Analysis of The Influence Factors of the Human Development Index in Padang City, West Sumatra

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ABSTRACT

This article aims to analyze the influence of GRDP, Life Expectancy, Average Length of School and Number of Poor Population in the 2018-2022 period on the Human Development Index (HDI) of Padang City, West Sumatra Province. The type of data used comes from the Padang City Central Statistics Agency (BPS), West Sumatra Central Statistics Agency (BPS) and Bank Indonesia (BI). While research supporting data also comes from various national and international journals as well as references related to research topics. Data analysis is the Ordinary Least Square (OLS) method, namely multiple regression analysis. The results of the study show that GRDP, life expectancy and average length of schooling are indicators that have a positive and significant impact on the Human Development Index in Padang City, West Sumatra Province. Meanwhile, the indicator for the Number of Poor Population is an indicator that has a negative and significant effect on the Human Development Index. The indicator that has the most dominant effect is the average length of schooling with a standardized coefficient beta of 1.127.

Keywords:
HDI, GRDP, Life Expectancy, Average School Years, Number of Poor Population

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1. Introduction

The Human Development Index (HDI) is an important indicator for measuring success in efforts to build the quality of human life and can determine the rank or level of development of a region/country (Haile & Niño-Zarazúa, 2018; Haque & Khan, 2019; Ivanová & Masárová, 2018; Jin et al., 2020). Whereas for a country the HDI is strategic data apart from being a measure of government performance, HDI is also used as one of the determinants of the General Allocation Fund (GAF) (Ahmad et al., 2019; Xiao et al., 2018). HDI is obtained through a three basic dimensional approach, namely longevity and healthy life, knowledge and a decent livelihood (Province, 2023).

In producing quality human beings, efforts are needed to improve the quality of human resources (Adle & Akdemir, 2019; Hardiyanto, 2020; Millimouno et al., 2021; Udin, 2020). The government makes expenditures or investments aimed at human development (Haque & Khan, 2019; Omodero, 2019). Government spending is a reflection of the policies taken by the
government (Dervis, 2011). Policies in budget allocation for all resources and funds owned by the regions to increase all public service needs, so that the achievement of social welfare can be obtained (Chugunov et al., 2019; Cubi-Molla et al., 2021; Wang & Zhang, 2022). In this case the priority is public services regarding the education (Cristina et al., 2021; Omodero & Dandago, 2019), health (Halaskova et al., 2021; Liu & He, 2019) and economic sectors which are at the heart of the concept of human development (Sirangi, 2019). Development Report (HDR) where the human development index (HDI) is calculated for each country. The index has become an important alternative to the traditional one-dimensional measure of development (ie growth in gross domestic product) (Sagar, 1998).

The Human Development Index (HDI) is also an important indicator to measure the performance of local governments of Padang City in building quality of life (Al-Rabbiaie et al., 2022; Purnomo et al., 2021; Zulham et al., 2021). The Human Development Index is influenced by several factors, including Health, Education, GRDP and Poverty Line. The Health Index is a comparison of the biological expectancy at birth with the life expectancy index. The Health Index reflects the level of knowledge and skills of the population, meaning the length of schooling (in years) that is expected to be experienced by children of a certain age in the future. Education is needed and is an investment to increase the productivity of society. The budget allocation for government spending on education is a concrete form of investment. The higher the average level of knowledge and skills that people have, the easier it will be for every individual of working age to understand, apply and get results from technological advances and ultimately improve the nation's economic and living standards. A nation must increase investment in education and health to achieve development (Hofmarcher, 2021; Mostert & Vall Castello, 2020). Gross Regional Domestic Product (GRDP) at market prices is the gross added value arising from all economic sectors in a region (Nugraha et al., 2020; Sasonogko et al., 2019). The meaning of added value here is the value added from a combination of production factors and raw materials in the production process.

Poverty is also another factor that affects the Human Development Index (IPM). Poverty is a condition of a person when he is unable to meet various needs for food, housing and clothing and low levels of income, education and skills, social isolation caused by limited ability to participate in community social activities. Previous research examines the factors that influence the human development index in a country in ASEAN member countries (see Arisman, 2018). The analysis technique used is regression using panel data regression with a fixed effect model. The results of processing using the fixed effect model show that population and per capita income growth rate affect the human development index in ASEAN member countries, while the inflation rate and unemployment rate variables do not have an impact on the human development index. This study implies the importance of government to control population and accelerate economic growth (Emara & El Said, 2021; Shittu et al., 2021).

The purpose of this article is to analyse to what extent the four factors (Health, Education, GRDP and Poverty) affect the Human Development Index (HDI) in Padang City, West Sumatra Province during the period 2018 – 2022. Table 1. Presents the development of the Padang City Human Development Index for 2018 – 2022.

<table>
<thead>
<tr>
<th>No</th>
<th>Years</th>
<th>HDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2018</td>
<td>82,25</td>
</tr>
<tr>
<td>2</td>
<td>2019</td>
<td>82,68</td>
</tr>
<tr>
<td>3</td>
<td>2020</td>
<td>82,82</td>
</tr>
<tr>
<td>4</td>
<td>2021</td>
<td>82,90</td>
</tr>
<tr>
<td>5</td>
<td>2022</td>
<td>83,29</td>
</tr>
</tbody>
</table>

Source: Central Statistics Agency of Padang City (2023)
In Table 1, it is explained that the Human Development Index (HDI) of the City of Padang during 2018 - 2022 has increased every year, although at a small percentage level. It indicates that the efforts to improve the quality of human life in Padang city was quite good during this time period.

Table 2. Data on HDI, GRDP, Life Expectancy, Average Length of Schooling and Number of Poor People in Padang City for The Period 2018 - 2022

<table>
<thead>
<tr>
<th>Years</th>
<th>HDI</th>
<th>GRDP</th>
<th>Life Expectancy</th>
<th>Average Length Of Schooling (Year)</th>
<th>Number Of Poor People (Thousands of Souls)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>82,25</td>
<td>6,06</td>
<td>73,35</td>
<td>11,33</td>
<td>44,04</td>
</tr>
<tr>
<td>2019</td>
<td>82,68</td>
<td>5,64</td>
<td>73,85</td>
<td>11,34</td>
<td>42,44</td>
</tr>
<tr>
<td>2020</td>
<td>82,82</td>
<td>-1.86</td>
<td>73,57</td>
<td>11,58</td>
<td>42,17</td>
</tr>
<tr>
<td>2021</td>
<td>82,90</td>
<td>3,66</td>
<td>73,65</td>
<td>11,59</td>
<td>48,44</td>
</tr>
<tr>
<td>2022</td>
<td>83,29</td>
<td>4,33</td>
<td>73,69</td>
<td>11,60</td>
<td>42,37</td>
</tr>
</tbody>
</table>

Source: Central Statistics Agency for West Sumatra Province (2023)

Table 2 shows the development of the Padang City’s HDI over a period of 5 years (2018 – 2022). HDI has increased even though in a small number, while the value of the Gross Regional Domestic Product (GRDP) has fluctuated due to the Covid-19. It had an impact on the entire community, including the people of Padang City. However, in 2021 the GRDP growth rate increased. The average life expectancy for the people of Padang City is 73 years. The average length of schooling for the school-age population is 11 years. Meanwhile, the number of poor people experienced fluctuations in the 5-year period and in 2021 it reached the highest number (48,44 thousand people). Based on data, it is necessary to analyze the extent to which factors influence, namely GRDP, Life Expectancy, Average Years of Schooling and Number of Poor Population in the 2018-2022 period on the Human Development Index (HDI) of Padang City, West Sumatra Province.

GRDP of the Agricultural Sector (Sulistyowati et al., 2020) partially has a positive and significant effect on the Human Development Index (HDI) in West Sulawesi Province. GRDP as an indicator of economic growth (Kholifia et al., 2021; Syaraswati et al., 2017) can increase people’s welfare as indicated by the Human Development Index (HDI). It is because economic development guarantees increased productivity (Beck et al., 2018; Borcan et al., 2018; Teignier, 2018) and increased income through job creation. Besides that, direct government spending partially has a positive and significant effect on the Human Development Index (HDI) in West Sulawesi Province. Government Direct Expenditure as a form of fiscal policy will be able to accelerate the increase in HDI through increasing the value of direct spending as well as efficiency in budget management that is more focused on productive sectors and programs that can be felt directly by the public.

Private investment partially has a positive and significant effect on the Human Development Index (HDI) in West Sulawesi Province. The increase in investment will cause the productive sector to move, which in effect will increase employment and increase the Purchasing Power Index which leads to an increase in the Human Development Index (HDI). The Open Unemployment Rate partially has a negative and insignificant effect on the Human Development Index (HDI) in West Sulawesi Province. The effect of the Open Unemployment Rate variable on HDI is not significant because the workforce in West Sulawesi Province is dominated by the agricultural sector, which reaches 57 percent. GRDP of the Agricultural Sector has a dominant influence on the Human Development Index (HDI) in West Sulawesi Province.

2. Methods
Data Types and Sources
The type of data used in this research is secondary data which is quantitative in nature. The main data in this study are the Human Development Index, GRDP, Life Expectancy, Average
Years of Schooling and Number of Poor Population in Padang City, West Sumatra Province during 2018 - 2022. Data comes from the Central Statistics Agency (BPS) Padang City, the Center for Statistics (BPS) West Sumatra and Bank Indonesia (BI). While research supporting data also comes from various national and international journals as well as references related to research topics.

**Analysis Method**

The analytical method used in this research is quantitative analysis. This quantitative research is data in the form of numbers that have characteristics in numerical form (Djaali, 2020). In addition, quantitative research is a research method based on the philosophy of positivism, used to research certain populations, data collection uses research instruments, data analysis is quantitative/statistical in nature with the aim of testing established hypotheses (Sugiyono, 2019). The population in this study is the City of Padang and the sample used is the Gross Regional Domestic Product (GRDP) figure, Life Expectancy Rate, Average Years of Schooling and Number of Poor Population, as well as the Padang City Human Development Index (HDI) figure in the 2018 - 2022. In analyzing the data used the Ordinary Least Square (OLS) method, namely multiple regression analysis. The intended method is that the sum of the squares of all the deviations between the X and Y variables, each of which has its own coordinates, will be as minimal as possible (Sugiyono, 2019) and (Bagya, 2018).

\[ Y = \alpha_1 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \]

**Description:**

\( Y \) = Human Development Index (HDI)  
\( \alpha_1 \) = Constant  
\( \beta_1, \beta_2, \beta_3, \beta_4 \) = Regression Coefficient  
\( X_1 \) = GRDP  
\( X_2 \) = Life Expectancy Rate  
\( X_3 \) = Average Years of Schooling  
\( X_4 \) = Number of Poor Population  
\( \varepsilon \) = Residue

**Hypothesis**

Based on the previous description, the following hypotheses can be made:

H1: GRDP, Life Expectancy, Average Years of Schooling and Number of Poor Population simultaneously have a positive effect on the Human Development Index in Padang City, West Sumatra Province.

H2: GRDP partially has a positive and significant effect on the Human Development Index in Padang City, West Sumatra Province.

H3: The average length of school partially has a positive and significant effect on the Human Development Index in Padang City, West Sumatra Province.

H4: The number of poor people has a negative and significant effect on the Human Development Index in Padang City, West Sumatra Province.

H5: GRDP has a dominant influence on the Human Development Index in Padang City, West Sumatra Province.

**3. Results**

Table 3. shows the coefficient of determination R2. The magnitude of the determinant coefficient R Square or R2 = 1.0000 which means that the variables GRDP (X1), Life Expectancy (X2), Average Years of Schooling (X3) and Number of Poor Population (X4), are able to explain the HDI
variable (Y) equal to 100 percent and the magnitude of the influence of other variables outside the model is 1 - 1.0000 = 0.0000 or 0 percent.

### Table 3. Coefficient of Determination

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Squared</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.000&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: Results of Processed SPSS Data (2023)

### Simultaneous Test (Test F)

The F test aims to test the effect of a variable on other variables simultaneously (simultaneously) the independent variable on the dependent variable.

### Table 4. ANOVA Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>.567</td>
<td>4</td>
<td>.142</td>
<td>.000</td>
<td>.000&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residual</td>
<td>.000</td>
<td>0</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.567</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Results of Processed SPSS Data (2023)

From the ANOVA test results obtained an F value of 0.0000 and a significance of 0.0000. Because the sig value is 0.0000 < 0.05, the hypothesis H<sub>0</sub> is rejected. The results of this analysis prove that together GRDP (X<sub>1</sub>), Life Expectancy (X<sub>2</sub>), Average Length of Schooling (X<sub>3</sub>) and Number of Poor Population (X<sub>4</sub>), have a significant effect simultaneously on the Human Development Index (Y) in Padang City, West Sumatra Province.

### Table 5. Partial Test (t test)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.823</td>
<td>.000</td>
</tr>
<tr>
<td>X1_GRDP</td>
<td>.054</td>
<td>.000</td>
</tr>
<tr>
<td>X2_Life Expectacy</td>
<td>.689</td>
<td>.000</td>
</tr>
<tr>
<td>X3_Average Length of Schooling</td>
<td>3.031</td>
<td>.000</td>
</tr>
<tr>
<td>X4_Number of Poor Population</td>
<td>-.349</td>
<td>.000</td>
</tr>
</tbody>
</table>

Source: Results of Processed SPSS Data (2023)

The individual tests produced to test the hypothesis can be seen as follows:

a) **GRDP has a positive and significant effect on the Human Development Index in Padang City, West Sumatra Province.**

   Table 5. shows the t statistical value for the GRDP variable is 0.000 with a probability value (sig.) = 0.000, because of the sig value. 0.000 < 0.05, then the hypothesis H<sub>0</sub> is rejected. These results prove that GRDP has a positive and significant effect on the Human Development Index in Padang City, West Sumatra Province.

b) **Life expectancy partially has a positive and significant effect on the Human Development Index in Padang City, West Sumatra Province**

   Table 5. shows that the t statistical value for the Life Expectancy variable is 0.000 with a probability value (sig.) = 0.000. Because the sig value is 0.000 < 0.05, the hypothesis H<sub>0</sub> is
rejected. These results prove that life expectancy has a positive and significant effect on the Human Development Index in Padang City, West Sumatra Province.

c) **The average length of school partially has a positive and significant effect on the Human Development Index in Padang City, West Sumatra Province**

Table 5, shows that the t statistic value for the average length of school variable is 0.000 with a probability value (sig.) = 0.000. Because the value of sig. 0.000 < 0.05 then the hypothesis H0 is rejected. These results also prove that the average length of schooling has a positive and significant effect on the Human Development Index in Padang City, West Sumatra Province.

d) **The number of poor people has a negative and significant effect on the Human Development Index in Padang City, West Sumatra Province**

Table 5, shows the t statistical value for the variable Number of Poor Population is 0.000 with a probability value (sig.) = 0.000. Because the value of sig. 0.000 < 0.05 then the hypothesis H0 is rejected. These results are contrary to the hypothesis and prove that the number of poor people has a negative and significant effect on the Human Development Index in Padang City, West Sumatra Province.

e) **GRDP has a dominant influence on the Human Development Index in Padang City, West Sumatra Province.**

Table 5 shows the order of significance of the independent variables which also illustrate dominance, the variable Average Length of School (X3) has a dominant influence on the Human Development Index in Padang City, West Sumatra Province. This is evidenced by the number of Standardized Coefficient Beta which has the greatest value, namely 1.127. Thus, the hypothesis is rejected. In addition, the sequence of variables that have the most influence on the Human Development Index in Padang City, West Sumatra Province are: GRDP, Life Expectancy and Number of Poor Population.

Based on the linear regression equation, the following equation is obtained from Table 5:

\[
Y = -0.823 + 0.054X_1 + 0.689X_2 + 3.031X_3 - 0.349X_4 + 0
\]

\[
Sig = 0.000 0.000 0.000 0.000 0.000
\]

Description:

- Y = Human Development Index (HDI)
- X1 = GRDP
- X2 = Life Expectancy
- X3 = Average Length of School
- X4 = Number of Poor Population
- \( \varepsilon \) = Residue (1-R²)

The constant value is -0.823 indicating that if the GRDP, life expectancy, average length of schooling and number of poor people are equal to zero (0), then the Human Development Index (HDI) will decrease.

The results of data analysis, obtained a coefficient of determination (R²) of 1.000. It can be said statistically that the model used is very good, because the value of the coefficient of determination shows the magnitude of the independent variables (GRDP, Life Expectancy, Average Years of Schooling and Number of Poor Population) on the dependent variable (Human Development Index), so that the coefficient a determination of 1.000 means that around 100 percent of the variables that affect the Human Development Index can be explained by GRDP, Life Expectancy, Average Years of Schooling and Number of Poor Population. Thus, there are no
other variables that explain other than the four independent variables on the Human Development Index (the dependent variable) in the multiple regression equation model.

The goal of development is to increase living rates and people’s welfare (Diebolt & Hippe, 2019; Guzman et al., 2018; Okubo, 2023). Residents have a very strong relationship with welfare, because residents are the subject and object of development itself. Residents as input in the production process and at the same time is the goal of development itself, namely to improve their welfare. The fiscal policy implemented by the Regional Government determines the acceleration of economic development which has an impact on the welfare of the people in that area (Cardoso et al., 2022; Olayele & Soo, 2020; Vozyak & Pelekhaty, 2018). Thus, one of the objectives of implementing decentralization is to improve public services (Dick-Sagoe, 2020; Konte & Vincent, 2021; Sanogo, 2019) with the consideration that regional governments understand the needs and potentials that exist in their regions.

The Human Development Index (HDI) also reminds us of the broader meaning of development, not only in the form of higher incomes, but also the dimensions of Health and Education which are fundamental development goals. If a country has a population with high income, but is not educated, health is not well maintained, so that life expectancy is shorter than the population of another country that has reached a higher level of development than a country with low income, but life expectancy and higher reading and writing abilities.

It is further said that the human development index and per capita income have a major influence on poverty reduction. Effect of human development index and income per capita in poverty alleviation was found to be significant in several nations in Asia. In some countries (such as India) people with high per capita income are suffering from high inequality. The data shows that inclusive growth is very far from India’s economy. While there has been a substantial reduction in the poverty ratio in most states, there is still a long way to go. Greater attention needs to be paid to human development in particular by increasing budgets and spending plans in the social sector and generating sufficient employment opportunities. So proper policies to protect the rights of women, children, minorities, good health facilities, education, population control, economic growth that starts from the grassroots, are needed to achieve balanced and inclusive growth with poverty alleviation.

In line with the results of this study, a comprehensive policy is needed from the Municipal Government of Padang, West Sumatra Province in an effort to encourage an increase in the Human Development Index in the City of Padang. Economic growth through increased output in dominant sectors such as education, namely the average length of schooling, the health sector through a relatively large life expectancy, policies in an effort to reduce poverty by increasing welfare, have proven to have a significant effect on increasing the human development index in Padang City, West Sumatra Province. In order to realize broad general welfare as mandated in the 1945 Constitution, a comprehensive government policy is needed, not only focusing on economic growth, but also on handling income inequality, expanding employment opportunities and better levels of education and health.

4. Discussion

a) The Influence of GRDP on the Human Development Index

Based on the results of the analysis that has been carried out, it can be seen that partially the GRDP variable has a positive and significant influence on the Human Development Index (HDI) in Padang City, West Sumatra Province, with a coefficient value of 0.054, which means that if GRDP increases by 1 trillion Rupiah, then City HDI Padang, West Sumatra Province, experienced an increase of 0.054 points. The results of this analysis support the research hypothesis that was previously carried out by (Salmani, 2013) by proving that GRDP per capita has a significant influence on the development of people’s quality of life (HDI) in West Kutai Regency. The results of this study also support research conducted by (Sirangi, 2019) which explains that there is a significant influence of the GRDP of the Agricultural Sector on HDI in
West Sulawesi Province.

Although GRDP is not the most decisive (dominant) indicator in improving people’s welfare in Padang City, West Sumatra Province, GRDP has a second, quite large influence. This is evidenced by the Standardized Coefficient value of 0.460 which is in second place after the average length of schooling. With the Human Development Index (HDI), economic development can be guaranteed by increasing productivity and increasing income through creating job opportunities.

This research can provide an overview to the Government of Padang City and the Provincial Government of West Sumatra in an effort to increase the Human Development Index, especially to match national achievements, so this can be done by encouraging production growth in all sectors that can affect the increase in PDRB of Padang City, West Sumatra Province, such as the agricultural sector, Health, Education, trade and so on.

This research is contrary to the research which states that per capita income does not represent other dimensions of the Human Development Index (HDI) (Krylov et al., 2019; Namayandeh et al., 2020; Smits & Permanyer, 2019). Per capita income is not a good indicator and has no effect on the Human Development Index of the Organization for Economic Co-operation and Development (OECD/Organization for Economic Co-operation and Development). However, for developing countries per capita income is quite influential on the development of the Human Development Index. The present result is consistent with the research explains that in low-income countries/developing countries, GRDP shows higher results and has a positive effect on the Human Development Index. This is because the number of people who work more and absorbed in various sectors of the economy.

b) The Effect of Life Expectancy on the Human Development Index

Based on the results of the study it was found that partially the life expectancy variable has a positive and significant influence on the Human Development Index (HDI) in Padang City, West Sumatra Province with a coefficient value of 0.689. This means that if the life expectancy rate increases every year, the HDI in Padang City, West Sumatra Province, will increase by 0.689 points. Life expectancy is part of the health sector. Thus, the results of this study support the research hypothesis and are relevant to the previous research which proved that the Education and Health sector had a positive and significant influence on the HDI. For this reason, it can be explained that life expectancy has a positive and significant effect on HDI (Herrero et al., 2019; Rychtaříková, 2019).

Life Expectancy is the third most dominant indicator influencing the Human Development Index (HDI) in Padang City, West Sumatra Province after the GRDP variable. This can illustrate that in addition to increasing the education sector through the average length of school which is the most dominant variable in Padang City, West Sumatra Province in influencing HDI, the Padang City Government can increase productivity in all sectors to increase Padang City’s GRDP and improve the health sector. through improving and increasing the life expectancy of the population of Padang City.

In the health sector, the addition of health facilities clearly has a major effect on increasing life expectancy, which is an indicator of the HDI. Increasing the number of Hospitals and Health Centers and providing good service to the community is one of the efforts that can be made to achieve better Life Expectancy. The results of this study also consistent with previous research which says that life expectancy, expected school year, labor participation rate, and GDP per capita have a statistically significant impact on the level of development (Sattar et al., 2022). Countries that have a high HDI can concentrate on determining variables, especially education to achieve good HDI standards in a country.

c) Effect of Average Length of School on Human Development Index

Based on the results of the study it was found that partially the average length of school
variable has a positive and significant influence on the Human Development Index (HDI) in Padang City, West Sumatra Province. This is evidenced by the coefficient value of 3.031, which means that if the average length of schooling increases every year for residents undergoing formal education, then the HDI of Padang City, West Sumatra Province, has increased by 3.031 points.

The results of this study support the previous hypothesis which proves that the average length of school has a positive and significant effect on HDI (Rahmat et al., 2021). The increase in the average length of school can be seen in terms of the readiness of the Padang City Government in the construction of supporting infrastructure facilities for the education sector. Apart from that, increasing the Literacy Rate (LR) is also an effort that can be made to support the average length of schooling as part of the Human Development Index (HDI) indicator.

The Average Length of Study (ALS) indicator is the most dominant indicator influencing the Human Development Index (HDI) in Padang City, West Sumatra Province. The Municipal Government of Padang must be able and play an optimal role in improving the education sector by building people's desire to take longer formal education starting from basic education and improving and providing better and more representative education support facilities. The results of present study in line with previous research which shows that the average length of schooling has the greatest impact on the likelihood of having a very high HDI score for a country.

d) Effect of Number of Poor Population on Human Development Index

Based on the results of the study it was found that partially the variable Number of Poor Population has a negative and significant influence on the Human Development Index (HDI) in Padang City, West Sumatra Province with a coefficient value of -0.349. The negative sign indicates the opposite direction between the number of poor people and HDI. This means that if the number of poor people decreased by 1 percent, then the HDI of Padang City, West Sumatra Province, would increase by 0.349 points.

In theory it is said that the number of poor people has an inverse effect on the Human Development Index (HDI), where the effect of the number of poor people is caused by a decrease in the level of social welfare. The lower the level of social welfare, the number of poor people will increase. Likewise, conversely, as welfare increases, the number of poor people will decrease. The results of this study are also in accordance with the theory which explains that the level of health and education as indicators included in human development (Hickel, 2020; Yumashev et al., 2020) can influence poverty. Improvements in the health sector carried out by the government can improve public health, and school-age children can go to school and can receive lessons well. The level of education makes workers have the skills and knowledge which in turn causes productivity to increase and their income also increases. This causes economic growth to increase which in turn causes the poverty rate to decrease.

Previous research explain that poverty indicators have a negative and significant influence on the Human Development Index (Ladi et al., 2021). These conditions cannot be used as a good tool in decision making. This is because the country of Jordan has a fairly high level of education, health and income, but there are still many people who are below the poverty line. The results of this study contradict previous research that poverty has a significant and significant effect on the Human Development Index (HDI) in Central Java Province, as evidenced by the positive value of the poverty variable.

5. Conclusion

The purpose of this article is to analyse to what extent the four factors (Health, Education, GRDP and Poverty) affect the Human Development Index (HDI) in Padang City, West Sumatra Province. Based on the order of indicators that have the most dominant effect on HDI from highest to lowest, they are: Average Years of Schooling (RLS), GRDP, Life Expectancy and Total Population Poor. These four indicators simultaneously) have a significant effect on the Human
Development Index (HDI) of Padang City, West Sumatra Province, thus this study supports the research hypothesis that has been made, but GRDP is not the dominant indicator that has the most influence on HDI in Padang City. The most dominant HDI indicator is the average length of schooling.

GRDP partially has a positive and significant effect on the Human Development Index (HDI) in Padang City, West Sumatra Province. GRDP as an indicator of economic growth can improve people’s welfare as indicated by the Human Development Index (HDI), because economic development guarantees increased productivity and increased income through job creation. Life expectancy also partially has a positive and significant effect on the Human Development Index (HDI) in Padang City, West Sumatra Province. In the health sector, the addition of health facilities clearly has a major effect on increasing life expectancy, which is an indicator of the HDI. Increasing the number of Hospitals and Health Centers and providing good service to the community is one of the efforts that can be made to achieve better Life Expectancy.

The average length of schooling indicator has a positive and significant effect on the Human Development Index (HDI) in Padang City, West Sumatra Province. The Municipal Government of Padang must be able and play an optimal role in improving the education sector by building people’s desire to take longer formal education starting from basic education as well as improving and providing better and more representative education support facilities. This is also due to the fact that the average length of school is an indicator that has the most dominant effect on HDI in Padang City.

The indicator for the number of poor people is an indicator that has a negative and significant effect on the HDI in Padang City, West Sumatra Province. If the number of poor people decreases by 1 percent, the HDI for Padang City, West Sumatra Province, will increase by 0.349 points. The effect of the number of poor people is due to a decrease in the level of social welfare. The lower the level of social welfare, the number of poor people will increase. Likewise, conversely, as welfare increases, the number of poor people will decrease.

6. References


Chugunov, I., Makohon, V., & Markuts, Y. (2019). Budgetary policy of the emerging countries in

https://doi.org/10.3390/su13073942


https://doi.org/10.1080/23322039.2020.1804036


https://doi.org/10.1016/j.worlddev.2018.05.017

https://doi.org/10.1002/jid.3326


https://doi.org/10.13189/ujer.2020.080653


https://doi.org/10.1080/1331677X.2018.1429944


