Determinants of Community Welfare in West Sulawesi Province Panel Data

Firsty Ramadhona Amalia Lubis[1,a]*; Lestari Sukarniati[2,b]
[1]firsty.ramadhona@ep.uad.ac.id

[a, b]Ahmad Dahlan University
*corresponding authors

ARTICLE INFO | ABSTRACT

The Human Development Index (HDI) is designated as one of the primary measures included in the basic pattern of regional development. This study aims to examine government spending on health, education, public facilities & housing on HDI. The data used is secondary data consisting of 2016-2020 in 6 districts/cities of West Sulawesi. This study aimed to examine the effect of health expenditure, education expenditure, housing, and public facilities on HDI in West Sulawesi. Fiscal indicators seen in this study include health expenditure, education expenditure, housing, and public facilities. The analysis method used data panel with specification model is Fixed Effect. The results showed that government spending in the education sector had a positive and significant effect on HDI, while government spending on housing and public facilities had a significant and negative effect.

Introduction

Sustainable Development Goals are needed in the regional development framework. Community welfare is one of the indicators in the SDGs that accommodates changing situations in the region. In its implementation, the regional autonomy policy requires the regional government to increase development and advance the economy following the condition of the resources owned by the region and involve the community in making policies so that the regional autonomy policy, namely community welfare, can be realized (Tangkalisin, 2005).

Wagner states that government spending is a function (exponent) of the ratio of government spending per capita to per capita income (i.e., GNP or GRDP divided by the number of residents), which always increases every year with increasing time, and the income per capita of the population is in line with a positive and significant influence between spending government with HDI because of the growth or increase in government

spending which was also followed by an increase of growth in the HDI in West Kalimantan (Noviansyah. Helmi, 2019)

United Nations Development Program (UNDP) through its serial publications since the early 1990s measurement better social welfare comprehensive by using (1) level per capita income, (2) education level and (3) visible life expectancy from the level of public health. Third this component is constructed into Human Development Index (Khairudin, Pratiwi&Daud, 2019).

Human development has capabilities in capacity building, education, and health. Human development is positive economic growth and change in human welfare. The Human Development Index (HDI) is designated as one of the primary measures included in the basic pattern of regional development. The HDI function and other human development indicators will be the key to implementing targeted planning and development (Farida, 2014).

The human development index is the thing that underlies development to achieve human welfare as the ultimate goal of development. The HDI provides broader development insights because its establishment is designed to focus attention on aspects of health and education development so that it can compare human development performance between countries and regions (Aditia, 2018).

One of the indicators used to measure the welfare of society is the Human Development Index (HDI), which is a composite statistic of life expectancy, education, and income per capita indicators. Many studies have discussed the determinants of HDI as well as the relationship between HDI and economic performance. However, a study on the causal relationship between the financial performance of local government and HDI still rarely found. By knowing the relationship between financial performance and HDI, the government can make a proper policy in allocating local government revenue and spending, that can improve the welfare or quality of the society (Riphat, Setiawan&Damayanti, 2016) Government spending in fiscal policy is one of the instruments to improve the social welfare. Spending allocation on item as indicators of human welfare (education, health, and infrastructure as a driver of economy) should be allocated sufficient to boost the level of social welfare. The policy

can be seen in the report of government's budget realization based on its functions. Government expenditure is taken based on reflection analysis of policy by the government. In this case, government expenditure is used to finance the public sector as the main importance and a priority to grow human quality resources as reflected in the Human Development Index (HDI). The government's role in increasing the Human Development

Index is also influential through the realization of state expenditure in public services. The role of the government in the policy of implementing regional autonomy and fiscal decentralization is based on the consideration that the regions know better about the needs and standards of service for the people in their regions. So that the provision of regional autonomy is expected to spur an increase in the welfare of the people in the regions by increasing economic growth (Butar&Rahmanta, 2019)

The increasing value of the Human Development Index (HDI) indicates that there is an increase in quality human resources in an area; the higher the quality of human resources in an area, the more productive the workforce, and the higher the opportunity to create innovations that are the key to sustainable growth. In essence, the development of a country or region depends on how its human development is (Tangkalisin, 2005).
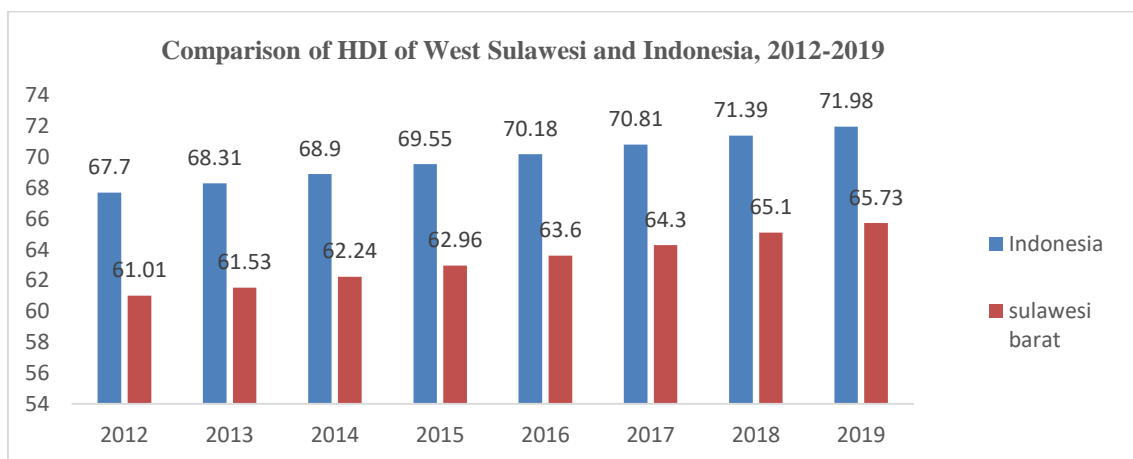
Source: Regional Office of the Directorate General of Treasury of West Sulawesi Province, 2019
Figure 1. Comparison of Indonesia's HDI (percentage) with West Sulawesi in 2012 – 2019
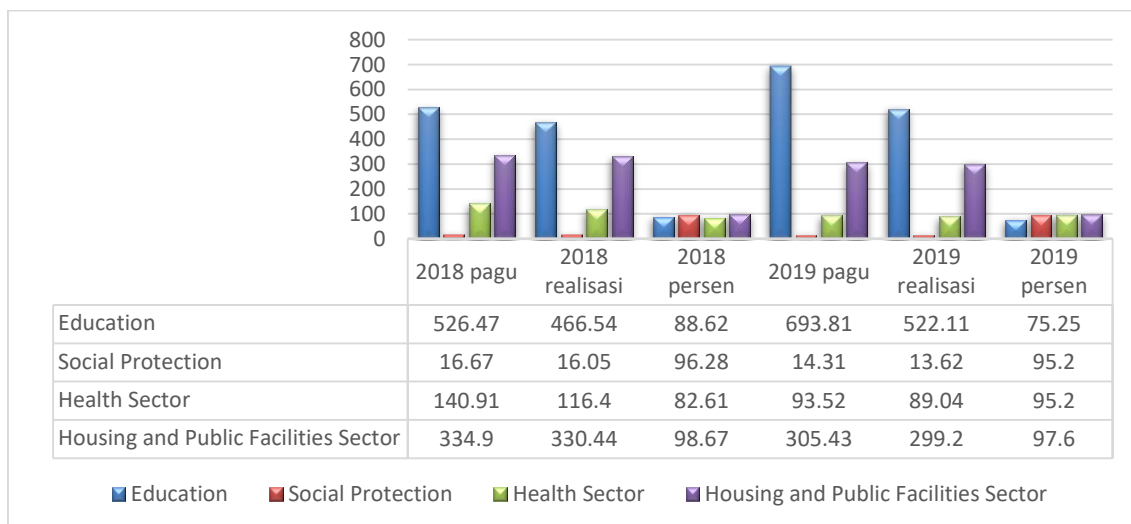
Since the formation of West Sulawesi in 2004, the impact has been quite significant. This can be seen at least from the increase in HDI from year to year. In 2019, West Sulawesi's HDI reached 65.73, while Indonesia's HDI was 71.98 (Figure 1). The quality of human resources in West Sulawesi Province, indicated by the HDI achievement scores, has relatively increased over the last eight years but is still far below the national level. This HDI achievement value still places West Sulawesi Province in the 4th lowest national position of 34 provinces. The average HDI growth of West Sulawesi is more progressive when viewed from the increase in data on economic growth every year. However, this growth has not been able to match the national level. So strong support is needed from the government by budgeting a more significant allocation for the budget, especially at the health and education level. (West Sulawesi Regional Statistics, 2019)
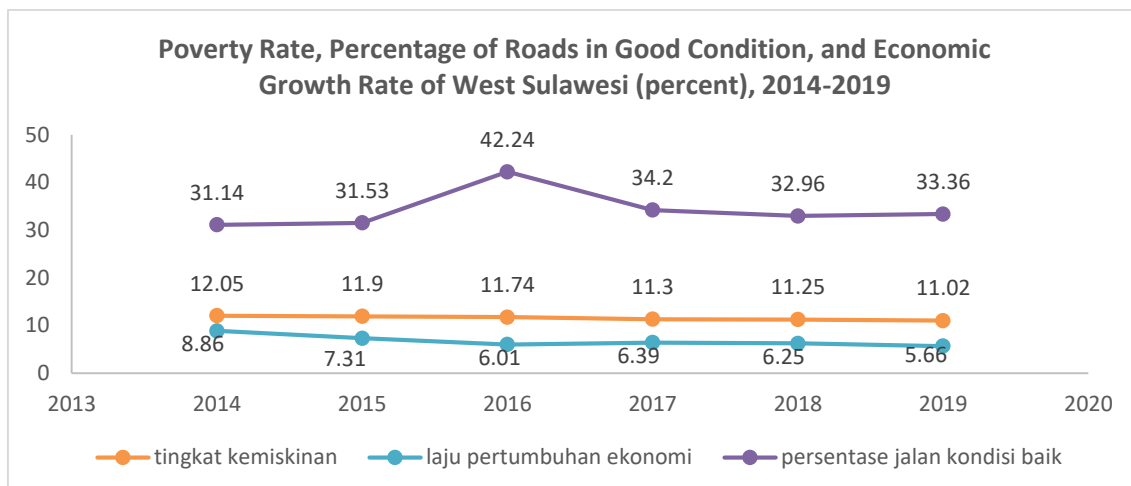
Poverty Rate, Percentage of Roads in Good Condition, and Economic Growth Rate of West Sulawesi (percent), 2014-2019

Source: Regional Office of the Directorate General of Treasury of West Sulawesi Province, 2019)

Figure 2. Poverty Rate, Percentage of Roads in Good Condition, and Economic Growth Rate of West Sulawesi (percent), 2014-2019

The condition in the picture explains that the region's expansion in the province of West Sulawesi in 2004 has had a significant effect. It can be seen that the poverty rate data, the percentage of roads in good condition, and the rate of economic growth in the province of West Sulawesi fluctuate (Figure 2). The opening of new roads and improving the quality of roads are necessary to increase the distribution of goods and services. This is because the geographical condition of West Sulawesi in the form of hills and mountain ranges shows accessibility between one area and another, especially by land.

	2018 pagu	2018 realisasi	2018 persen	2019 pagu	2019 realisasi	2019 persen
Education	526.47	466.54	88.62	693.81	522.11	75.25
Social Protection	16.67	16.05	96.28	14.31	13.62	95.2
Health Sector	140.91	116.4	82.61	93.52	89.04	95.2
Housing and Public Facilities Sector	334.9	330.44	98.67	305.43	299.2	97.6

Source: Regional Office of the Directorate General of Treasury of West Sulawesi Province, 2019)

Figure 3. Realization progress by function in West Sulawesi Province in 2018-2019 In billion rupiah

Figure 3 explains the total development of realization based on the functions of Regencies and Cities in West Sulawesi Province in the last two years. The data shows a

relatively declining trend every year. The condition of average budget realization is still below the budget ceiling agreed by the government. These conditions illustrate that the government's role in managing regional finances is not yet optimal in carrying out government functions for the community's welfare.

Financial management is said to be good if the budget allocation is more to finance the community's interests or commonly known as public spending. Public spending is government expenditure used to finance public goods through government programs and activities, where the results, benefits, and impacts can be enjoyed directly or indirectly by the people of Sun'an & Senuk (2015).

This study analyzes after the regional expansion in West Sulawesi Province in 2004. What is the role of the local government of West Sulawesi, especially the district and city governments, in determining policies so that regional HDI achievements can balance the national HDI? Based on the above, the title of this research is "Determinants of Community Welfare in West Sulawesi Province Panel Data."

Method

Data Types and Sources

The data used are secondary data obtained from the BPS of West Sulawesi Province, including data on government spending in the education sector, government spending on the health sector, government spending on infrastructure, and the Human Development Index (IPM) in West Sulawesi Province. The data used is panel data from 5 districts and one city in West Sulawesi from 2016-2020. The districts in the study include Majene, Mamuju, Polewali Mandar, Mamasa, North Mamuju and Central Mamuju.

Table 1. Data Source

Variable	Description	Source	Unit
IPM	Human Development Index (Points)	BPS	Percent
Pend	Government Expenditure on Education Sector	Ministry of Finance Directorate General of Fiscal Balance	Billion
Kes	Government Expenditure on Health Sector	Coordinating Ministry for Economic Affairs	Billion
PFU	Government Expenditure on Housing and Public Facilities Sector	Coordinating Ministry for Economic Affairs	Billion

Analysis Method

The analytical method used in this study uses the econometric analysis method, namely panel data regression analysis. The time-series data used is from 2016-to 2020, consisting

of 6 districts and cities in West Sulawesi Province. Analysis and calculation of the model will be calculated using the STATA software.

The equation of the model used is:

$$y_{it} = \beta_{0it} + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_{it} \quad . \tag{3.1}$$

$$IPM_{it} = \beta_{0it} + \beta_1 Ln\text{Pend}_{it} + \beta_2 Ln\text{Kes}_{it} + \beta_3 LnPfU_{it} + \varepsilon_{it} \tag{3.2}$$

Where y_{it} is Human Develompent Index (HDI), $Ln\text{Pend}_{it}$ denotes *Ln Government Expenditure on Education Sector,* $Ln\text{Kes}_{it}$ is *Ln* Government Expenditure on Health Sector, $LnPfU_{it}$ is L*n* Government Expenditure on Housing and Public Facilities Sector, I is Regency and City West Sulawesi Province, t denotes 2016-2020 and ε_{it} as *eror term*

Variable Operational Definition

Government Expenditure on Education Sector

Gorton (1976) in Sun'an & Senuk (2015) said that humans could gain experience and valuable knowledge for their survival through education. The government is obliged to seek and organize education and prioritize the education budget of 20 percent of the APBN and APBD in addition to the salaries of educators and the costs of official education. This is stated in Law Number 20 of 2003 concerning the National Education System article 49. Education expenditures are expenditures aimed at improving the quality of education, such as purchasing books, school internet network facilities, and school buildings (Fransisco, Firdaus, & Mulatsih, 2016).

Government Expenditure on Health Sector

The government plays an essential role in fulfilling public health by providing fair, equitable, adequate, affordable, and quality health services for all levels of society. Health is a fundamental development goal. Health also plays an essential role in economic development, both as an input in production that enables the acquisition of higher incomes and as an output that directly affects human well-being (Todaro & Smith, 2011). Education expenditures are expenditures aimed at improving the quality of education, such as purchasing books, school internet network facilities, and school buildings (Fransisco, Firdaus, & Mulatsih, 2016).

Government Expenditure on Housing and Public Facilities Sector

Human development depends on the availability of infrastructure to support investment in human resources, which is nothing but the improvement and development of the quality of human capital itself (Safitri, 2016). According to general economic theory (Idris, 2016), access and public facilities can increase the productivity of a society in a country. Government expenditures in the housing sector/public facilities include access to rental flats, decent housing, access to clean water, drainage, and access to waste disposal.

Specification Test

To estimating model parameters with panel data, there are three techniques (models) that are often used to estimate regression models with panel data, namely, Common Effect Model (CEM) estimation regression, Fixed Effect Model (FEM), and Random Effect Model (REM) approach. The advantage of regression using panel data is that panel data is a combination of two-time series and cross-section data, providing more data to produce a greater degree of freedom (Widarjono, 2013).

The Chow, Hausman, and Lagrange Multiplier tests were performed to determine the best model for panel data regression. The three tests will determine the most appropriate model among the three models, namely the common effect, fixed effect, or random effect.

Classical assumption Test

After selecting the best model, the next step is to test the classical assumptions to determine whether there is a violation of the classical assumption test and obtain a simulator that is the Best Linear Unbiased Estimator (BLUE). According to Widarjono (2013:99), the classical assumption testing technique for econometrics includes three types of tests: the multicollinearity test, the heteroscedasticity test, and the autocorrelation test. The three types of tests are as follows.

1. Multicolinearity Test
2. Heteroscedasticity Test
3. Autocorrelation Test

Statistical Analysis Test

Statistical analysis test was conducted to find out statistically how significant the independent variables' influence on the dependent variable was either partially or simultaneously. The type of test used is the t-test and F test. In addition, it is necessary to calculate the value of the coefficient of determination (R^2) to determine the variation of the goodness of fit (Widarjono, 2013).

Discussion

Descriptive Analysis

Table 3 shows the results of the calculation of descriptive analysis of data using STATA software covering Regencies and Cities of the Province of West Sulawesi for the 2016-2020 period. Table 3 shows that the average HDI data is 65.23 percent, with a standard deviation of 1.69. Meanwhile, for the three independent variables of government expenditure used, the highest average data is the variable of government expenditure in the education sector of 236.25 billion with a standard deviation of 114.19. They were then followed by government spending on the health sector with an average of 154.55 billion and a standard deviation of 72.25. Finally, the government spending variable on housing and public facilities is 151.25 billion, and the standard deviation is 45.54. The data shows that of the five regencies and one city in West Sulawesi Province, the largest expenditure budget is in the education sector. This is following the mission of West Sulawesi, which wants to build and prioritize the quality of its human resources.

Table 3 Descriptive Data

Variable	Observation	Mean	St.Dev	Min	Max
HDI (Percent)	30	65,23	1,69	61,51	68,15
Government Expenditure on Education Sector (Billion)	30	236,25	114,19	35,08	476,62
Government Expenditure on Health Sector (Billion)	30	154,55	72,25	41,29	335,99
Government Expenditure on Housing and Public Facilities Sector (Billion)	30	151,25	45,54	63,73	244,49

Source: Data processed by Stata.16

Specification Test

The following table (Table 4) shows panel data model calculations for Common Effects, Fixed Effects, and Random Effects.

Table 4 Selection of the Best Model

Variabel	(1) Common Effect	(2) Fixed Effect	(3) Random Effect
Education Expenditure	0.350	1.997***	1.826***
	(0.32)	(4.28)	(3.56)
Health Expenditure	-0.551	1.270*	1.292*
	(-0.40)	(2.60)	(2.39)
Housing and Public Facilities Expenditure	0.465	-1.537***	-1.455***
	(0.47)	(-4.60)	(-3.93)
Cons	63.78***	55.94***	56.34***
	(10.87)	(26.16)	(22.57)

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001
Source: Data processed by Stata.16

Then testing for the Chow Test was carried out to select the Common Effect or Fixed Effect model (Table 5). The results of the Chow test in the table show that the probability value of F is more diminutive than = 0.05, so H0 is rejected, then the model chosen is the Fixed Effect Model.

Table. 5 Chow Test

Test	F Test	Prob
Chow Test	$F(5, 21) =$ 92.8	Prob > F = 0.00

Sumber: Data processed by Stata.16

Table 6 shows the Hausman test results in the table show the value of prob>chi2 is smaller than 0.05, so that H_0 is rejected, meaning that the best estimation model chosen is the Fixed Effect Model.

Tabel 6. Hausman Test

Variable	FEM	REM	S.E
Education Expenditure	1,723	1,5591	0,1013
Health Expenditure	1,431	1,4402	0,0805
Housing and Public Facilities Expenditure	-0,0117	-0,01108	0,0004
Prob>chi2		**0,042**	

Source: Data processed by Stata.16

The Classical Assumption Test

Multicollinearity shows that the independent variables have a substantial direct relationship (correlation). Multicollinearity occurs if the Variance Inflation Factor (VIF) value is more significant than ten or the Tolerance value is 0.10 less. Based on testing, all independent variables have a VIF value of less than the maximum limit of 10 or a Tolerance value of more than 0.1 so that H_0 is rejected, which means that the independent variable does not show any symptoms of multicollinearity (there is no strong relationship between the independent variable and other independent variables). Table 7 shows the result of multicollinearity test.

Table 7. Multicollinearity Test

Variable	VIF	1/VIF
Education Expenditure	3,75	0,26
Health Expenditure	3,68	0,27
Housing and Public Facilities Expenditure	1,11	0,90
Mean Vif	2,85	

Source: Data processed by Stata.16

The heteroscedasticity test is used to determine whether there is a non-constant variance of the disturbance variable in the regression model. Prob>chi is smaller than 0.05, meaning that H0 is rejected, the independent one indicates a problem, so treatment is used using a robust test (Table 8).

Table 8. heteroscedasticity Test

Chi2	Prob>Chi 2
18,76	0,0046

Source: Data processed by Stata.16

Statistical Analysis Test

The t-test is to see the individual significance of the influence of the independent variable on the dependent variable as follows.

1. Education sector government spending has a positive and significant impact on HDI at α= 1%.

2. Health sector government expenditure positively and significantly impacts HDI at α= 1%.

3. Government spending on housing and public facilities has a negative and significant effect on HDI at α= 1%.

Table 9. Fixed Effect Model after Robust

Variable	*Coef*	*t*	*P>|t|*
Education Expenditure	1,996	5,10	0,004
Health Expenditure	1,270	3,77	0,013
Housing and Public Facilities Expenditure	-1,536	-5,28	0,003
Cons	55,94	24,15	0,000

Source: Data processed by Stata.16

Furthermore, the F or simultaneous test is carried out to see whether all independent variables affect the dependent variable. Based on the Table 10, it can be seen that the probability F value of 0.0000 means that the variables of government expenditure in the education sector, government spending in the health sector, government spending in the housing sector, and public facilities have a simultaneous effect on the formation of HDI at a significance of α=1%.

Table 10. F Test

Test	F Test	Prob
F Test	F(5, 21) = 92.87	Prob > F = 0.00

Source: Data processed by Stata.16

The interpretation of the results of the panel data regression equation with the Fixed Effect Model method in this study is as follows:

1. The constant value of 55.94 is interpreted as an estimate of the HDI value which is not influenced by government spending in the education sector, government spending in the health sector, government spending on housing, and public facilities.

2. The value of the Education Sector Government Expenditure Coefficient of 1.99 shows that every 1 percent increase in government spending in the Education sector will increase the HDI by 1.99 percent, ceteris paribus. Investment in education is a means in the actual form of investment in order to improve human development.

3. The coefficient value of government spending in the health sector is 1.27, indicating that every 1 percent increase in government spending in the health sector will increase the HDI by 1.27 percent, ceteris paribus. One of the excellent human development indexes can be seen from the suitable health investment and positively impacts the community.

4. The coefficient value of government spending on housing and public facilities is -1.53, indicating that for every 1 percent increase in government spending on the health sector, the HDI will decrease by 1.53 percent, ceteris paribus. Government spending on housing and public facilities should positively impact the community, but the research results obtained are inversely proportional to the districts and cities of West Sulawesi.

The Effect of Education Sector Government Expenditure Variables on HDI

This study indicates that local government spending on the education sector in West Sulawesi Province in the 2016-2020 period has an impact on community welfare through the Human Development Index (HDI). The calculation results show that local government spending in the education sector in West Sulawesi Province during the 2016-2020 period has shown a positive and significant effect of 1.99 percent on people's welfare, as seen from the HDI.

Based on empirical studies that have been carried out, it is generally stated that government spending in the education sector has a significant influence on HDI, where an increase will follow every increase in one unit of government expenditure in the education sector in HDI. Overall the level of education in West Sulawesi is slowly getting better. (Edeme, 2014)

Education is a way to progress and achieve socio-economic welfare. Government spending on education improves educational services and facilities such as school buildings, books, laboratory supplies, or scholarships for underprivileged students. Thus, the government's spending policy on education is an investment that ends in improving human quality. In addition, investment in education has significantly succeeded in promoting economic progress and creating social welfare. (Safirah, Djohan, & Nurjanah, 2019)

This study indicates that local government spending on the education sector in West Sulawesi Province in the period 2016-2020 had a positive and significant impact on the welfare of the people of all districts/cities of West Sulawesi through the Human

Development Index (HDI). Table 11 shows positive and significant results in all districts and cities in West Sulawesi for the 2016-2020 period. It can be seen from the School Participation Rate (APS) trend, which continues to increase. APS illustrates how many school-age residents have taken advantage of educational facilities, as seen from the population who are still in school at a certain age.

The research results by Haque and Khan (2018) found that education expenditure is a critical factor that contributes to human development in Saudi Arabia. The results show that a 1% change in Education spending allows for a 10% increase in the human development index (HDI).

Table 11. The Effect of Education Expenditure on the HDI of Each District/City

District and City	Coefficient	P>|t|
Majene	13.39	0.017
Mamuju	3.85	0,032
Poliwali Mandar	9,31	0,048
Mamasa	5,63	0,003
Mamuju Utara	3,05	0,015
Mamuju Tengah	1,77	0,033

Source: Data processed by Stata.16

The Effect of Health Sector Expenditure Variables on HDI

This study indicates that local government spending on the health sector in West Sulawesi Province in the 2016-2020 period has an impact on community welfare through the Human Development Index (IPM). Judging from the calculation results, local government spending on the health sector of all regencies and cities in West Sulawesi Province during the 2016-2020 period has shown a positive and significant influence on people's welfare, as seen from the HDI.

The study results are the following research conducted by Fattah & Muji (2012) and Mahulauw, Kadir, & Budi (2016), based on empirical studies that have been carried out, in general, the research suggests that government spending in the health sector has a significant influence on HDI, where every time there is an increase in one unit of government spending in the health sector, an increase will follow it in HDI.

The regression results reinforce the positive and significant impact of health sector government spending on HDI by looking at the effect of the government expenditure variables in each district and city in West Sulawesi. Table 12 shows positive and significant results in all districts and cities in West Sulawesi for the 2016-2020 period. This further strengthens the theory and previous research that the health sector government expenditure variable has a positive and significant influence.

The regression results reinforce it by looking at the effect of the variable government expenditure on the health sector in each district and city in West Sulawesi. The picture of West Sulawesi's health development over the last five years has progressed. This can be seen from the increasing number of health service facilities and health resources in the 2016-2020 period. Increased Proper investment in the health sector will have a positive impact on human development. The use of allocations for the construction of health buildings such as hospitals and health centers and the procurement of drugs and medical equipment can improve the quality of health owned by the community (Mongan, 2019).

Table 12. The Effect of Health Expenditure on the HDI of Each District/City

District and City	Coefficient	P>|T|
Majene	2,52	0.027
Mamuju	4,67	0,033
Poliwali Mandar	6,66	0,009
Mamasa	3,70	0,013
Mamuju Utara	7,46	0,011
Mamuju Tengah	2,11	0,006

Source: Data processed by Stata.16

Social Welfare must start by investing in human development which can be started by improving public health services. The government has increased the allocation of funds for the health sector, which is expected to support the improvement of public health. Government spending on the education sector in cities and districts is significant, which means spending on the education sector in cities has a more substantial influence than in districts because facilities in cities are relatively better, enabling better accessibility for the community to access various educational services (Fadilah, Ananda & Kaluge, 2018).

The Effect of Variable Government Expenditure on Housing and Public Facilities on HDI

The results of this study indicate that local government spending on housing and public facilities in West Sulawesi Province in the 2016-2020 period harms people's welfare through the Human Development Index (HDI). Judging from the calculation results, if the local government spending on housing and public facilities in West Sulawesi Province during the 2016-2020 period has shown a negative and significant effect of 1.53 percent on the community's welfare as seen from the HDI. This has a meaning that is inversely proportional to the results of the analysis of the previous two variables. Every increase in government spending on housing and public facilities will further reduce the human development index.

This study is following research conducted in Jambi in 2010-2015 found that by using the dynamic panel test, government spending on the housing and public facilities sector has a negative coefficient of -0.001 which means an increase in spending on housing and public

facilities by 1 percent will reduce HDI by 1 percent. 0.00116 percent. This is due to district and city expenditures development every year, but the portion of spending is lower than the operational expenditure. Francisco, Firdaus and Mulatsih, (2016). Then it is reinforced by the results of research by Edeme (2014) that energy and housing expenditures have an impact that can reduce investment in human development in Nigeria. This finding similar remarked result in which they found that government spending on infrastructure sector does not have any significant influence on the human development index. (Fadilah, Ananda & Kaluge, 2018)
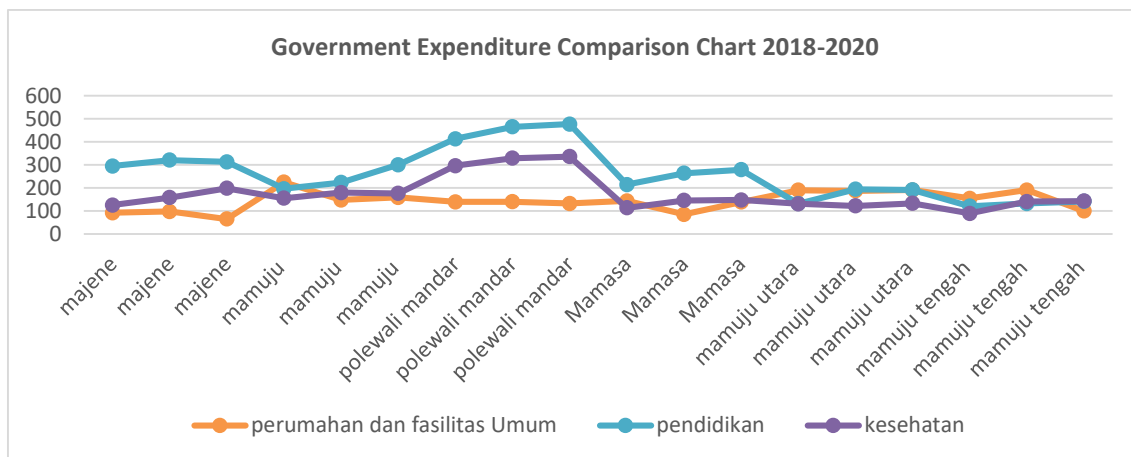
Table 13. Effect of Housing and Public Facilities Expenditure on HDI Every District/City

District and City	Coefficient	P>|T|
Majene	-2,47	0.152
Mamuju	-2,51	0,508
Poliwali Mandar	-7,41	0,009
Mamasa	-2.19	0,212
Mamuju Utara	-6,63	0,204
Mamuju Tengah	1.16	0,444

Source: Data processed by Stata.16

Seeing the results of the calculation of the effect of the variable government spending on housing and public facilities on the HDI of each district and city of West Sulawesi for the 2016-2020 period further strengthens the reason why the results of the regression calculations are negative. It can be seen from the coefficient and probability data for each district and city that there is only one that is significant to its HDI, namely Polewali Mandar district with a coefficient of -7.41 and a significance of 0.009. Meanwhile, for 4 districts and 1 City in West Sulawesi Province, there is no significance.

Spending on housing and public facilities in West Sulawesi is still too small compared to other sectors, particularly health and education. Figure 4 compares government spending on housing and public facilities, education, and health 2018-2020. The government budget for the housing and public facilities sector is at its lowest compared to other sectors (Coordinating Ministry for Economic Affairs, 2020). Suppose the government wants to increase the provincial HDI In West Sulawesi further. In that case, expenditures that are not related to improving the quality of human resources, such as the defense sector, are more deducted and allocated to sectors directly related to improving the quality of human resources. Government spending on the housing/public facilities sector has not been able to be accessed by every individual, such as decent housing and clean water sources so that the purchasing power of some individuals is reduced.

Government Expenditure Comparison Chart 2018-2020

Legend: perumahan dan fasilitas Umum — pendidikan — kesehatan

Source: Coordinating Ministry for Economic Affairs, 2020

Figure 4. West Sulawesi Government Expenditure Comparison Graph 2018-2020

Conclusion

This study analyzes the determinants of welfare based on the human development index in West Sulawesi for the 2016-2020 period using panel data analysis. The analysis found that local government spending on the education sector and local government spending on the health sector had a positive and significant impact on the Human Development Index. Meanwhile, for the government spending on housing and public facilities analysis, the HDI has a negative and significant coefficient of 1.53 percent. This is due to district and city expenditures development every year, but the portion of spending is lower than its operational expenditure. Francisco, Firdaus and Mulatsih, (2016).

The government must make-work programs that can be a solution or alternative to increase human resources. Welfare improvement programs made by local governments include improving education and health facilities and increasing human resources. Local governments must monitor and evaluate work to see whether the policies and work programs are on target so that the community's welfare can improve.

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