



The Influence of Literacy Rates on Poverty in West Java Province in 2021-2022

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Abstract

The research utilizes data sourced from Central Bureau of Statistics in Indonesia covering the years 2021-2022 for each district in West Java. The dataset includes variables such as Literacy Rates and Number of Poor People, comprising a total of 108 data points across 27 districts. This quantitative approach aims to investigate the interplay between Literacy Rates and poverty using the Structural Equation Modeling method with Partial Least Squares (SEM-PLS) in SmartPLS 4. The study seeks to provide insights into how changes in Literacy Rates influence poverty dynamics within the province. The research finds a significant negative relationship (-0.299) between Literacy Rate and the Number of Poor People. This indicates that as Literacy Rate increases, there is a corresponding decrease in poverty levels within the province. The findings underscore the critical role of literacy in socio-economic development, highlighting its impact on educational attainment, economic opportunities, health outcomes, and community engagement.

Keywords: *Literacy Rates; Poverty; West Java.*

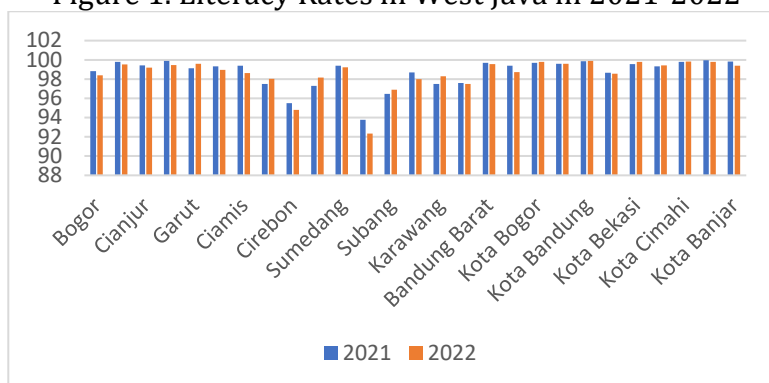
INTRODUCTION

Reading is not merely a pastime but a cornerstone of national and state life, playing a pivotal role in fostering intellect and nurturing creativity among individuals. Through reading, people gain access to diverse perspectives, knowledge, and ideas that stimulate critical thinking and innovation. It cultivates a deeper understanding of societal issues, history, and culture, empowering individuals to contribute meaningfully to their communities and the nation at large. Moreover, reading fosters language proficiency, communication skills, and the ability to analyze and synthesize information, all of which are essential in an increasingly interconnected and information-driven world (Muhtarom, 2016).

However, despite its profound benefits, there has been a noticeable decline in reading interest across Indonesia (Sulfemi, 2023). This trend poses a significant challenge for both central and regional governments, as well as educators and community leaders, who recognize the pivotal role of literacy in sustainable development. Addressing this challenge requires concerted efforts to promote reading culture through educational programs, community initiatives, and policy

interventions that make literature and reading materials more accessible and appealing to people of all ages and backgrounds (Barber & Klauda, 2020).

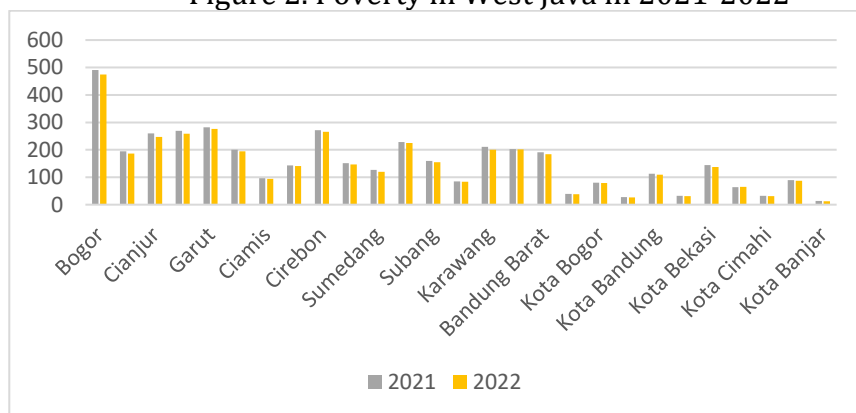
Figure 1. Literacy Rates in West Java in 2021-2022



Source: Central Bureau of Statistics in Indonesia, 2024

From 2021 to 2022, several cities and districts in West Java experienced declines in their literacy rates. Cirebon saw a decrease from 95.50% to 94.81%, indicating a decline of 0.69 percentage points. Tasikmalaya's literacy rate dropped from 99.34% to 98.96%, reflecting a decrease of 0.38 percentage points. Similarly, Ciamis experienced a decline from 99.40% to 98.63%, marking a decrease of 0.77 percentage points. Indramayu's literacy rate declined significantly from 93.76% to 92.34%, showing a decrease of 1.42 percentage points. Pangandaran's literacy rate also decreased from 99.39% to 98.74%, indicating a decline of 0.65 percentage points. Finally, Purwakarta recorded a decrease from 98.68% to 97.98%, representing a decline of 0.70 percentage points.

Figure 2. Poverty in West Java in 2021-2022



Source: Central Bureau of Statistics in Indonesia, 2024

Data shows that from 2021 to 2022, all recorded areas experienced a decline in the number of poor people, indicating a relative improvement in economic and social conditions in most cities and districts in West Java during that period. After reviewing literacy data and the number of poor people (in thousands) from 2021 to 2022, no city



or district showed a decline in literacy rates and also experienced a decline in the number of poor people in the same period.

Previous research produced findings that Literacy Rate had a negative and significant effect on Poverty (Lavenia et al., 2023). However, in other research shows that Literacy Rate has no effect on Poverty (Muhtarom, 2016). The goal of this research is to analyze and understand the influence of the Literacy Rate on the Poverty of West Java Province during the period of 2021-2022.

METHODS

Hypotheses

The goal of this research is to analyze and understand the influence of the Literacy Rate on the Poverty of West Java Province during the period of 2021-2022. High literacy levels increase access to and participation in education. Individuals with good literacy levels tend to have more opportunities to acquire the skills and knowledge needed to access better jobs and higher incomes. This can help reduce unemployment rates and improve overall economic prosperity (Muhtarom, 2016).

H1: Literacy Rate has negative and significant effect on Poverty

Method

This research is using quantitative methods to analyze data sourced from Badan Pusat Statistik covering the years 2021-2022 for each district in West Java (BPS, 2024). The dataset encompasses variables such as Literacy Rates and Number of Poor People, totaling 108 data points across 27 districts. Utilizing the Structural Equation Modeling method with Partial Least Squares (SEM-PLS) in SmartPLS 4.0 (Ghozali & Latan, 2015), the study aims to investigate the interplay between Literacy Rates dan poverty.

Data Processing

Data preprocessing is crucial to ensure data integrity and reliability. Validity tests are employed to confirm that all measured variables (HDI and economic growth) exhibit loadings above 0.7, indicating robust measurement of their respective constructs. Additionally, reliability is assessed using Cronbach's alpha, ensuring internal consistency exceeds 0.6 for the constructs under examination. The model's adequacy is evaluated with R Square for model fit, followed by hypothesis testing to ascertain the significance of relationships between Literacy Rates dan poverty within West Java's districts. Hypothesis testing follows, aiming to validate relationships between Literacy Rates dan poverty. A critical aspect of this phase is determining the significance of these relationships, typically set at a p-value of less than 0.05 to establish statistical significance (Ghozali & Latan, 2015).

RESULTS AND DISCUSSIONS

Validity, Reliability, and Model Test

Table 1. Validity, Reliability, and Model Test

Variable	Outer Loadings	Cronbach Alpha	R Square
Literacy Rate (X)	1.000	1.000	-
Number of Poor People (Y)	1.000	1.000	0.089

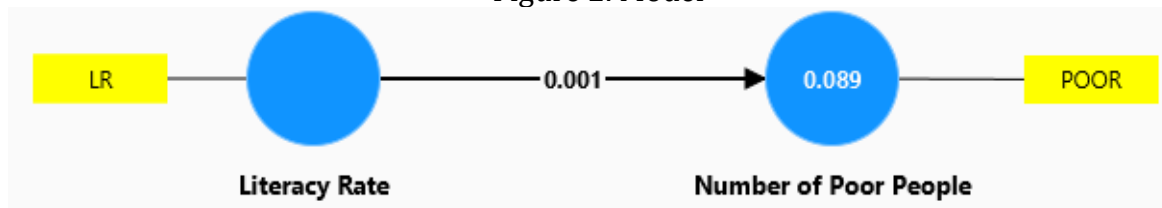
Source: SmartPLS result, 2024

The outer loading of Literacy Rate is 1.000, which signifies that Literacy Rate is perfectly measured by its indicators or items in the model. In other words, the indicators used to measure LR are highly correlated with the underlying construct of Literacy Rate itself. The outer loading of Number of Poor People (POOR) is also 1.000, indicating that the selected indicators or items used to measure Number of Poor People are highly correlated with the underlying construct of Number of Poor People.

The Cronbach's alpha coefficient for Literacy Rate is also 1.000, indicating perfect internal consistency among the indicators used to measure Literacy Rate. This suggests that the indicators reliably measure the concept of Literacy Rate without any measurement error. Similar to Literacy Rate, the Cronbach's alpha coefficient for Number of Poor People (POOR) is 1.000, suggesting perfect internal consistency among the indicators used to measure economic growth.

The R Square value for Number of Poor People (POOR) is 0.089. This value represents the proportion of variance in Economic Growth explained by the predictors (which may include LR and possibly other variables) in the model. An R Square of 0.089 indicates that approximately 8.9% of the variance in Literacy Rate is explained by the variables included in the analysis.

Figure 2. Model



Source: SmartPLS result, 2024

Hypotheses Test

Table 2. Path Coefficient

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Literacy Rate - > Number of Poor People	-0.299	-0.304	0.086	3.469	0.001



Source: SmartPLS result, 2024

The original sample value for the path coefficient from Literacy Rate to Number of Poor People is -0.299. This value indicates the estimated effect or strength of the relationship between Literacy Rate and the Number of Poor People in your model based on the data. A negative coefficient suggests an inverse relationship, implying that as Literacy Rate increases, the Number of Poor People tends to decrease.

The standard deviation (STDEV) associated with this path coefficient is 0.086. This represents the variability or spread of the data points around the mean of the path coefficient estimate.

The T statistics ($|O/STDEV|$) calculated for this path coefficient is 3.469. T statistics measure the size of the estimated coefficient relative to its standard error. A higher T value indicates that the estimated coefficient is larger relative to its standard error, suggesting a more robust relationship.

The p-value associated with the T statistics is 0.001. This p-value indicates the probability of observing a relationship as strong as or stronger than what is found in the sample, assuming the null hypothesis (typically no relationship between Literacy Rate and Number of Poor People) is true. A p-value of 0.001 (or < 0.05) is considered statistically significant. Therefore, the results suggest that the relationship between Literacy Rate and Number of Poor People in your model is statistically significant, implying that changes in Literacy Rate are associated with changes in the Number of Poor People in West Java Province from 2021 to 2022.

Discussion

The path coefficient from Literacy Rate to Number of Poor People in the model is -0.299, indicating an inverse relationship between these variables. This means that as Literacy Rate increases, the Number of Poor People tends to decrease. This finding aligns with theoretical expectations and empirical evidence that higher literacy levels within a population can have several positive impacts on socio-economic conditions (Lavenia et al., 2023).

Firstly, increased literacy typically enhances individuals' access to education and knowledge, which are crucial for economic empowerment (Mohammad & Maulidiyah, 2023). Educated individuals are more likely to secure higher-paying jobs or engage in entrepreneurial activities, thereby improving their economic status and reducing the likelihood of falling below the poverty line (Minor, 2023).

Secondly, literacy promotes better health outcomes and understanding of healthcare information. Educated individuals tend to adopt healthier lifestyles and seek timely medical care, which can reduce healthcare costs and improve productivity, contributing to overall economic well-being (Nutbeam et al., 2018).

Thirdly, higher literacy levels foster civic engagement and participation in community development initiatives (Mohammad et al., 2023). This active participation can lead to advocacy for policies and programs that support poverty



alleviation, thereby creating a more conducive environment for socio-economic progress (Mirra, 2018).

CONCLUSION

The research findings indicate a significant negative impact of Literacy Rate on the Number of Poor People in West Java Province from 2021 to 2022. The path coefficient of -0.299 suggests that as Literacy Rate increases, there is a corresponding decrease in the Number of Poor People. This inverse relationship highlights the critical role of literacy in socio-economic development and poverty alleviation efforts within the region. Policies aimed at improving literacy rates can effectively contribute to poverty reduction strategies. By enhancing literacy levels, individuals are better equipped to access education, secure higher-paying jobs, and participate more actively in economic activities. Policymakers should prioritize investments in education and literacy programs as integral components of poverty alleviation strategies. Targeted interventions aimed at improving literacy rates can yield substantial long-term benefits in reducing poverty and promoting inclusive growth. Future research may examine the role of digital literacy in economic development and poverty alleviation. With the increasing digitalization of economies, understanding how digital skills impact income generation and livelihoods can be crucial for future policy directions.

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