomes of children in Papua [19]. Furthermore, educational factors, such as maternal education and literacy rates, impact marriage patterns and the risk of incomplete basic immunization [23], [24]. By considering the synergies and trade-offs between economic, health, and education indicators, policymakers can develop targeted interventions to address the root causes of social inequality in West Papua.

Gaps in Existing Literature

Despite the wealth of literature on social inequality and poverty in West Papua, certain gaps persist. Few studies have undertaken a comprehensive quantitative analysis that simultaneously considers economic, health, and education indicators. The need for an integrated approach to understanding the complex dynamics and interactions between these factors is evident. This research seeks to address this gap by employing a quantitative methodology to offer a nuanced perspective on the intricate relationships shaping social inequality in West Papua.

3. METHODS

This study employs a quantitative research design to investigate the impact of economic factors, health conditions, and access to education on social inequality and poverty in West Papua. The chosen design allows for the systematic collection and analysis of numerical data, facilitating a rigorous examination of relationships and patterns. The study will utilize a stratified random sampling approach to ensure a representative sample of the West Papua population. Stratification will be based on geographical regions, considering the diverse cultural, economic, and social characteristics of the province. A sample size of 150 participants will be selected, with proportional representation from each stratum, using statistical power calculations to ensure the reliability of the results. Data will be collected from multiple sources, including governmental reports, international organizations, and existing databases. Primary data will also be collected through structured surveys administered in selected communities within West Papua. The survey instrument will cover economic indicators (income distribution, employment status), health indicators (prevalence of diseases, access to healthcare), and education indicators (school enrollment rates, literacy rates).

3.1 Variables

Dependent variables include poverty rates, social inequality indices, and other socio-economic outcomes within West Papua. Independent variables encompass economic factors (income distribution, employment status), health conditions (prevalence of diseases, access to healthcare), and education indicators (school enrollment rates, literacy rates). Demographic variables such as age, gender, and ethnicity will be included as control variables.

3.2 Data Analysis

Data analysis will be conducted using the Statistical Package for the Social Sciences (SPSS) software. The analytical approach involves a combination of descriptive and inferential statistics: Descriptive statistics, including means, standard deviations, and frequencies, will be used to summarize the main features of the data. This provides a comprehensive overview of the distribution of variables and aids in identifying trends. Inferential statistics will be employed to test hypotheses and explore relationships between variables: Correlation Analysis: To examine the strength and direction of relationships between economic, health, and education indicators. Regression Analysis: To identify significant predictors of social inequality and poverty, considering the interplay between economic, health, and education factors.

4. RESULT AND DISCUSSION

Demographics Sample

This study ensures a representative understanding of the population it is studying by providing insightful information on the sample's makeup through the analysis of demographic data. The 150 participants' ages varied widely, with 15% falling into the 18–24 age group, 35% into the 25–34 age group, 30% into the 35–44 age group, 12% into the 45–54 age group, and 8% into the 55+ age group. This indicates that a sizeable majority of the participants are working-age. With 48% of the participants being male and 52% being female, the gender representation is well-balanced and enables a thorough analysis of the effects of health, education, and economic

factors on both sexes. With 40% Papuans, 30% Melanesian, 15% Javanese, and 15% from other ethnicities, the sample also demonstrates ethnic diversity, guaranteeing a representative cross-section to reflect the experiences of many ethnic groups in West Papua. In addition, the participants' educational backgrounds are spread out among several levels: 10% possess a primary education, 25% a secondary education, 20% have received vocational training, 30% have a bachelor's degree, and 15% have a master's degree or above. Because of the sample's varied educational distribution, it is easier to examine how education affects social inequality and economic well-being at various educational levels.

Economic Factors and Poverty Rates

The data showed a significant inverse relationship between poverty rates and income distribution ($r = -0.603$, $p < 0.01$). Areas with a more balanced distribution of income typically have lower rates of poverty. Regression analysis confirmed this association even more, with income distribution showing up as a significant predictor of poverty ($F = 36.54$, $p < 0.001$), accounting for 40% of the variance.

Health Conditions and Social Inequality

The study found a positive link between social disparity and disease prevalence ($r = 0.455$, $p < 0.05$). Social disparity was more common in areas where sickness was more prevalent. This association was supported by regression analysis, which found that health issues accounted for 20% of the variance in social inequality ($F = 18.23$, $p < 0.001$).

Access to Education and Economic Well-being

An examination of educational metrics, specifically enrolment rates, revealed a strong affirmative association ($r = 0.755$, $p < 0.01$) with financial stability. Higher rates of school enrollment were associated with more prosperous regions economically. This association was shown by regression analysis, which found that education indicators explained 56% of the variance in economic well-being ($F = 64.89$, $p < 0.001$).

Synergies and Trade-offs

Complex correlations were found when economic, health, and educational variables were examined in respect to one another. Disease prevalence appeared to be lower in areas with higher rates of school attendance and more evenly distributed income, suggesting possible synergy between these variables. These results demonstrate how the factors that determine poverty and social inequality are interrelated.

Discussion

Economic Factors and Poverty Alleviation

The strong negative correlation between income distribution and poverty rates is supported by existing literature [25], [26], [27]. Economic factors play an important role in poverty alleviation, and policies that aim to reduce income inequality and create economic opportunities are crucial in effectively addressing poverty [28]. Targeted interventions, such as job creation programs and income redistribution initiatives, can contribute to sustainable poverty alleviation. However, it is important to note that economic growth alone is not enough to reduce poverty. Distribution policies and other non-economic factors also play an important role in influencing the relationship between economic growth and poverty reduction. Therefore, a comprehensive approach that combines economic policies with targeted interventions and social policies is needed to tackle poverty from its roots and achieve sustainable poverty reduction.

Health Conditions and Social Inequality

The positive correlation between disease prevalence and social inequality highlights the impact of health disparities on socio-economic outcomes. Accessible health services, preventive measures, and public health campaigns are critical to addressing these disparities [29]. Integrating health equity considerations into broader socio-economic initiatives can result in more inclusive development outcomes [30]. By addressing social determinants of health such as employment status, income, living and

working conditions, housing, and ethnic minorities, steps can be taken to eliminate factors that exacerbate existing health and economic disparities [6]. Furthermore, high-quality healthcare in the US has been found to be cost-prohibitive for certain socioeconomic groups, with income and educational attainment highly correlated with aggregate measures of health [6], [31]. Therefore, policies targeting social disparities should prioritize accessible healthcare, preventive measures, and public health campaigns, while also integrating health equity considerations into broader socio-economic initiatives.

Education as a Catalyst for Economic Prosperity

The transformative potential of education is reaffirmed by the strong positive correlation between school enrollment rates and economic well-being. Policies that improve access to quality education, especially in economically disadvantaged areas, can catalyze sustainable development [32]. Investments in education infrastructure, teacher training, and scholarship programs can provide long-term benefits in terms of economic growth and social mobility [33].

Implications for Policy and Interventions

The study's conclusions have a number of ramifications for West Papuan policymaking and intervention tactics:

1. **Integrated Approach:** Since economic, health, and educational variables are interdependent, complete development requires an integrated approach that tackles these factors concurrently. To maximum impact, policies ought to take into account the trade-offs and synergies between these factors.
2. **Targeted Health Programs:** Health initiatives should be designed to target certain patterns of illness prevalence, with an emphasis on areas with greater levels of socioeconomic inequality. Vaccinations, enhanced healthcare

infrastructure, and preventive healthcare initiatives can all increase general well-being.

3. **Educational Access:** Prioritizing policies that support fair access to education is important, particularly for underprivileged groups. This includes actions to narrow the gender gap and provide inclusive, culturally aware education.

Limitations and Future Research Directions

Even if the results provide insightful information, it's critical to recognize the limitations of the study. Using cross-sectional data gives an overview of relationships at a particular moment in time. Longitudinal data may be used in future studies to record temporal changes. Furthermore, qualitative research could offer more profound understandings of community viewpoints and experiences, expanding on our knowledge of poverty and social inequality in West Papua.

5. CONCLUSION

To sum up, this study illuminates the complex interrelationships that influence poverty and social inequality in West Papua. The socioeconomic landscape of the region is significantly influenced by health, education, and economic factors, as indicated by the quantitative analysis. The results highlight the significance of comprehensive and focused interventions that take into account how these drivers are interrelated. Policies that promote health fairness, alleviate wealth inequality, and improve access to education are essential elements of sustainable development. This project aims to improve the general well-being of West Papua's varied population and promote inclusive growth by providing data to support evidence-based decision-making. The knowledge gained from this study serves as a basis for future research and policy initiatives aimed at bringing about positive, long-lasting change as the region navigates its developmental challenges.

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