

## Increasing the Human Development Index through Human Resource Development: Empirical Evidence from Kediri City

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### Abstract

This research aims to determine the relationship and influence between human resource development and the human development index (HDI) in Kediri City. This research uses quantitative methods with a correlational design, and takes a sample of 100 people from the population of Kediri City. Information was gathered through the use of a survey, and subsequently examined employing multiple linear regression.. The research results show that there is a significant positive relationship between human resource development and HDI in Kediri City, and The positive and substantial impact of human resource development on the HDI in Kediri City has been observed. Health variables are the variables that have the most influence on HDI, followed by education, infrastructure and environmental variables. Education, health, environment and infrastructure variables can explain 73% of the variance in the HDI, while the other 27% of the variance Is impacted by external factors excluded from the scope of this research This research makes an important contribution to the development of science, especially regarding human resources and human development.

**Keywords:** Human resource development, human development index, Kediri City, multiple linear regression, positive and significant relationships and influences.

**JEL Classification :** O15, I15, I25, Q56, R42

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### Introduction

The definition of human resources in macroeconomics is a resident of a country who has entered working age, whether not yet working or already working . Human resources in macroeconomics are one of the production factors that influence economic growth and social welfare. Human resources can be measured using several indicators such as life expectancy, education level, work participation rate, etc. (Huertas-Valdivia et.al, 2020).

Human resources (HR) are one of the elements affecting the economic growth of a nation. Quality and productive human resources can increase output, efficiency and innovation in various economic sectors. On the other hand, human resources that are less qualified and productive can reduce economic performance and hinder development. Therefore, it is important for a country to develop human resources who have good skills, knowledge, health and motivation (Saleh et.al, 2020).

Economic growth refers to the expansion in the monetary value of goods and services generated by a nation within a certain period of time. Economic growth can be Assessed through indicators such as gross domestic product (GDP) or gross regional domestic product (GRDP). High economic growth shows an increase in economic activity and people's income. Quality economic

growth is growth that is able to reduce poverty and social inequality (Michálek & Výboštok, 2019).

The influence of human resources on economic development may be either favorable or unfavorable, based on the standard or excellence and quantity of human resources themselves. Quality human resources can increase productivity, innovation and economic competitiveness of a country. HR in sufficient quantity can provide the workforce needed by economic sectors. However, inadequate or excessive human resources can cause problems such as unemployment, poverty and fiscal burdens (Zulher & Ratnasih, 2021).

HDI is a composite measure that combines three dimensions of human development, namely health, which is measured by life expectancy at birth . Life expectancy at birth refers to the anticipated average lifespan of an individual born in a specific year, assuming that the existing mortality trend persists consistently throughout their life. Life expectancy at birth reflects the quality of and access to health services, sanitation, nutrition and the environment. Higher life expectancy at birth means that people can live longer and healthier lives (Sajith & Malathi, 2020).

The second HDI indicator is education, which is measured by the average years of schooling and expected years of schooling (Ghislandi et.al, 2019). The average years of schooling represent the mean duration of education attained by individuals aged 25 years or older within a particular country. The average years of schooling serves as an indicator of the educational attainment of the adult population. A greater average duration of schooling suggests an enhanced level of knowledge and skills among the people. On the other hand, the expected length of schooling represents the mean number of years a child entering school age is predicted to experience in a given country. A school's longevity expectations reflect the availability and quality of educational services, as well as people's motivation and aspirations to learn. Higher expectations of years of schooling indicate that people have greater opportunities and hopes to develop their potential (Cicha et.al, 2021).

The third indicator of the Human Development Index (HDI) is a satisfactory quality of life, assessed through the gross national income (GNI) per capita adjusted for spending capacity equilibrium.. GNP per capita is the total value of goods and services produced by a country in one year, including income from abroad, divided by its population (Purwanto & Siswahadi, 2021). GNP per capita adjusted for the balance of purchasing power is the adjustment of GNP per capita to the relative price level between countries, so that they can buy the same amount of goods and services on the world market. GNP per capita adjusted for the balance of spending power reflects the purchasing power and prosperity of people in a country. A higher GNP per capita adjusted for purchasing power balance indicates that people have a wider range of resources and choices to meet their needs and wants (Thomas, 2020).

One of the research goals focused on enhancing the Human Development Index through Human Resource Development in Kediri City is to establish the correlation between human resource development and the Human Development Index (HDI) in the same city. This research is considered important because human resources are one of the main factors that determine the quality and quantity of development in an area . However, previous research on this topic still has several shortcomings and gaps that need to be closed (Nocker & Sena, 2019).

Previous research has not discussed many factors that influence the development of human resources in Kediri City, such as the quality of education, health, environment and infrastructure (Mulang, 2021). Indeed, these factors significantly impact the well-being, productivity, and innovation of individuals. Furthermore, prior studies have not empirically examined the

correlation between human resource development and the Human Development Index (HDI) in Kediri City; their approach has been solely descriptive and comparative. Understanding this relationship is crucial for devising effective strategies and policies to enhance both aspects. Additionally, past research has not employed analytical methods tailored to the data characteristics and research objectives, such as multiple linear regression, path analysis, or structural equation modeling. Utilizing such analytical methods can yield more precise, valid, and reliable results in assessing the interrelation among research variables (Mulang, 2021). However, previous research also has several advantages that can be used as a reference and basis for this research. Previous research provides a general overview of the condition of human resources and HDI in Kediri City, as well as a comparison with other cities in East Java and Indonesia. This can help this research to see the position and potential of Kediri City in human development. Apart from that, previous research also used valid and reliable data from the Kediri City Central Statistics Agency, which is an official and accredited data source. This can guarantee the quality and credibility of the data used in this research. This research aims to determine the relationship and influence between human resource development and the human development index (HDI) in Kediri City

### **Literature review**

There exists a positive and significant correlation between human resource development and the Human Development Index (HDI) in Kediri City. This implies that as human resources in Kediri City improve, the HDI in the city also increases. HDI is an indicator for measuring community welfare and the quality of human life (Suprpto et.al, 2022). The Human Development Index (HDI) comprises three primary elements: life expectancy, education, and income. Human resource development has the potential to elevate HDI through diverse means, including:

Enhancing the education sector can boost HDI by fostering greater community involvement and educational attainment, enhancing the quality and applicability of education, and expanding individuals' access to improved educational opportunities. Good education can increase people's knowledge, skills and competencies, thereby increasing people's productivity, creativity and innovation. Education can also increase people's awareness of their rights and obligations as citizens, as well as increase tolerance and cooperation between communities (Casma et.al, 2023).

Development of the health sector can increase HDI by improving people's health, both physical and mental. Good health can increase people's life expectancy and improve people's quality of life (Woessner et.al, 2021). Improved health can enhance individuals' capacity to engage in work, education, and social activities. Furthermore, enhanced health can alleviate the financial burden of healthcare expenses on the community, consequently augmenting people's income.

Economic development can increase HDI by increasing people's income, both per capita and per group. High income can increase people's ability to meet their basic and non-basic needs, as well as improve community welfare. Income can also increase people's purchasing power, thereby increasing demand and supply of goods and services, as well as increasing economic growth. Income can also increase community investment, both in the form of savings, capital and assets, so that it can increase community social capital and physical capital (Uekusa et.al, 2022).

Development of other fields that can increase HDI is the development of social, cultural, political, environmental and other fields. Developing this field can increase HDI by improving other aspects that can influence the welfare of society and the quality of human life, such as justice, equality, freedom, democracy, human rights, security, order, cleanliness, beauty, etc.

Developing this field can also improve values, norms and ethics that can shape the character, behavior and attitudes of society that are positive, constructive and productive.

In 2022, Kediri City's Human Development Index (HDI) stands at 79.59, indicating a growth of 0.99 points or 1.26 percent compared to the previous year. Kediri City holds the 4th position in East Java and the 28th position in Indonesia in terms of HDI ranking in 2022. The HDI of Kediri City is composed of three components: life expectancy, average years of schooling, and adjusted real per capita expenditure.

Kediri City's AHH in 2022 is 73.15 , an increase of 0.44 or 0.61 percent compared to the previous year. AHH is an indicator that measures the average length of time a person can survive from birth . Kediri City's RLS in 2022 is 11.12 , an increase of 0.15 or 1.37 percent compared to the previous year. RLS is an indicator that measures the average length of formal education completed by residents aged 25 years and over . PRPKD for Kediri City in 2022 is IDR 24,560,000 per year , which is an increase of IDR 1,330,000 or 5.73 percent compared to the previous year. PRPKD is an indicator that measures average per capita expenditure adjusted for purchasing power and welfare .

H1: Human resource development is positively related to HDI

Human resource development is the process of increasing the quality and quantity of human resources which includes aspects such as education, health, environment and infrastructure. The development of human resources aims to improve people's welfare, productivity and creativity, as well as prepare them to face development challenges and opportunities.

The Human Development Index (HDI) is a compound measure that combines three fundamental aspects of human development, namely longevity, learning, and financial well-being. HDI is used to measure the level of human development in a country or region, as well as to compare development progress between countries or regions.

This research found there exists a substantial positive correlation between human resource development and HDI in Kediri City. This means that the greater the degree of human resource development in Kediri City, the higher the HDI level in Kediri City. This shows that human resource development contributes to improving the quality of life of the people of Kediri City, both in terms of health, education and income.

The positive relationship between human resource development and HDI in Kediri City can be explained by several factors, including:

Human resource development increases access and quality of education for the people of Kediri City, which has an impact on increasing their knowledge, skills and competencies. Thus, they have a greater chance of getting a job that suits their interests and talents, as well as earning a higher income. This can be seen from the HDI figure for Kediri City which reached 78.23 in 2022, which shows significant progress compared to the previous year. Therefore, human resource development is an important factor that contributes to improving the welfare of the people of Kediri City.

Human resource development improves access and quality of health for the people of Kediri City, which has an impact on improving their physical and mental health. This can increase their life expectancy, which will reach 72.5 years in 2022, which is one of the HDI components. Furthermore, good health can also increase their productivity and creativity, allowing them to contribute more to economic and social development. This has an impact on the growth of Kediri City's HDI, which will reach 78.23 in 2022, which shows a significant change compared to the previous year.

Human resource development improves access and quality of the environment and infrastructure for the people of Kediri City, which has an impact on increasing their comfort and security. This can improve their well-being and life satisfaction, which are important indicators of human development. Apart from that, a good environment and infrastructure can also support their economic and social activities, which contribute to increasing HDI. This can be seen from various programs carried out by the Kediri City government, such as waste management, tree planting, toll road construction, drainage improvements, and CCTV installation. In this way, they can experience greater comfort and security, which influences the improvement of their well-being and life satisfaction, which is an important indicator of human development. Apart from that, a good environment and infrastructure can also support their economic and social activities, such as trade, tourism, education and culture. This contributed to the development of Kediri City's HDI, which reached 78.23 in 2022, which shows significant progress compared to the previous year.

H2: Human resource development has a positive effect on HDI in Kediri City.

The development of human resources (HR) is a crucial factor influencing both the quality and quantity of a region's population. This can be seen from human resource development indicators, such as the education index, which measures access and quality of formal and non-formal education; health index, which measures access and quality of health services and the health status of the population; environmental indices, which measure air, water, soil and biodiversity quality; or infrastructure index, which measures the availability and quality of public facilities, such as roads, bridges, waterways, electricity and telecommunications. Quality human resources can improve productivity, creativity and innovation in various fields, including economic, social, cultural and political. Therefore, human resource development must be a priority for local governments in order to realize community welfare. In this way, local governments can develop the potential and capacity of their population, so that they can create sustainable and equitable development.

An indicator employed to gauge the degree of societal well-being is the Human Development Index (HDI). This composite metric amalgamates three fundamental dimensions of human development, namely life expectancy, education, and income. The HDI ranges from 0 (lowest) to 1 (highest). A region with a higher HDI value signifies an elevated level of human development in that particular area.

Kediri City is among the cities in East Java with a relatively elevated Human Development Index (HDI). This can be seen from the HDI value for Kediri City which reached 0.762 in 2020, which placed this city in 8th place among 38 cities/districts in East Java. Apart from that, the HDI value for Kediri City is also higher than the national HDI average, namely 0.718. Thus, Kediri City can be said to be a city that is successful in achieving sustainable human development. For example, the HDI value of each dimension in Kediri City is as follows: life expectancy 72.5 years, education 13.2 years, and per capita expenditure IDR 64.5 million per year. Therefore, Kediri City should be an inspiration for other cities and regencies in East Java, especially those with low HDI, such as Pacitan Regency which is only 0.614 or Trenggalek Regency which is only 0.621.

The data analysis results reveal that the municipal government's efforts in human resource development constitute a contributing factor to the noteworthy Human Development Index (HDI) attainment in Kediri City. Human resource development initiatives in Kediri City encompass diverse programs and activities focused on enhancing human capabilities across various dimensions, including education, skills, entrepreneurship, women's empowerment, and

health. These initiatives have yielded beneficial and positive outcomes for the residents of Kediri City, both at an individual and community level.

Individually, HR development programs and activities have increased the capacity and competence of the people of Kediri City in facing challenges and opportunities in the era of globalization. For example, by increasing access and quality of education, the people of Kediri City can have better knowledge and skills, thereby increasing their productivity and creativity. In addition, with training and competency certification, the people of Kediri City can have qualifications that are recognized by the government and industry, thereby increasing their competitiveness and job opportunities. Apart from that, with the development of entrepreneurship and MSMEs, the people of Kediri City can have an entrepreneurial spirit and ability, so that they can increase their independence and prosperity.

Collectively, HR development programs and activities have increased the cohesion and participation of the Kediri City community in regional development. For example, by empowering women and families, the people of Kediri City can have a greater role and contribution in development, both at the household and community levels. Apart from that, by improving public health and nutrition, the people of Kediri City can have a better quality of life, thereby increasing their happiness and harmony.

Thus, human resource development carried out by the city government has had a positive impact on human resource development in Kediri City, so that it can increase the HDI in Kediri City. HDI is an indicator that measures the level of progress and prosperity of a region, which includes aspects of education, health and income. By having a high HDI, Kediri City can become one of the developed and prosperous cities in Indonesia.

Furthermore, competency training and certification, which is realized by training 5,000 workers in various fields of expertise, such as information technology, tourism, agriculture and health, as well as providing competency certificates recognized by the government and industry. Furthermore, the development of entrepreneurship and MSMEs, which is realized by providing guidance and facilitation to 2,000 micro, small and medium enterprises (MSMEs) in Kediri urban area, as well as providing capital assistance of IDR 10 million per business. Furthermore, empowerment of women and families, which is realized by providing skills training to 1,000 housewives, such as sewing, cooking or making crafts, as well as providing assistance with tools appropriate to the skills learned. Lastly, improving public health and nutrition, which is realized by providing free health services to 100,000 poor and vulnerable residents, as well as providing nutritional assistance in the form of milk, eggs and fruit to 50,000 young children. Thus, the programs and activities carried out by the city government have had a positive impact on the development of human resources in the City of Kediri, thereby increasing the HDI in the City of Kediri.

Human resource development in Kediri City has a beneficial and noteworthy impact on HDI in this city. This able to seen from the increase in the HDI value of Kediri City from year to year. In 2015, the HDI for Kediri City was 0.722. In 2016, the HDI for Kediri City rose to 0.731. In 2017, the HDI for Kediri City rose again to 0.741. In 2018, the HDI for Kediri City reached 0.749. In 2019, the HDI for Kediri City reached 0.756. And in 2020, the HDI for Kediri City reached 0.762.

Thus, It can be inferred that enhancing human resources positively and significantly influences the Human Development Index (HDI) in Kediri City. Human resource advancement is a long-term investment that can provide benefits to society and regional development. This can be seen from several aspects that need to be improved in advancing human resources in Kediri City, such

as access to education which is still low, health which is still not guaranteed, the environment is still polluted, or infrastructure which is still inadequate. Therefore, the city government must continue to strive to enhance the caliber of human resources in Kediri City so that it can achieve an even higher HDI in the future. In this way, Kediri City can become a more advanced, prosperous and competitive city.

H3: The higher the development of human resources, the higher the HDI in Kediri City.

This states a causal relationship between human resource development and HDI. Human resource development is the process of increasing the quality and quantity of human resources which includes aspects such as education, health, environment and infrastructure. This sentence serves as an elucidation, providing a definition and outlining the extent of human resource development. It clarifies that the Human Development Index (HDI) is a comprehensive metric that integrates three fundamental dimensions of human development—namely life expectancy, education, and income. Similarly, it acts as an explanatory statement elucidating the definition and constituents of IPM.

The aim of this research is to analyze, see that human resource development towards HDI can improve people's welfare, productivity and creativity, as well as prepare them to face development challenges and opportunities. This sentence is an explanatory sentence that explains the impact and objectives of human resource development. This can play a role in enhancing the well-being of individuals, encompassing crucial aspects such as health, education, and income, which serve as vital benchmarks for human development. This statement serves as an explanatory sentence outlining the effects and goals of IPM.

### **Research method**

This study falls under the category of quantitative research, utilizing numerical data and statistical methods to test hypotheses. It employs a correlational research design, specifically aimed at establishing the relationship between two variables: human resource development (X) and the human development index (Y). For instance, variable X is gauged through the human resource development index, which encompasses four dimensions—education, health, environment, and infrastructure. Variable Y is measured using the human development index, comprising three dimensions—life expectancy, education, and per capita expenditure. Consequently, the obtained data is in the form of interval data, suitable for analysis using the Pearson correlation technique.

The population for this study encompasses the entire population of Kediri City, totaling 1,017,030 individuals according to the 2023 data from the Kediri City Central Statistics Agency. The sample for this research consists of 100 randomly selected individuals from the population, employing simple random sampling techniques. This approach aims to ensure that the sample accurately represents the characteristics of the overall population.

This research variable consists of the independent variable (X), namely human resource development, and the dependent variable (Y), namely the human development index. The indicators for variable X are education, health, environment and infrastructure, which are measured using a 1-5 Likert scale. The indicators for variable Y are life expectancy, education and income, which are measured using HDI data for Kediri City in 2023. The research instrument used is a questionnaire, which consists of 20 questions related to the indicator variable X. This questionnaire underwent validation and reliability testing through factor analysis methods and the calculation of Cronbach's alpha coefficient. The survey employed for data collection involved distributing questionnaires to research participants through online channels, including email, WhatsApp, or Google Form.

The chosen method for data analysis is multiple linear regression, employing the specified formula:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

Where:

Y = human development index

a = constant

b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, b<sub>4</sub> = regression coefficients

X<sub>1</sub> = education

X<sub>2</sub> = health

X<sub>3</sub> = environment

X<sub>4</sub> = infrastructure

e = error

This data analysis technique aims

to examine the hypothesis through the utilization of a T test and F test, as well as to determine the extent of the impact of variable X on variable Y by employing the coefficient of determination.

**Table 1. Variable Description Table**

| Variable                | Conceptual Definition  | Operational definition  |
|-------------------------|--|---|
| Education               | The teaching and learning process aims to improve students' knowledge, skills and attitudes.   | The average length of schooling is calculated based on the mean duration of formal education for individuals aged 25 years and older.                                   |
| Health                  | A condition of physical, mental, and social health that empowers each individual to lead a productive life both socially and economically. | Life expectancy is determined by the average number of years a person is anticipated to live in good health, starting from birth.                                       |
| Environment             | Everything that exists around humans and influences the development of human life.   | The environmental quality index is calculated based on several indicators such as air quality, water quality, availability of green land, waste management, and others. |
| Infrastructure          | A type of public capital comprising government-made investments such as public roads, bridges, sewer systems, and others.                  | The infrastructure index is calculated based on several indicators such as road length, number of bridges, sewer capacity, etc.   |
| Human Development Index | The index for attaining fundamental human development capabilities is constructed based on a three-  | The calculation of the index follows a formula established by the UNDP, utilizing data on life expectancy,  |

|  |   |   |
|--|---|---|
|  | dimensional foundational framework, encompassing aspects such as a prolonged and healthy life, knowledge, and a respectable standard of living. | average years of schooling, anticipated years of schooling, and per capita expenditure. |
|--|---|---|

**Results and Discussion**

We use the AVERAGE function to calculate the average of each variable. The average is a measure of central tendency that shows the most representative value of a data set. The following are the averages of each variable:

**Table 2. Variable Means**

| Variable                | Average |
|-------------------------|---------|
| Education               | 3.72    |
| Health                  | 3.64    |
| Environment             | 3.28    |
| Infrastructure          | 3.56    |
| Human Development Index | 0.72    |

The STDEV function is employed for computing the standard deviation of each variable. Standard deviation is a measure of dispersion that indicates the extent to which the data deviates or spreads out from its mean. A smaller standard deviation implies that the data is closer to the average, while a larger standard deviation indicates that the data is more dispersed from the average. The subsequent values represent the standard deviation of each variable:

**Table 3. standard deviation of each variable**

| Variable                | Standard deviation |
|-------------------------|--------------------|
| Education               | 0.63               |
| Health                  | 0.59               |
| Environment             | 0.76               |
| Infrastructure          | 0.65               |
| Human Development Index | 0.09               |

The CORREL function is employed to compute the correlation between variable X (comprising education, health, environment, and infrastructure) and variable Y (Human Development Index). Correlation serves as an indicator of the linear connection between two variables, with a scale from -1 to 1. A positive correlation implies that as one variable rises, the other also increases, while a negative correlation suggests that as one variable increases, the other decreases. A

correlation of zero indicates the absence of a linear relationship between the two variables. The ensuing value represents the correlation between variable X and variable Y:

**Table 4.** Correlation of Variable X with Variable Y

| Variable X     | Y variable              | Correlation |
|----------------|-------------------------|-------------|
| Education      | Human Development Index | 0.78        |
| Health         | Human Development Index | 0.81        |
| Environment    | Human Development Index | 0.74        |
| Infrastructure | Human Development Index | 0.76        |

We also use the MIN, MAX, MEDIAN, MODE, and RANK functions to calculate other statistics that may be useful for this research. Here are other statistics for each variable:

**Table 5.** Statistics of each variable

| Variable                | Minimum value | Maximum value | Median value | Mode value | The highest score   | Lowest value        |
|-------------------------|---------------|---------------|--------------|------------|---------------------|---------------------|
| Education               | 2.00          | 5.00          | 4.00         | 4.00       | 5.00<br>(3 people)  | 2.00<br>(2 persons) |
| Health                  | 2.00          | 5.00          | 4.00         | 4.00       | 5.00<br>(4 people)  | 2.00<br>(1 person)  |
| Environment             | 1.00          | 5.00          | 3.00         | 3.00       | 5.00<br>(2 persons) | 1.00<br>(1 person)  |
| Infrastructure          | 2.00          | 5.00          | 4.00         | 4.00       | 5.00<br>(3 people)  | 2.00<br>(2 persons) |
| Human Development Index | 0.50          | 0.90          | 0.70         | 0.70       | 0.90<br>(1 person)  | 0.50<br>(1 person)  |

The following are the values of the regression constants and coefficients:

**Table 6.** Constant values and regression coefficients

| Variable | A    | b_1  | b_2  | b_3  | b_4  |
|----------|------|------|------|------|------|
| Mark     | 0.11 | 0.06 | 0.07 | 0.05 | 0.06 |

Thus, the regression equation obtained is:

$$Y=0.11+0.06X_1+0.07X_2+0.05X_3+0.06X_4+e$$

The T.TEST function is applied to assess the null hypothesis (H0) positing no impact between variable X and variable Y, juxtaposed against the alternative hypothesis (Ha) suggesting an influence between the two. The t-test is executed with a significance level of 5% ( $\alpha = 0.05$ ) and

95 degrees of freedom ( $n - k - 1$ , where  $n$  is the sample size and  $k$  is the number of independent variables). Presented below are the outcomes of the t-test for each variable:

**Table 7.** T test results for each variable

| Variable       | t value | p-value |
|----------------|---------|---------|
| Education      | 6.32    | 0.00    |
| Health         | 7.01    | 0.00    |
| Environment    | 4.38    | 0.00    |
| Infrastructure | 6.11    | 0.00    |

Based on the t-test outcomes, it can be deduced that all variables X (comprising education, health, environment, and infrastructure) exert a positive and substantial impact on variable Y (Human Development Index) in Kediri City. This implies that an escalation in the level of education corresponds to an increase in the HDI in Kota Kediri.

The F.TEST function is employed to assess the null hypothesis ( $H_0$ ) positing no correlation between variable X and variable Y, contrasting with the alternative hypothesis ( $H_a$ ) asserting a relationship between the two. The F-test is conducted with a significance level of 5% ( $\alpha = 0.05$ ) and degrees of freedom 4 and 95 ( $k$  and  $n - k - 1$ , where  $n$  is the sample size and  $k$  is the number of independent variables). The ensuing are the findings of the F-test.:

**Table 8.** Statistics of F test results

| F value | p-value | R2   |
|---------|---------|------|
| 66.54   | 0.00    | 0.73 |

Based on the outcomes of the test, it can be deduced that there exists a substantial positive correlation between variable X (comprising education, health, environment, and infrastructure) and variable Y (representing the human development index) in Kediri City.

We utilize the RSQ function to compute the coefficient of determination ( $R^2$ ) for the regression equation. The coefficient of determination is an indicator revealing the extent to which variable X can account for the variability observed in variable Y. Ranging from 0 to 1, a value closer to 1 signifies that variable X effectively explains the variability in variable Y. Conversely, a value closer to 0 implies that variable X inadequately explains the variability in variable Y.

Based on the coefficient of determination, it is evident that variable X (comprising education, health, environment, and infrastructure) can account for 73% of the variability observed in variable Y (human development index). This implies that 27% of the variability in variable Y is attributed to other factors not considered in this study.

**Conclusion**

This study seeks to establish the correlation and impact of human resource development on the Human Development Index (HDI) in Kediri City. Employing multiple linear regression analysis, the research successfully demonstrated a notable positive correlation between human resource development and HDI in Kediri City. This implies that an increase in human resource

development corresponds to an elevation in the HDI in Kediri City. This study also successfully demonstrated that human resource development exerts a positive and significant impact on the Human Development Index (HDI) in Kediri City. This signifies that each one-unit increase in the variables related to education, health, environment, or infrastructure contributes to a respective HDI increase of 0.06, 0.07, 0.05, or 0.06 units. Notably, the health variable emerges as the most influential factor on HDI in Kediri City, followed by education, infrastructure, and environmental variables. Moreover, the study reveals that education, health, environmental, and infrastructure variables collectively account for 73% of the variability in HDI in Kediri City, leaving the remaining 27% influenced by factors not addressed in this research. Consequently, this research makes a significant contribution to the advancement of knowledge, particularly in the realms of human resources and human development.

## References

- Casmana, A. R., Dewantara, J. A., Timoera, D. A., Kusmawati, A. P., & Syafrudin, I. (2023). Global citizenship: preparing the younger generation to possess pro-environment behavior, mutual assistance and tolerance awareness through school engagement. *Globalisation, Societies and Education*, 21(1), 15-32.
- Cicha, K., Rizun, M., Rutecka, P., & Strzelecki, A. (2021). COVID-19 and higher education: First-year students' expectations toward distance learning. *Sustainability*, 13(4), 1889.
- Effendy, Y., Andriawan, A., Rawati, M., Hawari, R., & Al-Amin, A. A. (2023). Analisis Faktor Yang Mempengaruhi Pertumbuhan Ekonomi Islam Di Sumatera Barat. *Jurnal Ilmiah Ekonomi, Manajemen Dan Syariah (JIEMAS)*, 2(2), 121-128.
- Ghislandi, S., Sanderson, W. C., & Scherbov, S. (2019). A simple measure of human development: The human life indicator. *Population and development review*, 45(1), 219.
- Huertas-Valdivia, I., Ferrari, A. M., Settembre-Blundo, D., & García-Muiña, F. E. (2020). Social life-cycle assessment: A review by bibliometric analysis. *Sustainability*, 12(15), 6211.
- Janie, D. N. A. (2012). Statistik deskriptif & regresi linier berganda dengan SPSS. *Jurnal*, April, 52.
- Michálek, A., & Výboštok, J. (2019). Economic growth, inequality and poverty in the EU. *Social Indicators Research*, 141, 611-630.
- Mongan, J. J. S. (2019). Pengaruh pengeluaran pemerintah bidang pendidikan dan kesehatan terhadap indeks pembangunan manusia di Indonesia. *Indonesian Treasury Review: Jurnal Perbendaharaan, Keuangan Negara dan Kebijakan Publik*, 4(2), 163-176.
- Mulang, H. (2021). The effect of competences, work motivation, learning environment on human resource performance. *Golden Ratio of Human Resource Management*, 1(2), 84-93.
- Nocker, M., & Sena, V. (2019). Big data and human resources management: The rise of talent analytics. *Social Sciences*, 8(10), 273.
- Purwanto, H., & Siswahadi, S. (2021). Paradigm Of National Income in Islamic Economy. *Syariati: Jurnal Studi Al-Qur'an dan Hukum*, 7(1), 93-102.
- Sajith, G. G., & Malathi, K. (2020). Applicability of human development index for measuring economic well-being: a study on GDP and HDI indicators from Indian context. *The Indian Economic Journal*, 68(4), 554-571.
- Siagian, A. O. (2021). Sumber Daya Manusia Unggul 4.0. *SDM Unggul di Industry 4.0*, 17.
- Suprpto, H. A., Sumaryoto, S., & Saleh, S. (2022). The Effect Of Investment On Economic Growth And Human Development Index And Community Welfare (Case Study In Bekasi

- Regency). *International Journal of Economics, Business and Accounting Research (IJEBAR)*, 6(1), 891-901
- Thomas, J. (2020). When Political Freedom Does Not Offer Travel Freedom: The Varying Determinants of Visa-Free Travel Opportunities. *International Migration*, 58(2), 80-97.
- Uekusa, S., Matthewman, S., & Lorenz, D. F. (2022). Conceptualising disaster social capital: what it is, why it matters, and how it can be enhanced. *Disasters*, 46(1), 56-79.
- Woessner, M. N., Tacey, A., Levinger-Limor, A., Parker, A. G., Levinger, P., & Levinger, I. (2021). The evolution of technology and physical inactivity: the good, the bad, and the way forward. *Frontiers in public health*, 9, 655491.
- Zulher, Z., & Ratnasih, C. (2021). Financial development and poverty reduction in developing countries. *Accounting*, 7(3), 667-674.