

Analysis of Factors Affecting Human Development Index in the Ex-Resident of Semarang and Surakarta

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ABSTRACT

The HDI achievements in the ex-resident of Semarang and Surakarta show high and stable performance. Even though there are 2 regencies, namely Grobogan and Wonogiri, with HDI achievements that contrast with the cities of Salatiga, Semarang and Surakarta, the HDI in each district/city continues to increase every year. This research aims to analyze the effect of Minimum Wage, Economic Growth, Government Expenditure on Education and Health on the Human Development Index (HDI) in the Ex-Resident of Semarang and Surakarta, Central Java Province. The object is in 13 districts/cities in the period 2015-2019. Data were collected from Central Bureau of Statistics (BPS) and Directorate General of Fiscal Balance (DJPK) using panel data regression with random effect as the best model selected. The result is that the Minimum Wage has a significant positive effect on HDI. Economic Growth has no significant effect on HDI caused most people do not actively contribute to increasing economic growth due to unequal income distribution, so not all levels of society can receive the benefits. Government Expenditure on Education has a significant negative effect on HDI caused the increase in the number of students and school infrastructure has not been matched by the quantity and quality of educators. In addition, education is a long-term investment, so this variable in the research period has not shown a positive impact on HDI. Government Expenditure on Health has no significant effect on HDI caused the increasing population is not accompanied by an increase in health facilities.

Keywords: Minimum Wage, Economic Growth, Government Expenditure on Education, Government Expenditure on Health, HDI

INTRODUCTION

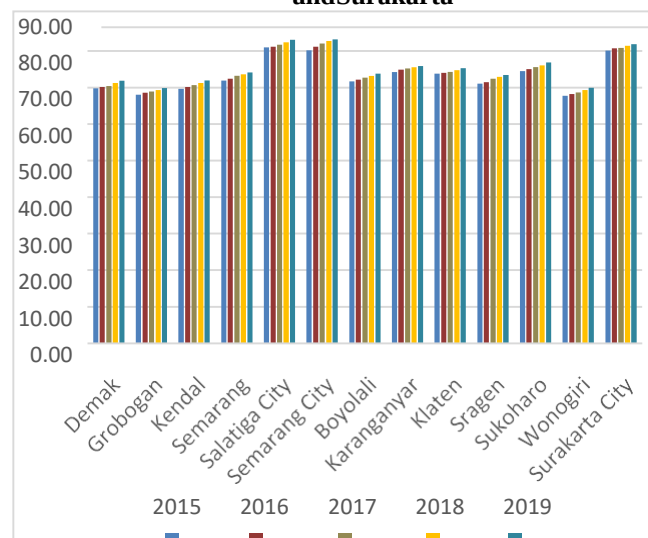
Community welfare is one of the main focuses of development in a region. Economic development that stems from humans is a new paradigm that can be seen from the quality of life of its people. UNDP (United Nations Development Programme) in 1990 introduced the Human Development Index (HDI) as one approach to measure the success rate of human development. Longevity and healthy living, knowledge, and decent living standards are the dimensions that make up the Human Development Index (HDI) (UNDP, 1990). The Central Statistics Agency (2019) divides 4 HDI categories, namely very high HDI ≥ 80 , high $70 \leq \text{HDI} < 80$, medium $60 \leq \text{HDI} < 70$, and low < 60 .

The distribution of Indonesia's population is concentrated more than half in Java Island due to the pull factors of good infrastructure, facilities, and accessibility conditions in Java Island (Arif, A. F. N. & Nurwati, N., 2022). Central Java Province is one of the Provinces in Java Island with the 2nd lowest HDI achievement in Java Island after East Java Province in 2019. However, starting from 2015 there are 3 regions with very high HDI categories, namely Semarang City, Salatiga City, and Surakarta City where these areas are included in the Semarang and Surakarta Ex-Residency areas.

Ex-Residency of Semarang and Surakarta are 2 of the 6 Ex-

Residency regions in Central Java Province. Semarang Ex-Residency consists of 4 regencies and 2 cities, namely Demak, Grobogan, Kendal, Semarang, Salatiga City, and Semarang City. The Ex-Residency of Surakarta consists of 6 regencies and 1 city, namely Boyolali, Karanganyar, Klaten, Sragen, Sukoharjo, Wonogiri, and Surakarta City.

Figure 1. HDI in the Ex-Residency of Semarang and Surakarta



(Source: BPS, processed by the author)

Based on figure 1, from 13 regencies/cities in 2015-2019, there are 3 regions with high HDI categories, namely Semarang City, Salatiga City, and Surakarta City as well as the highest HDI in Central Java Province. Ex-Residency Semarang and Surakarta are areas with HDI achievements that tend to be stable and high. In the period 2015-2019 there were 2 out of 13 regencies/cities whose HDI achievements were still relatively low, namely Grobogan and Wonogiri regencies, the rest were classified as high and very high HDI. The comparison of HDI achievements between Grobogan Regency and Wonogiri Regency with three cities in Semarang and Surakarta Ex-Residency, indirectly illustrates that there is a gap in terms of economic and social development between regions in Semarang and Surakarta Ex-Residency.

UNDP (1995) states that one of the paradigms of human development is productivity. So, humans need to increase their productivity to earn income which in turn can improve their standard of living. Wages are the main source of a person's income; therefore, wages need to be sufficient to meet the needs of workers reasonably. The Minimum Wage for Ex-Residency Districts / Cities of Semarang and Surakarta continues to increase. In 2019 the lowest minimum wage in Semarang and Surakarta Ex-Residency was in Wonogiri Regency at Rp 1,655,000.00 and the highest was in Semarang City at Rp 2,498,587.53. However, there is a gap in the period 2015-2019, namely in Sragen Regency which has a high HDI category has a lower minimum wage of Rp 1,673,500.00 in 2019 compared to Grobogan Regency which has a medium HDI category of Rp 1,685,500.00. The high minimum wage can illustrate that a region has a high level of economy.

Economic growth is one part of human development. The rate of economic growth in Semarang and Surakarta Ex-Residency from 2015-2019 fluctuated. Grobogan Regency in 2015 had an economic growth rate of 5.96% then decreased to 4.51% in 2016 and again rose 5.85% in 2017. And there was a decrease in the period 2015-2019 by 5.96% to 5.37%. Each district/city has various economic growth rates. Of the 13 regencies/cities located in the administrative areas of Semarang and Surakarta Ex-Residency, Semarang City has the highest economic growth rate in 2019 of 6.81%. Then the achievement of the lowest economic growth rate in 2019 of 5.14%, namely Wonogiri Regency.

Education and good health have an important role related to the quality of human resources. Human resources become more effective and efficient as a result of good education and health levels, so that in the end there is an increase in productivity. The role of local governments in development is very important. For example, in terms of providing and guaranteeing education and public health. By allocating budget funds in order to advance human development, fiscal policy instruments are used as an effort to improve the human development index. To improve human development, the government needs to facilitate education

and health infrastructure (Dewi, N., 2017). However, some levels of government, including local governments, usually have their own human development policies. In addition, the problem is that the ability to ensure government education and health depends on the financial condition of the region concerned.

The achievement of HDI in the Ex-Residency of Semarang and Surakarta seems to show high and stable performance. Although there are still 2 districts, namely Grobogan and Wonogiri with HDI achievements that contrast with Salatiga, Semarang and Surakarta, the HDI in each Regency/City continues to increase every year. The increase is an interesting fact because the Human Development Index can reflect performance achievements in the development of quality human resources that are useful for economic development in a region.

The success of development can be measured from several parameters, and the most developed today is development based on humans. Seeing the importance of HDI as one of the indicators of development success, the purpose of this study is to determine the effect of minimum wage, economic growth, government expenditure on education and health on the Human Development Index (HDI) in the Ex-Residency of Semarang and Surakarta.

LITERATURE REVIEW

The Human Development Index introduced by the United Nations Development Programme in 1990 is one of the important tools to assess how well a region has managed to improve the quality of life of its people and to assess the level of development in the region. The HDI measures the average achievement of a country in 3 basic dimensions of human development, namely healthy life and longevity, knowledge, and decent living standards (Hardjanto, 2011).

The minimum wage as an illustration of the dimension of decent living standards is the lowest wage that will be used as a standard by employers to determine the actual wages of workers/laborers working in their companies. Research conducted by Faizin, M (2021) regarding the minimum wage for HDI in Provincial Districts/Cities in East Java for the 2010-2018 period using panel data analysis, states that the minimum wage has a positive effect on HDI. Conversely, research by Izzah & Hendarti (2021) regarding the minimum wage on HDI in Central Java Province using quantitative methods with the SPSS 13 program for the 2010-2019 period, states that the minimum wage has a significant negative impact on HDI.

According to Prawoto, N (2019) economic growth can be seen as a long-term process to increase per capita output. This definition places strong emphasis on three concepts: process, output per capita, and long run. Based on research from Khan et al. (2019) on economic growth of HDI in Pakistan in 1990-2014 using the Autoregressive Distribution Lag (ARDL) method and Vector Error Correction Model (VECM) stated that economic growth

has a positive and significant impact on human development. Meanwhile, Ningrum et al.'s (2020) research on economic growth on HDI in Indonesia in 2014- 2018 using panel data analysis, states that economic growth variables do not have a significant effect on HDI.

The HDI measurement is also inseparable from knowledge and health factors. The quality of education and health in a country is expected to increase along with the increase in government spending in these sectors. Based on the development model of government spending developed by Rostow and Musgrave, the development of government spending is linked to the stages of economic development which are grouped into early, middle, and advanced stages. Since the government must provide facilities and services such as health, education, and transportation, the percentage of government investment to total investment is high in the early stages of economic development. In the middle stage, government investment is still needed to boost economic growth. At this time the role of private investment is also growing Subandi, M (2014). And at an advanced stage, government spending is used for social activities replacing infrastructure provision. Based on research conducted by Soleha & Fathurrahman (2017) on government spending on health and education in Indonesia in 1985-2014 using Vector Error Correction Model (VECM) analysis, it is stated that government spending in the health sector has a significant positive effect on HDI, while government spending in the education sector has a significant negative effect on HDI. Then research from Kahang et al. (2016) in East Kutai using SPSS in 2009- 2014, stated that government spending in education had a positive effect on HDI. Meanwhile, government spending in the health sector does not have a significant influence on HDI.

METHOD

The object of this research focuses on Regencies / Cities located in the Semarang Ex-Residency area, namely Demak, Grobogan, Kendal, Semarang, Salatiga City, and Semarang City. Then in the Surakarta Ex-Residency area, namely Boyolali, Karanganyar, Klaten, Sragen, Sukoharjo, Wonogiri, and Surakarta City.

This study uses secondary data obtained from the Central Bureau of Statistics (BPS) and the Directorate General of Fiscal Balance (DJPK) in the form of data on the Human Development Index, Minimum Wage, Economic Growth, Government Expenditure on Education, and Government Expenditure on Health in the 2015-2019 period. The data analysis method is in the form of multiple regression models with panel data. The regression model of the data panel in this study is as follows:

$$Y_{it} = \alpha + b_1 X1_{it} + b_2 X2_{it} + b_3 X3_{it} + b_4 X4_{it} + e_{it}$$

Information:

Y_{it} = Human Development Index
 α = Constant

$b1-4$ = The Regression coefficient of each independent variable
 $X1$ = Minimum Wage
 $X2$ = Economic Growth
 $X3$ = Government Expenditure on Education
 $X4$ = Government Expenditure on Health
 e = Error term
 i = Regencies/Cities Ex-Residency of Semarang and Surakarta
 t = 2015-2019

Panel data estimation model consists of Common Effect Model, Fixed Effect Model, Random Effect Model. Then the best model selection test is carried out with the Chow Test to estimate between fixed effect models or random effect models. Hausman Test to determine the most appropriate model to use between fixed effect models or random effect models. The Lagrange Multiplier (LM) Test is performed to find out if the random effect model is better than the common effect model. To test the quality of data in research using classical assumption tests. In panel data regression, not all classical assumption tests are used, it can be done only with multicollinearity and heteroscedasticity tests as needed (Basuki & Prawoto, 2017).

RESULT AND DISCUSSION

Data Quality Test

Heteroscedasticity Test

Test

This study used the Glejser test, where the independent variable is regressed with absolute residual values. Obtained probability values of all independent variables and Prob. (F-statistical) of $0.210471 > \alpha = 0.05$. So, it is concluded that the regression model is free from heteroscedasticity problems.

Table 1. Heteroscedasticity Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.79491	4.011203	2.691189	0.0092
LOG(UMK)	-0.572714	0.372965	-1.535568	0.1299
PE	0.166176	0.114775	1.447840	0.1529
LOG(BEL_PEN)	0.073128	0.059550	1.228017	0.2242
LOG(BEL_KES)	-0.074980	0.092495	-0.810638	0.4208
F-statistic	1.510746			
Prob (F-statistic)	0.210471			

(Source: Data processed Eviews 10)

Multicollinearity Test

Table 2. Multicollinearity Test Result

	IPM	LOG (UMK)	PE	LOG (BEL_PEN)	LOG (BEL_KES)
IPM	1.000000	0.335971	0.375223	0.036040	0.120077
LOG(UMK)	0.335971	1.000000	0.417097	0.634403	0.717930
PE	0.375223	0.417097	1.000000	0.147321	0.369244
LOG(BEL_PEN)	0.036040	0.634403	0.147321	1.000000	0.838038
LOG(BEL_KES)	0.120077	0.717930	0.369244	0.838038	1.000000

(Source: Data processed Eviews 10)

This multicollinearity test uses the partial correlation method between independent variables. The results showed no correlation between independent variables that were high above 0.90. So, it can be concluded that the regression model does not have a multicollinearity problem because the result of the multicollinearity test value is less than 0.90 (Ghozali, 2013: 83).

Best Model Analysis

Common Effect Model, Fixed Effect Model and Random Effect Model approaches are used in estimating regression models with panel data. Here are the regression results.

Table 3. Regression Result

HDI	Model		
	Common Effect	Fixed Effect	Random Effect
Contant	-56.40012	-11.59799	-11.69980
Std. Error	45.76833	4.203893	4.361747
t-Statistic	-1.232296	-2.758870	-2.682367
Prob.	0.2226	0.0082	0.0094
LOG(UMK)	10.75202	6.324009	6.333278
Std. Error	4.239407	0.396922	0.396701
t-Statistic	2.536208	15.93263	15.96488
Prob.	0.0138	0.0000	0.0000
PE	3.480436	0.017842	0.021388
Std. Error	1.632656	0.122053	0.122023
t-Statistic	2.131763	0.146185	0.175276
Prob.	0.0371	0.8844	0.8615
LOG(BEL_PEN)	-0.444101	-0.144411	-0.144766
Std. Error	0.914081	0.063317	0.063305
t-Statistic	-0.485844	-2.280758	-2.286800
Prob.	0.6288	0.0270	0.0258
LOG(BEL_KES)	-1.166577	-0.020561	-0.022133
Std. Error	1.396576	0.098351	0.098330
t-Statistic	-0.835312	-0.209062	-0.225085
Prob.	0.4069	0.8353	0.8227
R²	0.172654	0.997496	0.914650
Prob(F-statistic)	0.003784	0.000000	0.000000

(Source: Data processed Eviews 10)

Panel Data Best Model

Selection Chow Test

The Chow test is carried out as a determination of the best model between common / pooled effect and fixed effect. If the result accepts the null hypothesis, it means that the best model is common. Conversely, if the results reject the null hypothesis, it means that the best model is fixed effect, and the next test is the Hausman Test.

Table 4. Chow Test Result

Effects Test	Statistic	d.f	Prob.
Cross-section F	1647.809787	(12,48)	0.0000
Cross-section Chi-square	391.516609	12	0.0000

(Source: Data processed Eviews 10)

Based on the results of the chow test, the probability of

Cross-section F and Cross-section Chi-square is less than $\alpha = 0.05$. This means rejecting the null hypothesis, so the model chosen is fixed effect and testing continues to the Hausman Test.

Hausman Test

The Hausman test is carried out as a determination of the best model between Random Effect and Fixed Effect. If the result accepts the null hypothesis, it means that the best model is the Random Effect. Conversely, if the results reject the null hypothesis, it means that the best model is Fixed Effect. If the selected is the Random Effect Model, then the next test is the LM Test.

Table 5. Hausman Test Result

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.018130	4	0.2854

(Source: Data processed Eviews 10)

Based on the results of the hausman test, the probability of cross-section random is greater than $\alpha = 0.05$. This means accepting the null hypothesis, so the selected model is a Random Effect and testing continues to the Lagrange Multiplier Test.

Lagrange Multiplier Test

The Lagrange Multiplier test is performed as a determination of whether the Random Effect model is better than the Common Effect model. If the result rejects the null hypothesis, it means that a random effect model was chosen. Meanwhile, if the result accepts the null hypothesis, it means that a common effect model was chosen.

Table 6. Lagrange Multiplier Test Result

Null (no rand. effect) Alternative	Cross-section One-Sided	Period One-sided	Both
Breusch-Pagan	106.6116 (0.0000)	1.023799 (0.3116)	107.6353 (0.0000)
Honda	10.32529 (0.0000)	-1.011829 (0.8442)	6.585609 (0.0000)
King-Wu	10.32529 (0.0000)	-1.011829 (0.8442)	4.286374 (0.0000)
GHM	--	--	106.6116 (0.0000)
	--	--	

(Source: Data processed Eviews 10)

Based on the results of the LM test, a Breusch-Pagan probability value of 0.0000 is obtained less than $\alpha = 0.05$. It means rejecting the null hypothesis. So that the Random Effect model is the best model that can be used.

Random Effect Model (REM) Panel Data Regression Result

Based on the selection of models with chow test, hausman test, and LM test, the best model used in this study was the random effect. Here are the estimation results using the random effect model:

Table 7. Random Effect Model (REM) Panel DataRegression Result

IPM (Dependent Variable)	Coefficient	Std. Error	Prob.
C	-11.69980	4.361747	0.0094
LOG(UMK)	6.333278	0.396701	0.0000
PE	0.021388	0.122023	0.8615
LOG(BEL PEN)	-0.144766	0.063305	0.0258
LOG(BEL KES)	-0.022133	0.098330	0.8227

(Source: Data processed Eviews 10)

Statistic Test

T-Statistic Test

The t-Statistic Test is used to determine whether the independent variable has a relationship with the dependent variable.

Table 8. T-Statistic Test Result

Variable	t-Statistic	Prob.	Probability Standard
LOG(UMK)	15.96488	0.0000	Significant
PE	0.175276	0.8615	Insignificant
LOG(BEL PEN)	-2.286800	0.0258	Signifikan
LOG(BEL KES)	-0.225085	0.8227	Insignificant

(Source: Data processed Eviews 10)

Based on the table above, the variables that are significant to the HDI of Semarang and Surakarta Ex-Residency are the District/City Minimum Wage (UMP) variable at the significance level of 5% (0.05) and the Government Expenditure on Education variable (BEL_PEN) at the significance level of 5% (0.05). Meanwhile, the variables of Economic Growth (PE) and Government Expenditure on Health did not have a significant effect on the HDI in the Ex-Residency of Semarang and Surakarta.

R-Squared Test

The R-squared test or coefficient of determination is performed to assess the ability of a model to explain variations in the dependent variable. The coefficient of determination has a range of values between 0 until 1.

Table 9. R-Squared Test Result

Random Effect Model Regression	
R-squared	0.919985
Adjusted R-squared	0.914650
F-Statistic	172.4642
Prob (F-statistic)	0.000000

(Source: Data processed Eviews 10)

Based on the table above, the regression results using the random effect model obtained an Adjusted R-Square value of 0.914650. This means statistically that the HDI variables of Districts/Cities in the Ex-Residency of Semarang and Surakarta are influenced by the variables of Minimum

Wage, Economic Growth, Government Expenditure on Education, and Government Expenditure on Health by 91.5%. While the remaining 8.5% was influenced by other variables outside this research.

F-Statistic Test

The F-statistic test is performed to see the overall effect of the independent variable on the dependent variable. The F-statistical probability value of 0.000000 is less than 0.05. This means that the independent variables (Minimum Wage, Economic Growth, Government Expenditure on Education and Government Expenditure on Health) together affect the dependent variable (HDI) of Districts/Cities in the Ex-Residency of Semarang and Surakarta.

Interpretation of the Random Effect Model Regression Results and Discussion

The Effect of Minimum Wage on Human Development Index

Based on the regression results, it shows that the minimum wage variable has a significant positive influence on the Human Development Index in the Ex-Residency of Semarang and Surakarta at a significance level of 5%. The value of the minimum wage coefficient of 6.333278 can be concluded that when there is an increase in the minimum wage by 1%, it will increase the Human Development Index in the Ex-Residency of Semarang and Surakarta by 6.33% while other variables are considered fixed.

The amount of income can affect people's spending. Wages are one of the incomes of workers who are used to improve their welfare. Through various steps contained in laws and regulations, the government has played an active role in overcoming wage problems. The minimum wage is set so that workers' wages are not paid too low. In addition, it aims to ensure that workers / laborers get a minimum income for a decent life whose amount must be able to meet basic needs including housing, clothing, and food.

The need for decent living can increase along with the increase in the minimum wage which then has an impact on the level of welfare. This happens because the increase in the minimum wage can encourage people's purchasing power which allows them to meet their needs, so that in the end welfare will increase. The productivity of workers will also increase because the increased wages can support themselves and their families properly. It can be concluded that the Human Development Index in the Ex-Residency of Semarang and Surakarta will increase along with the increase in minimum wage. The results of this study are in line with Faizin (2017) which states that the minimum wage of districts / cities has a significant positive effect on HDI.

The Effect of Economic Growth on the Human Development Index

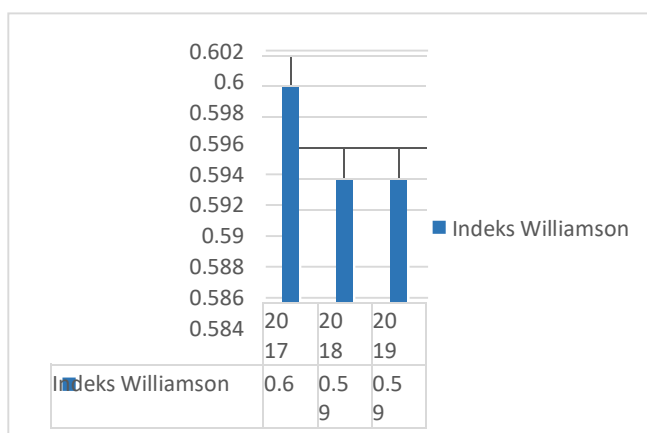
Based on the regression results, it shows that the economic

growth variable does not significantly affect the Human Development Index in the Ex-Residency of Semarang and Surakarta at a significance level of 5%. The results of this study show that HDI is not always influenced by economic growth. This depends on the economic activity of the community and the government as a regulator. The insignificant economic growth of HDI in the Ex-Residency of Semarang and Surakarta can occur due to several factors, namely, economic growth that tends to stagnate in the range of 5% which means that economic conditions slowed down in 13 Regencies/Cities Ex-Residency Semarang and Surakarta in the study period. So that in 2015-2019 there was no significant influence on HDI.

Economic growth has not shown significant value to HDI in the Ex-Residency of Semarang and Surakarta can also be caused by most people not actively contributing to increasing economic growth. This can result in not all levels of society benefiting from economic growth, only those who actively contribute to economic growth benefit. The condition of society that does not actively contribute to economic growth is caused by the uneven distribution of income, where household expenditure is also determined by the distribution of income. Inequality makes poor regions unable to catch up, causing differences in HDI (Susanto, 2021).

The existence of developed areas side by side with underdeveloped areas shows the inequality of regional development. According to the Central Bureau of Statistics (2022) the Williamson Index is used as a measure of development inequality, the closer to number one means the greater the income inequality between regions. Kendal Regency, Demak Regency, Semarang Regency, Grobogan Regency, Semarang City, and Salatiga City have experienced development inequality between regions in it. Here are the achievements of the Williamson Index from the region in the 2017-2019 period.

Figure 2. Williamson Index



(Source: Statistics of Jawa Tengah Province, processed by the author)

The figure above shows that the achievement of the

Williamson Index from 2017-2019 is greater than 0.5, meaning that there is a high development inequality between regions in Kendal Regency, Demak Regency, Semarang Regency, Grobogan Regency, Semarang City, and Salatiga City. The BPS (2022) stated that development in the city center, namely Semarang City, has not been able to have an impact on development, especially in Demak Regency and Grobogan Regency. Semarang City with a GDP per capita of 105.93 million rupiah/population compared to the GDP per capita in Demak Regency and Grobogan Regency of 22.62 million rupiah/population and 19.82 million/population respectively also illustrates the income inequality between regions.

Income inequality leaves many households in financial difficulty. So that in the end they cannot improve the quality of their resources in a better direction. In other words, the poor cannot benefit from the social structures and activities that take place. The government is expected to implement it.

development plans that favor the poor, emphasize investment in labor and improve the social security system, so that all groups can enjoy the benefits of economic growth (Dewi, N., 2017). This research is in line with research from Ningrum et al. (2020) which states that economic growth has no effect on HDI in Indonesia, research from Ozturk & Suluk (2020) shows that there is no causality relationship between the independent variable of economic growth and the dependent variable of HDI in Norway, and Susanto (2021) explains that Gross Regional Domestic Product (GDP) has no impact on HDI.

The Effect of Government Expenditure on Education on the Human Development Index

Based on the regression results, it shows that the variable Government Expenditure on Education has a significant negative influence on the Human Development Index in the Ex-Residency Districts/Cities of Semarang and Surakarta at a significance level of 5%. The coefficient value of - 0.144766 can be concluded that when there is an increase in education spending by 1%, it will reduce the Human Development Index in Semarang and Surakarta Ex-Residency by 0.145% while other variables are considered fixed.

The cause of variable government expenditure on education has a negative influence on the HDI of Districts/Cities in the Ex-Residency of Semarang and Surakarta occurs because the allocation of education function spending is less effective and optimal. In general, the local governments of the Districts/Cities in the Ex-Residency of Semarang and Surakarta have realized a Regional Budget (APBD) of 20% for the education sector. Government spending on education still focuses on the physical construction of schools. Apart from physical development, the sustainability of education also needs more attention. The focus of education development in Central Java shifted from providing basic education to



secondary education Central Bureau of Statistics (2020).

Table 10. Number of Junior High Schools (units)

Districts/Cities	Academic Year	
	2014/2015	2019/2020
Demak	51	85
Grobogan	138	136
Kendal	97	107
Semarang	93	102
Salatiga City	23	27
Semarang City	174	188
Boyolali	76	97
Karanganyar	77	80
Klaten	107	118
Sragen	171	92
Sukoharjo	79	77
Wonogiri	119	119
Surakarta City	54	73

(Source: Jawa Tengah Province in Figures of various editions, processed by the author)

Based on the table above, it can be explained that most of the number of Junior High Schools in Semarang and Surakarta Ex-Residency Districts/Cities has increased from the 2014/2015 school year to the 2019/2020 school year. The increase does not make the number of students continue to survive to the next level. This is proven that the School Participation Rate (APS) in 2016-2019 in the age group 7-15 almost all children received basic education, while the agegroup of 16-18 years was still below 70% Central Statistics Agency (2019). The dropout rate of high school / vocational school in Central Java is still quite high. According to data from the Ministry of Education and Culture, in 2018 the dropout rate in Central Java was 1,566 high school students and 9,689 vocational students.

The increasing number of schools also needs to be accompanied by the quantity and quality of teaching staff. BPS (2020) stated that the growth rate of the number of schools is still unable to keep up with the speed of student growth. At the SM/MA/SMK level in 2019, it must provide services for an average of 589.95 students per school. Meanwhile, the average teacher load in 2015 of 11.6 students increased to 12.05 students in 2019. The Regional Education Balance (2019) notes that in 2018-2019 in Central Java out of 100% of existing certified teachers, teachers who have not been certified with the highest percentage are in Early Childhood Education (PAUD) and Vocational High School (SMK) units. So, it can be said that the increase in the number of schools needs to be balanced with an increase in the number of teachers and their quality. Because skilled and capable teachers are better equipped to manage larger classes.

Education is also an impact in the long run, so government spending in education in this study has not shown a direct positive impact on HDI in the Ex-Residency of Semarang

and Surakarta the results of this study are in line with the research of Soleha & Fathurrahman (2017) which states that spending on education has a significant negative effect on the human development index.

The Effect of Government Expenditure on Health on the Human Development Index

Based on the regression results, it shows that the variable of Government Expenditure on Health does not significantly affect the Human Development Index in the Ex-Residency of Semarang and Surakarta at a significance level of 5%. Government expenditures can be allocated in the form of budgets to organize the construction and maintenance of health facilities, both physical and non-physical. This is done so that people get easy access to services in the health sector. The basic needs of public health can be met through the ease of obtaining health services, so that in the end it can improve the quality of life of the community. One of the requirements to increase community productivity is through government spending on the health budget sector which is spent to fulfill one of the basic rights to access health services in the form of health facilities and services Todaro & Smith, (2003).

Table 11. Number of Public Health Center (units)

Districts/Cities	2015	2016	2017	2018	2019
Demak	27	27	27	27	27
Grobogan	30	30	30	30	30
Kendal	30	30	30	30	30
Semarang	26	26	26	26	26
Salatiga City	6	6	6	6	6
Semarang City	37	37	37	37	34
Boyolali	29	29	29	26	26
Karanganyar	21	21	21	21	19
Klaten	34	34	34	34	34
Sragen	25	25	25	25	25
Sukoharjo	12	12	12	12	13
Wonogiri	34	34	34	34	38
Surakarta City	17	17	17	17	17

(Source: Jawa Tengah Province in Figures of various editions, processed by the author)

The insignificant government expenditure on health sector on HDI in the Ex-Residency of Semarang and Surakarta is related to health facilities and services. Based on table 11, the number of health facilities in this case community health center tends to stagnate and even decrease, namely Semarang City and Boyolali Regency. In 2015 in Semarang City as many as 37 units decreased to 34 units in 2019. Boyolali district from 29 units dropped to 26 units in the same year.

Based on Susanto (2021) that improving health infrastructure can result in better public health and life expectancy which can increase HDI numbers. In an effort to ensure that individuals have easy access to health services, the government built public facilities and infrastructure, one of which is puskesmas. So, when the number of puskesmas does not change or even decreases,

it can cause difficulties for the community to obtain easy access to health. So, in this study, government spending in the health sector has not had a significant influence on HDI in the Ex-Residency of Semarang and Surakarta. This research is in line with research from Kahang et al. (2016) showing that there is no significant relationship between government spending in the health sector to HDI.

CONCLUSION AND RECOMMENDATION

The Minimum Wage variable has a positive and significant effect on the Human Development Index in the Ex-Residency of Semarang and Surakarta in the 2015-2019 research period. Economic growth variables have no influence on the Human Development Index in the Ex-Residency of Semarang and Surakarta in the 2015-2019 research period. The variable government expenditure on education has a negative and significant effect on the Human Development Index in the Ex-Residency of Semarang and Surakarta in the 2015-2019 research period. The variable government expenditure on health has a negative and significant effect on the Human Development Index in the Ex-Residency of Semarang and Surakarta in the 2015-2019 research period.

People's living standards through minimum wages need to be improved according to proper calculations to increase people's income. This is done so that all groups of people have higher purchasing power and are able to meet their basic needs. Local governments need to make policies regarding the quality and equitable distribution of people's income so that the impact can be enjoyed by all levels of society. So that economic growth in Semarang and Surakarta Ex-Residency can be effective and optimal as an effort to increase human development. In addition, local governments are expected to pay more attention to the quantity and quality of teachers and students by allocating appropriate educational function expenditures, for example through scholarship programs for underprivileged students and increasing the number of certified teachers. Then the local government and the Ministry of Health are expected to pay more attention to the needs of public health facilities as the population continues to increase. The construction and improvement of health facilities certainly needs to be followed by improving the quality of available medical personnel. The training of medical personnel can be funded using health expenditures. This study only used 4 variables, namely minimum wage, economic growth, government expenditure on education, and government expenditure on health. Future research can use other variables that can affect HDI, especially education and health indicators. In addition, the period used in the study lasted from 2015-2019. This is due to limited data access. For better results if the year chosen in the next study is more than five years. Further research can also use different methods according to the research objectives, for example to determine the long-term impact of each variable.

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