

ANALYSIS OF THE INFLUENCE OF PER CAPITA INCOME, EDUCATION LEVEL, POPULATION OF PRODUCTIVE AGE, AND HUMAN DEVELOPMENT INDEX ON POVERTY IN INDONESIAN PROVINCES

**Amanda Putri Salsabila¹, Amanda Afriza Putri^{2*}, Amalia Nasution³, Radja Janna
Lubis⁴, Umi Hasanah⁵, Rita Handayani⁶**

^{1,2*,3,4,5}Department of Islamic Economic, Universitas Islam Negeri Sumatera Utara,
Indonesia

⁶Department of Economic, Universitas Muhammadiyah Sumatera Utara, Indonesia

**Corresponding author: amandaafrizaputri@gmail.com*

Abstract: *This study aims to analyze the influence of per capita income, education level, the productive-age population, and the human development index on poverty levels in Indonesian provinces. The data used in this study are secondary data obtained from the Indonesian Central Bureau of Statistics and the World Bank. The analysis method used is multiple linear regression. The results of the study show that per capita income, education level, and the human development index have a significant influence on poverty levels in Indonesian provinces. However, the number of productive-age population does not have a significant influence on poverty. These findings have important policy implications in efforts to reduce poverty levels in Indonesian provinces.*

Keywords: *per Capita Income, Education Level, Productive-Age Population, Human Development Index, Poverty.*

INTRODUCTION

The background of this research discusses the analysis of the influence of per capita income, level of education, the population of productive age, and the Human Development Index on the poverty rate. This research is highly relevant because poverty is a complex issue that requires a deep understanding of the factors that can affect it. Economic growth and societal well-being are often measured through per capita income. Per capita income reflects the average individual income in a population or region. However, a high level of income does not always mean equal income distribution. Analyzing the relationship between per capita income and the poverty rate can provide insights into the extent to which economic wealth is accepted by all layers of society.

Furthermore, education is considered a key factor in addressing poverty. Education not only creates a more skilled and qualified workforce but also opens doors to better job opportunities. Therefore, involving the level of education in the analysis of poverty will help determine the extent to which investment in education can be an effective strategy in reducing poverty rates.

The population of productive age, typically in the range of 15 to 64 years, plays a crucial role in the economic dynamics of a country. The growth of the productive age population can drive economic activities if accompanied by the creation of adequate job opportunities. On the other hand, population growth not balanced with employment opportunities may potentially increase the poverty rate.

The Human Development Index (HDI) is an indicator that encompasses economic, educational, and health dimensions in measuring the progress of a society. Analyzing

the influence of HDI on poverty can provide a holistic overview of the development conditions of a region. Good performance in this indicator can indicate the overall well-being of society, while low performance can highlight sectors that require more attention in poverty alleviation efforts.

The issue of poverty is not only about a lack of income but is closely related to access to education, job opportunities, and adequate healthcare. Therefore, this research aims to comprehensively analyze how these variables interact and influence the poverty rate. By understanding the contributing factors to poverty, governments and policymakers can formulate more effective strategies to reduce inequality and improve societal well-being.

Moreover, the results of this research can serve as a guide for international institutions, non-governmental organizations, and relevant parties to provide support and assistance tailored to actual needs. Overall, this research plays a crucial role in providing a strong scientific foundation for formulating policies that can effectively address poverty. Through in-depth analysis of the influence of per capita income, education level, the population of productive age, and the Human Development Index, it is hoped that this research can make a positive contribution to sustainable development efforts and poverty eradication. This research is also relevant in a global context, where poverty alleviation efforts are an integral part of the Sustainable Development Goals (SDGs). The interconnection between per capita income, education level, the population of productive age, and the Human Development Index with poverty reflects the urgency of adopting a holistic approach in designing development policies. Economic growth not accompanied by inclusivity can leave a significant portion of the population in poverty. Therefore, through this research, it is expected to find strategies that not only encourage economic growth but also ensure that its benefits are distributed evenly and accessible to all layers of society. In the context of globalization and economic competition, the level of education becomes one of the key factors in enhancing the competitiveness of a country.

LITERATURE REVIEW

1. Previous Research

Several previous studies have explored the relationship between per capita income, education level, the population of productive age, Human Development Index, and the poverty rate. Some of them have laid important foundations for understanding the complexity of this phenomenon. A study by [Ricky Bastian] (2022) indicates that per capita income has a significant correlation with the poverty rate at the regional level. The results highlight the importance of equitable income distribution in efforts to reduce the poverty rate. This research provides insights into how economic growth, when not balanced with fair distribution, can affect societal well-being. Research related to the level of education by [Silva Agnes] (2022) suggests that equitable access to education can be a key factor in reducing the poverty rate. The analysis highlights that a high level of education can open up better job opportunities, contributing to a decrease in poverty. The involvement of the productive age population is revealed in the study by [Andini Putri] (2022). This research emphasizes that the growth of the productive age population needs to be accompanied by the creation of adequate job opportunities to have a positive impact on poverty. The analysis provides perspectives on demographic and economic dynamics. Moreover, there is a focus on the contribution of the Human Development Index (HDI) to the poverty rate. The results indicate that regions with high HDI performance tend to have lower poverty rates, signaling the importance of simultaneously considering economic, educational, and health aspects. Although these studies offer valuable insights, it should be noted that the geographical and demographic context of a region can introduce significant variability in the relationships among these factors. Therefore, this research aims to provide an additional contribution by comprehensively analyzing the relationship between per capita income, education level, the population of productive age, Human Development Index, and the poverty rate in East Java. Through a deeper understanding of previous research, it is expected that this study can fill knowledge gaps and provide a more specific perspective on the situation in East Java, assisting in formulating policies tailored to the needs and characteristics of the region.

2. Literature Review

The analysis of the relationship between per capita income and the poverty rate has been a focal point in various economic research studies. Investigating the impact of income distribution on the poverty rate at the regional level, this research provides in-depth insights into the importance of income distribution equality in reducing poverty. Recognizing that uneven economic growth can create disparities in societal well-being, this study emphasizes the importance of policies leading to fair income distribution. The role of education as a tool to reduce the poverty rate has been the focus of intense research. Highlighting the positive relationship between the level of education and poverty reduction, the analysis indicates that a higher level of education not only creates a more skilled human resource but also opens doors to better job opportunities. Thus, investment in the education sector is identified as a key strategy in reducing the poverty rate. The economic growth of a region is often linked to the population of productive age. Investigating the impact of the growth of the productive age population on the poverty rate, the results reflect the complexity of demographic and economic dynamics, showing that the growth of the productive age population can drive economic activities if accompanied by the creation of adequate job opportunities. However, a lack of employment opportunities can potentially increase the poverty rate.

Incorporating economic, educational, and health dimensions, the Human Development Index (HDI) serves as an indicator of societal well-being. Focusing attention on the contribution of HDI to the poverty rate, this research emphasizes that high performance in HDI can indicate a better level of well-being, while low performance reflects sectors that require more attention in poverty alleviation. Although the literature provides valuable insights, this research is focused on the specific context of East Java. The geographic, social, and economic diversity of this region creates unique dynamics. Therefore, through this approach, it is expected to contribute valuable insights for a deeper understanding of the complexity of poverty in East Java and serve as a basis for more contextual policies.

3. Theoretical Framework

This theoretical framework is designed to provide a deep conceptual understanding of the key concepts that will be elucidated in this research. The main focus of the theoretical framework involves per capita income, education level, the population of productive age, Human Development Index (HDI), and the poverty rate in the context of East Java. Per capita income refers to the average income of individuals in a population or region. Economic growth theories (Solow, 1956; Romer, 1986) emphasize that the growth of per capita income can influence the poverty rate. However, unequal income distribution can create economic inequality contributing to poverty (Kuznets, 1955). This theoretical framework considers the importance of understanding the relationship between economic growth and income distribution in the research context of East Java. Human capital theory (Becker, 1964) suggests that investing in education creates more productive human capital, which can help reduce poverty. Education not only enhances individual skills but also opens up better job opportunities. With equitable education, the community has access to knowledge and skills necessary to improve their economic well-being. This theoretical framework considers the key role of education in the context of poverty alleviation strategies in East Java.

The economic demography theory (Becker and Lewis, 1973) emphasizes the relationship between the population of productive age and economic growth. The growth of the productive age population can drive economic development if accompanied by the creation of adequate job opportunities. However, this theory also warns that population growth without balanced job opportunities can result in an increase in the poverty rate. This theoretical framework observes the complexity of the interaction between demographic growth and economic development in East Java. The human development theory (Sen, 1999) emphasizes that development should not only be measured from an economic perspective but should also include education and health. HDI, covering these three dimensions, provides a more holistic view of societal well-being. This theoretical framework acknowledges that improvements in human well-being indicators can help

reduce the poverty rate by detailing the important aspects that shape a decent human life. The concept of poverty is articulated through various theoretical frameworks, including multidimensional approaches (Alkire and Foster, 2011) that combine factors such as income, education, and health. The capability theory (Sen, 1985) suggests that poverty is not just about a lack of income but is also related to individuals' inability to achieve their full potential in various dimensions of life. This theoretical framework forms the basis for understanding and measuring the poverty rate in East Java through a multidimensional framework.

RESEARCH METHOD

This type of research is qualitative descriptive research with a literature study research method through a literature review derived from previous research journals (Kurniawan, 2014) related to the title, as well as through accessing data obtained from websites as information publications. Qualitative descriptive research can be interpreted as the researcher being a key instrument where data collection techniques are carried out through the merging and analysis of data inductively (Sugiyono, 2012), thus producing and processing data that is descriptive, such as narrating the results of interviews and/or observations.

RESULTS AND DISCUSSION

1. The Influence of Per Capita Income on the Poverty Rate, and the Role of Income Distribution in Context

Firstly, we will discuss the influence of per capita income on the poverty rate in East Java. Per capita income reflects the average income of individuals in a region, and this concept is central to the analysis of poverty rates. Economic growth theory suggests that an increase in per capita income can affect the well-being of society. East Java, as one of the largest provinces in Indonesia, has varied economic characteristics. Significant economic growth can contribute to the increase in per capita income. However, the question is to what extent this increase can positively impact the regional poverty rate. In-depth statistical analysis of East Java's economic data can help identify whether the growth in per capita income correlates significantly with a reduction in the poverty rate. Therefore, this research will attempt to explore how the regional economic dynamics, reflected in per capita income, contribute to poverty alleviation in East Java. In addition to per capita income growth, the role of income distribution is also an important aspect of understanding the poverty rate in a region. Even though a region may experience an increase in per capita income, uneven distribution can create economic disparities that, in turn, affect the poverty rate.

Even income distribution is crucial to ensuring that the benefits of economic growth are enjoyed by all layers of society. If a significant portion of income is concentrated in a specific group, the likelihood of high poverty rates among other groups may increase. Therefore, this research will explore to what extent income distribution in East Java plays a crucial role in the context of poverty rates. Analysis of income distribution may involve measuring inequality indices, such as the Gini Index, to assess the extent to which income is evenly distributed in society. The influence of per capita income and income distribution in East Java becomes the focal point in understanding the complexity of poverty. By engaging in statistical analysis and theoretical approaches, this research aims to provide in-depth insights into how these factors are interrelated and contribute to poverty rates. With a better understanding of these dynamics, it is hoped that more effective policies can be formulated to improve the well-being of the people in East Java.

In the context of analyzing income distribution in East Java, the Gini Index becomes an essential tool to measure the level of income inequality. The Gini Index provides a visual representation of how income is distributed in society. The Gini Index values range from 0 (minimal inequality) to 1 (maximum inequality). The application of the Gini Index in this research involves collecting income data from various social groups in East Java. The results of this income distribution analysis will provide a deeper understanding of how economic disparities can contribute to the poverty rate in this province. Furthermore, this research will analyze the correlation between the increase in per capita

income and the decrease in the poverty rate in East Java. This analysis may involve using regression methods to assess the extent to which changes in per capita income can predict changes in the poverty rate.

Understanding this relationship is crucial for formulating policies aimed at improving the overall well-being of society. Through the analysis of income distribution using the Gini Index and the correlation between per capita income and the poverty rate, this research aims to provide a comprehensive view of how economic dynamics and income distribution can impact poverty rates in East Java. With a deeper understanding of these factors, it is hoped that this research can make a significant contribution to designing effective policies to alleviate poverty and improve the welfare of the people in this province.

2. The Influence of Education on the Poverty Rate, and Whether Equitable Education Access Can be an Effective Solution in Reducing Poverty

Education has long been recognized as a key factor in understanding and addressing poverty. Education not only provides knowledge and skills but also opens doors to better economic opportunities. This essay will delve into the profound impact of education on the poverty rate, as well as the relevance of equitable education access as an effective solution in reducing poverty. Firstly, it is important to understand how the level of education influences the poverty rate. Education creates better job opportunities, enhances skills, and provides access to more developed economic sectors. Individuals with higher levels of education tend to have higher incomes, which, in turn, can reduce the likelihood of falling into poverty. In East Java, like in many other regions, the level of education exhibits significant variation. Analyzing the relationship between the level of education and the poverty rate in this province will involve understanding the educational structure, literacy rates, and education access for various societal groups.

Furthermore, the relevance of equitable education access becomes a central point. Equitable education access creates an equal foundation for all members of society to access quality education. This not only includes the availability of educational facilities but also equality in opportunities to access education without discrimination. In the context of East Java, challenges related to education access remain a major issue. There are significant differences between urban and rural areas, as well as disparities among different economic groups. Therefore, ensuring that all layers of society have equal access to education is a crucial step in efforts to reduce the poverty rate. Equitable education does not only focus on elementary and secondary levels but also includes access to higher education. Higher education provides opportunities to acquire specific skills and in-depth knowledge, which can enhance an individual's competitiveness in the job market. Therefore, this research will explore how higher education policies in East Java can help reduce economic disparities and poverty rates. The relevance of equitable education access can also be seen from the perspectives of women and minority groups. Equality in access to education can open doors to reducing gender gaps and improving social inclusivity. Hence, this analysis will consider the impact of policies and initiatives supporting women and minority groups in obtaining equal education. Moreover, equitable education is not just about physical access but also about the quality of education. Therefore, this research will explore whether the quality of education provided in East Java aligns with the needs of the job market and can enhance social mobility. Good-quality education can be a determining factor in changing the economic paradigm and reducing poverty rates in the long term.

It is important to involve policy perspectives in this discussion. How education policies in East Java are designed and implemented directly impact the level of education access and, ultimately, the poverty rate. Therefore, this research will also delve into existing policies and assess the extent to which their implementation can have a positive impact on reducing poverty rates. In conclusion, this essay will comprehensively discuss the influence of the level of education on the poverty rate in East Java, with a specific focus on the relevance of equitable education access. Through in-depth analysis, it is hoped that a better understanding can be found of how education can be a driving force to

reduce poverty and how good education policies can shape a more inclusive and sustainable future in this province.

3. The Correlation Between the Working-Age Population and the Poverty Rate, and Its Impact on the Economic Development of a Region

The working-age population, typically in the range of 15 to 64 years old, plays a crucial role in the economic dynamics of a country or region. In the context of East Java, we will explore how the size of the working-age population correlates with the poverty rate and its impact on the economic development of this region. Firstly, let's discuss how the size of the working-age population correlates with the poverty rate. The working-age population is considered a human resource with significant potential to contribute to economic growth if engaged in productive activities. Conversely, a mismatch between the size of the working-age population and available job opportunities can lead to unemployment and, consequently, an increase in the poverty rate. Statistical analysis of the relationship between the size of the working-age population and the poverty rate in East Java will help form a better understanding of how the demographic structure of the population influences socio-economic conditions.

Factors such as birth rates, migration, and labor policies will be taken into consideration to comprehend these dynamics. Next, we will look at the impact of the size of the working-age population on the economic development of a region. If the growth of the working-age population is accompanied by the creation of adequate job opportunities, it can serve as a primary driver of economic growth. On the other hand, population growth not balanced with job opportunities can result in economic strain and an increase in the poverty rate. Sustainable economic development requires synergy between the growth of the working-age population and efforts to create quality job opportunities. Therefore, this research will evaluate how the balance between population growth and employment opportunities in East Java can affect the pace of regional economic growth. It is also important to consider the economic sectors most influenced by the size of the working-age population.

4. The Human Development Index (HDI) contributes to the level of poverty and whether improvements in human well-being indicators can help address the issue of poverty

The Human Development Index (HDI) has become a crucial tool in measuring the progress of society, particularly in economic, educational, and health dimensions. In the context of East Java, we will explore how HDI contributes to the level of poverty and to what extent improvements in human well-being indicators can help address the issue of poverty. First and foremost, let's examine how HDI can contribute to the level of poverty. HDI encompasses several dimensions of human well-being, and success in achieving these targets is expected to positively impact the level of poverty. For example, increased access to education through higher literacy rates can open doors to better job opportunities, thus impacting the reduction of poverty levels. It is crucial to understand that HDI is not just a statistical indicator but also reflects the social and economic reality of a region. Therefore, this research will involve in-depth analysis of each component of HDI – education, health, and income – to understand how changes in these indicators can stimulate changes in the poverty rate.

Furthermore, we will examine how improvements in human well-being indicators can help address the issue of poverty. For instance, an increase in literacy rates in a region can create a more skilled workforce and, therefore, enhance the potential for the population to secure decent-paying jobs. Human well-being is also closely related to adequate access to healthcare. The research will explore how improvements in health indicators, such as a decrease in infant mortality rates or an increase in life expectancy, can contribute to reducing the poverty rate. Good health can enhance workforce productivity and alleviate economic burdens caused by medical expenses. In the context of income, improvements in these indicators may include efforts to enhance income distribution, ensuring that the benefits of economic growth are more evenly spread in society. Analysis will be conducted to understand the extent to which improvements in income indicators can have a positive impact on poverty alleviation in East Java.

Additionally, we will assess the sustainability of changes in human well-being indicators.

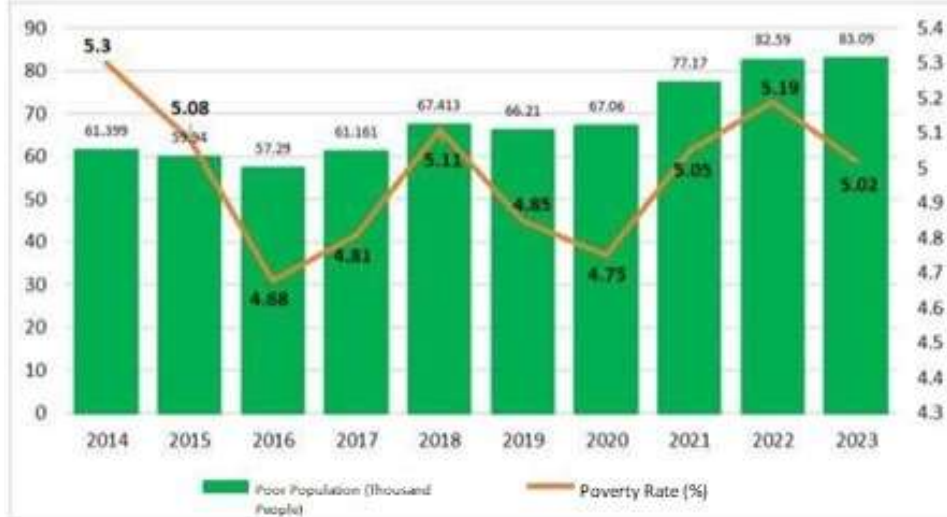


Figure 1. Development of the Poverty Rate of Poor Population 2014-2023

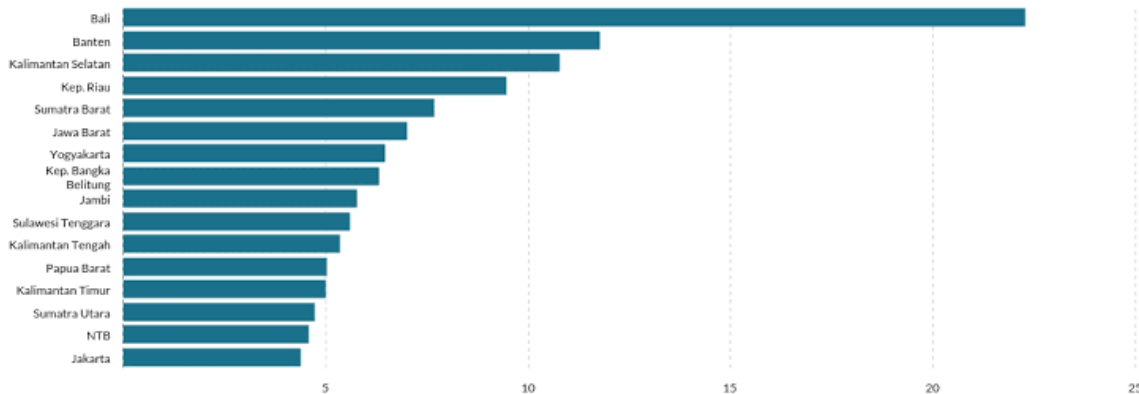


Figure 2. Poverty Growth in Each Province

The poverty growth in Indonesia from March 2015 to 2023 (YoY) was 4.23 percent. According to BPS data, 16 provinces recorded an increase in their poverty rates, with Bali experiencing the highest growth at 22.27 percent, followed by Bangka Belitung with a growth of 11.76 percent. Meanwhile, Jakarta ranked 16th with a growth rate of 4.38 percent. (RA) create a case study.

CONCLUSIONS AND SUGGESTIONS

1. Conclusion

In conclusion, the analysis of the influence of per capita income, education level, the population of productive age, and the Human Development Index (HDI) on the poverty rate in East Java provides crucial insights into addressing this complex issue. The research reveals intricate connections among key variables, highlighting that synergies and conflicts can impact the dynamics of poverty in East Java. There is potential for positive synergy between per capita income, education level, the population of productive age, and HDI. If economic growth is supported by evenly distributed educational investments and balanced growth in the working-age population with job opportunities, this synergy can form a strong foundation for reducing poverty rates. However, challenges related to income distribution and equal access to education may need to be addressed. If economic growth is not accompanied by equality in income distribution and education access, it can create conflicts and increase socio-economic disparities. HDI emerges as a key factor in measuring the holistic well-being of society.

Improved HDI can contribute to reducing poverty rates if accompanied by serious efforts to enhance human development dimensions, such as education and health. The conclusion of this research supports the need for a holistic approach in policy formulation to address poverty.

2. Recommendations

In the further development of this research, several recommendations can enhance the depth and relevance of the findings. First, deepening statistical analysis by applying hypothesis testing or regression models can provide a deeper understanding of the relationships between variables. Meanwhile, expanding the research scope to other regions in Indonesia can offer a richer regional comparison. Integrating qualitative elements, such as interviews or case studies, can complement quantitative analysis with richer context and understanding. Additionally, it is important to consider contextual factors, such as local government policies or socio-economic changes, that may influence research outcomes. Ensure the use of up-to-date data to reflect current conditions and enhance the accuracy of the analysis. Furthermore, identify areas where this research can serve as a basis for further in-depth exploration of specific aspects. Involve stakeholders, such as local governments or academics, in the research process to gain broader perspectives.

REFERENCE

- BPS, 2018. Persentase Rumah Tangga Terhadap Sanitasi Layak Menurut Provinsi yang diakses melalui <https://www.bps.go.id/statictable/2016/01/25/1900/persentase-rumah-tangga-menurut-provinsi-dan-memiliki-akses-terhadap-sanitasi-layak-1993-2019.html> BPS,2018. Gini Ratio Indonesia yang diakses melalui <https://www.bps.go.id/dynamictable/2017/04/26%2000:00:00/1116/gini-ratio-provinsi-2002-2018.html>
- BPS, 2018. Persentase Penduduk Miskin Menurut Provinsi yang diakses melalui <https://www.bps.go.id/linkTableDinamis/view/id/1219>
- Badan Pusat Statistik. 2020. "Persentase Penduduk Miskin Maret 2020 Naik Menjadi 9,78 Persen." Retrieved February 17, 2021 (<https://www.bps.go.id/pressrelease/2020/07/15/1744/persentase-penduduk-miskin-maret-2020-naik-menjadi-9-78-persen.html>).
- World Bank. 2019. Indonesia Overviews. <https://www.worldbank.org/en/country/indonesia/overview>.
- Kementerian Desa PDT dan Transmigrasi. 2020a. "Desa WargaJaya" Retrieved January 31, 2021 (<https://sid.kemendesa.go.id/home/dd/3201222010>
- Kementerian Desa PDT dan Transmigrasi. 2021 "Pendataan SDGs Desa 2021." Retrieved June 9, 2021 (<https://sdgsdesa.kemendesa.go.id/pemutakhiran-data-sdgs-des/>).
- Tempo.co. 2020. "Program SDGs Desa Agar Dana Desa Dirasakan Untuk Warga." Retrieved June 9, 2021(<https://nasional.tempo.co/read/1404394/program-sdgs-des-a-agar-dana-des-a-dirasakan-untuk-warga/full&view=ok>
- World Bank. 2020. Poverty and Inequality. <https://datatopics.worldbank.org/worlddevelopmentindicators/themes/poverty-and-inequality.html>.
- World Economic Forum. 2018 The Global Competitiveness Report 2018. ALASUNIV [http://www.cdi.org.pe/pdf/IGC/2018/The Global Competitiveness Repor 2018.pdf](http://www.cdi.org.pe/pdf/IGC/2018/The%20Global%20Competitiveness%20Report%202018.pdf)