

The Influence of Education on the Human Development Index (IPM) in Makassar City

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Abstract

This research aims to find out how much influence education has on the Human Development Index (HDI) in Makassar City. The research carried out was a type of quantitative research, using secondary data related to education and HDI in Makassar City during the 2012-2022 period. The research results show that education has a positive and significant influence on HDI in Makassar City. This is proven through the results of data processing which shows the education variable coefficient is 3.586 with a significance value of 0.000 which is smaller than 0.05 ($0.000 < 0.05$). In other words, education significantly influences the increase in HDI in Makassar City. These findings emphasize the importance of efforts to improve the education sector as one of the main strategies for improving the quality of life and welfare of the people in Makassar City. Thus, the government and stakeholders are expected to continue to prioritize investment in the education sector to encourage better development in the Human Development Index in the region.

1. Introduction

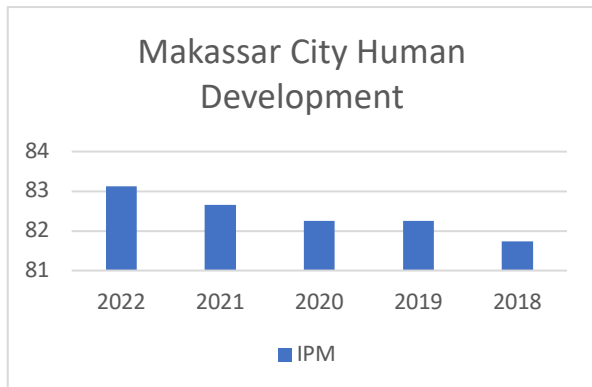
Human development is the main component in measuring the level of social welfare. Therefore, UNDP (United Nations Development Program) is a basic indicator for achieving sustainable development (UNDP, 1990; Badrudin, 2011). Technically, HDI provides a combined measure of three dimensions, namely: long and healthy life, knowledge and average years of schooling for the adult population, and decent living standards.

Human Development Index (HDI) according to BPS 2009 (Rudy Badrudin, 2012:154), HDI is a measure of human development achievement based on a number of basic components of quality of life. The Human Development Index (HDI) is calculated based on data that can describe three components, namely life expectancy which measures success in the health sector, literacy rate and average years of schooling which measures success in education, and the purchasing power of people in a number of countries. need. principal as income that measures success in the field of developing a decent life. HDI measures the main dimensions of human development which are

considered to reflect the basic capability status of the population.

Calculating HDI as an indicator of human development has important objectives, including: Building indicators that measure basic dimensions of human development and expanding freedom of choice. Use a number of indicators to keep measurements simple. Forming one composite index rather than using a number of basic indices. Human Capital theory argues that education is an investment in human resources that provides many benefits, including: obtaining better working conditions, production efficiency, increasing welfare and additional income if someone is able to complete a higher level of education compared to the income of graduates. higher education. under. Education is an important investment in facing the future of the global world. For this reason, education must be able to prepare the young generation of the 21st century who are superior, highly competitive and able to work together to achieve prosperity for every country and the world.

Figure 1.1 Makassar City Human Development Index



Source: Makassar City Central Statistics Agency, 2022

Based on the picture above, in 2018-2022 the Human Development Index for the city of Makassar experienced an increase. In 2018 the Human Development Index reached 81.73%, then in 2019 it increased to 82.25%, only in 2020 there was no increase or decrease so that the Human Development Index figure in 2020 remained the same as in 2020. In 2019 it was 82.25%. , then from 2021 to 2022 there will be an increase every year, where in 2021 the Human Development Index reaches 82.66% and in 2022 the Human Development Index reaches 83.12%. (BPS 2022)

Education is a fundamental sector for a country because education is able to provide positive benefits for development even though these benefits will only be felt in the next few years. Education makes a major contribution to the development of socio-economic life through increasing knowledge, skills, abilities, attitudes and productivity, so that education is expected to be able to produce a quality workforce.

Education is one of the most important aspects of human life. Education is also a social means to achieve social goals, which can be useful for ensuring a person's survival. Education is also an indicator in measuring community welfare. People with a high level of education are also expected to have a high quality of life so that prosperity can be achieved

Education is an effort to develop a person's thinking abilities. Because in a global era like this, competition is getting tighter accompanied by increasingly sophisticated technological advances. Efforts to educate the nation are emphasized in the preamble to the 1945 Constitution which states that "The Indonesian State Government protects the entire Indonesian nation and all of Indonesia's blood and implements world order based on independence. Lasting peace and social justice. So, to make the nation's life more intelligent, a national education system is implemented which is able to guarantee equal distribution of educational opportunities, improve the quality and relevance and efficiency of education management (UU SISDIKNAS: 2003)

Education contributes greatly to increasing the Human Development Index (HDI), the contribution of education can be seen from the increase in the Average Years of Schooling (RLS) in 2018 amounting to 11.09 and continuing to increase until 2022 to 11.55 and the Expected Years of Schooling (HLS) which Every year it also increases, where in 2018 it was 15.55 until 2022 it became 15.59 (BPS 2022).

According to BPS (2022) In general, the majority of the population aged 15 years and over in Indonesia have achieved 9 years of compulsory education or completed junior high school/equivalent or above (62.68 percent). Based on SUSENAS data for 2022, it can be seen that out of 100 residents aged 15 years and over, 22 people have completed junior high school/equivalent education, 29 people have completed junior high school/equivalent education, and 10 people have completed tertiary education. , while the rest have completed elementary school/equivalent or below.

The functions and objectives of national education are in accordance with the Law of the Republic of Indonesia no. 20 of 2003 concerning SISDIKNAS states that national education functions to develop abilities and form superior national character and

civilization in order to educate the life of the nation, aiming to develop the potential of students to become human beings who believe and are devoted to God Almighty. Almighty, noble, healthy, knowledgeable, capable, creative, independent, as well as being a democratic and responsible citizen.

Based on the description above, to find out whether the level of education has an effect on the Human Development Index (HDI), researchers are interested in researching, "The Effect of Education on the Human Development Index (HDI)".

2. Literature Review

2.1 Education

Based on Law of the Republic of Indonesia Number 20 of 2003 concerning the Education System, education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, as well as the skills needed by himself, society, nation and state. Education is an effort to attract something within humans as an effort to provide various opportunities or different learning experiences in the form of formal, non-formal and informal education at school and outside school, which lasts forever and is expected to improve abilities. which every person has so that in the future they can play their life roles appropriately (Triwiyanto, 2014:23).

Education is a means of developing abilities, knowledge and skills through good education. The quality of human resources can be improved in accordance with the goals of education itself, namely increasing the attitudes, knowledge and behavior of educational participants as expected. Based on the definition above, it can be concluded that education is an effort made by a person to obtain additional skills or develop knowledge and understanding so that they can be used in the future.

2.2 Human Development Index (HDI)

Human development is one indicator of the creation of development that is able to encourage economic growth. To measure the quality of human capital, the United Nations Development Program (UNDP) introduced the concept of human capital quality which was named the Human Development Index (HDI). HDI provides a combined measure of three dimensions of human development, namely the health dimension measured by life expectancy, the education dimension measured by the level of adult literacy and average years of schooling and the purchasing power dimension which has a decent standard of living measured by purchasing power parity. (UNDP, 2004).

3. Research Methods

This research uses a quantitative approach with a cross-sectional design as described by Sudarma et al. (2021). Quantitative research aims to investigate a particular population or sample, using statistical data analysis to test predetermined hypotheses (Sudarmanto et al., 2021). The study will be carried out at the Makassar City Central Statistics Agency (BPS) office, South Sulawesi, over a period of two months in the 4th and 5th months of 2023. The data used is quantitative, consisting of time series data which presents annual reports. insight, such as level of education. The data sources are secondary, obtained from archives and intermediary media.

The population includes all education data in Makassar and the Human Development Index (HDI). The sample is time series data for 2012-2022. Data collection involves literature studies from documents, archives and relevant literature. The research variables include education as the independent variable (X) and HDI as the dependent variable (Y). Education is defined as a structured effort to prepare students to face their roles in the future through various forms of learning (Triwiyanto,

2013). HDI measures human development based on life expectancy, education level, and living standards.

Data analysis includes classical assumption tests, including normality, heteroscedasticity and autocorrelation tests. Simple regression analysis is used to determine the effect of education on HDI, with the regression equation $Y = a + bX$, where Y is HDI, X is education, a is a constant, and b is the regression coefficient. Hypothesis testing includes the coefficient of determination (R^2) to measure how well the independent variable explains the dependent variable, and the t test to assess the significance of the influence of the independent variable on the dependent variable.

4. Results and Discussion

4.1 Presentation of Research Data

a. Variable Description

The research uses the Human Development Index (HDI) as the dependent variable and education as the independent variable. The development of education in Makassar City is measured using the indicators Expected Years of Schooling (HLS) and Average Years of Schooling (RLS). HLS indicates the expected length of schooling for a child at a certain age, while RLS shows the average number of years spent in formal education by the population aged 25 and over. These indicators help evaluate the education system's progress, with maximum and minimum limits set according to UNDP and BPS standards.

From 2012 to 2022, there has been a consistent increase in both RLS and HLS in Makassar City. For instance, RLS improved from 10.42% in 2012 to 11.55% in 2022, while HLS increased from 14.22% to 15.59% in the same period. This upward trend reflects ongoing improvements in the educational sector.

The HDI measures the quality of life based on education, health, and standard of living. Over the last decade, Makassar City's HDI has generally shown a positive trend, indicating overall improvement in human

development. This consistent rise in HDI underscores the progress in education, health, and living conditions within the city.

b. Classic assumption test

The Normality Test is used to determine if a regression model for the independent and dependent variables follows a normal distribution. According to Figure 4.2, the Normal PP Plot of Regression Standardized Residual shows that the points do not closely follow the diagonal line, indicating that the data is not normally distributed. The Heteroscedasticity Test checks for inequality of variance from the residuals of one observation to another in the regression model. As seen in Figure 4.3, the points are not randomly distributed and are mostly above the number 0 on the Y-axis, indicating the presence of heteroscedasticity.

The Autocorrelation Test evaluates whether there is a correlation between the residuals in a linear regression model at different time periods. Using the Durbin-Watson method, the value obtained is 1.742. Comparing this with the critical values ($dL = 0.927$ and $dU = 1.324$), it falls between dU and $4-dU$ ($1.324 < 1.742 < 2.676$), which indicates no autocorrelation. A simple regression analysis was conducted to analyze the impact of education on the Human Development Index (HDI) in Makassar City. The regression equation derived from the analysis is $Y = 33.986 + 3.586X$, indicating that an increase in education by 1% results in a 3.586% increase in HDI.

The Coefficient of Determination Test (R^2) measures how well the independent variable explains the variance in the dependent variable. The R^2 value obtained is 0.875, meaning that 87% of the variance in HDI is explained by education, while the remaining 13% is due to other factors not examined in this study. The t-test determines the significance of the influence of the independent variable on the dependent variable. The results show that education has a

positive and significant effect on HDI, with a coefficient of 3.586 and a significance value of 0.000, which is less than 0.05. This confirms that the hypothesis that education positively affects HDI in Makassar City is accepted.

4.2 Discussion

Human development is one indicator of the creation of development that is able to encourage economic growth. To measure the quality of human capital, the United Nations Development Program (UNDP) introduced the concept of human capital quality which was named the Human Development Index (HDI). HDI provides a combined measure of three dimensions of human development, namely the health dimension measured by life expectancy, the education dimension measured by the level of adult literacy and average years of schooling and the purchasing power dimension which has a decent standard of living measured by purchasing power parity. (UNDP, 2004).

Based on research that has been conducted, it was found that education has a positive and significant effect on the Human Development Index (HDI) in Makassar City. This is proven from the results of data processing where the coefficient for the education variable is 3.586 with a significant value of 0.000, less than 0.05 ($0.000 < 0.05$). This means that education can influence the Human Development Index (HDI) in Makassar City compared to 2 other Human Development Index (HDI) indicators, namely health and a decent life.

The results of this research are in line with research conducted by Andra Fadhil Martin 2022 which shows that education has a positive and significant effect on the human development index. Also in line with research conducted by Nurul Farida 2022, the higher the education obtained, the more knowledge will support productivity in producing development output.

5. Closing

5.1 Conclusion

Based on research that has been conducted, it was found that education has a positive and significant effect on the Human Development Index (HDI) in Makassar City. This is proven by the results of data processing where 87% of education has an influence on the Human Development Index. This means that education has a greater influence on the Human Development Index (HDI) in Makassar City compared to the other 2 Human Development Index (HDI) indicators, namely health and a decent life.

5.2 Suggestion

Based on the research results and conclusions, the suggestions for this research are as follows:

1. The Makassar city government in this case is to facilitate educational infrastructure so that efforts can be made to improve the quality of education, facilities, infrastructure and budget distribution must be on target and evenly distributed, so that in this case it is hoped that it can continue to improve education in the human development index figures in Makassar city.
2. It is recommended for further research to expand the research object to variables that influence the human development index (HDI), for example: health and a decent life.

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