The Role of Community Welfare Indicators in the Quality of Human Development and Economic Growth in West Java Province

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Abstract. Economic growth and the quality of human development are indicators that describe the succsess of economic development. This research aims to determine the role of community welfare indicators in the quality of human development and economic growth in West Java Province. This research method was carried out using the path analysis method using a quantitative approach. The results of this study found that household consumption, labor partially had a positive and significant impact on the human development index. Government spending in the education sector and government spending in the health sector partially have a positive and insignificant impact on the human development index. The human development index partially and simultaneously has a positive and significant impact on economic growth. Household consumption expenditure and government expenditure in the health sector partially have a negative and significant impact on economic growth, labor and government expenditure in the education sector partially have a positive and insignificant impact on economic growth.

Keywords: Household Consumption. Labor, Government Spending, Human Development Index, Economic Growth

1 Introduction

Economic development is one of the efforts to create maximum growth which is characterized by reduced poverty rates, income inequality, and increases in education and health. The indicators used in determining the economic development of a region are economic growth and human development. [1] Economic growth is the ability to increase the economy in producing goods and services. Human development as seen from the Human Development Index (HDI) introduced by The United Nations Development Program (UNDP) is [2] a human-focused development concept consisting of aspects of education, health, and people's purchasing power. The following is the average economic growth and HDI of West Java Province from 2017-2019.

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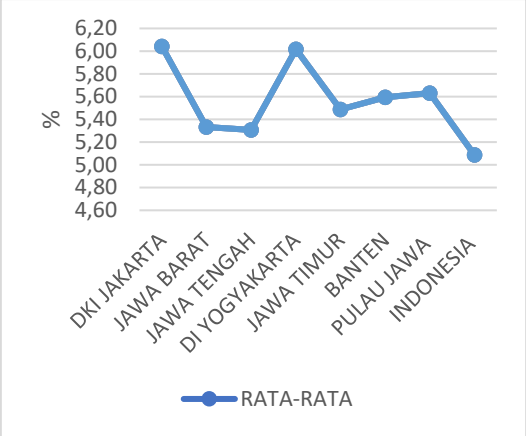

Fig 1. Average provincial and national economic growth for 2017-2019

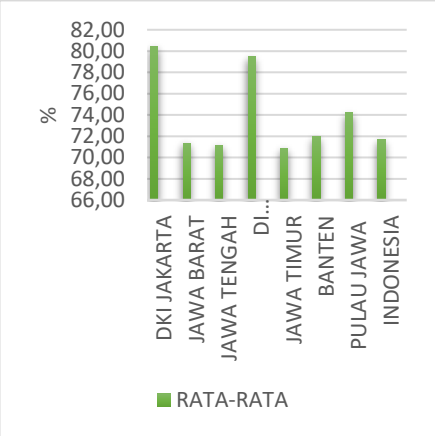

Fig 2. Average Provincial and National HDI for 2017-2019

Based on Fig 1, the average economic growth in West Java Province is 5.33%, exceeding the national average economic growth which is only 5.09%. But, when compared with the average economic growth in Java, West Java Province is still below Java Island with an average of 5.63%. Based on Fig 2, the average HDI for West Java Province is 71.34%, which is still below the national average of 71.66% and the average throughout Java Island of 74.19%. This proves that both economic growth and the human development index in West Java province are still a serious problem for the government and need to be increased both in terms of the level of employment and human capital in this case, namely education and health [3] which do have a very important role, especially in developing countries in absorbing technology and developing its capacity, so that sustainable growth and development will be created.

Economic growth and human development are mutually sustainable. Economic growth can increase the supply of resources needed in human development such as population income, a decent standard of living, education, and health. Finally, the prosperity of the people will be guaranteed, as well as with a good quality of human development can give the population the ability to carry out the management that becomes a source of economic growth [4]. Thus, the two cannot be connected linearly but can be determined by the factors that link the two concepts, one of which is through indicators of community welfare. As revealed by [5] the determining factor between economic growth and human development is the quality of human capital in terms of health and education. In this case, education, health, consumption, and employment are included in the welfare of society. Therefore, the target of the research is to discuss about the role of community welfare indicators in the quality of human development and economic growth in West Java Province.

2 Method

The research method used was a quantitative descriptive method with data secondary data sourced from the Central Bureau of Statistics, Directorate General of Financial Balance of the Republic of Indonesia and West Java open data and using Common Effect panel data. The research locations were 26 regencies/cities in West Java Province for a period of 8 years from

2012 to 2019. The variables used consist of the dependent variable is Economic Growth, the intervening variable is Human Development Index, and the independent variables are household consumption expenditure, labor, government spending on education, and government spending on health.

The model used in this study is the Path Analysis model with statistical tools in the form of the Statistical Program for Social Science (SPSS) and the tests used consist of statistical tests. The following is the function of the path analysis model equation in this study:

$$Y_{it} = P_{yx1}X_{1it} + P_{yx2}X_{2it} + P_{yx3}X_{3it} + P_{yx4}X_{4it} + \varepsilon 1 \quad (1)$$

$$Z_{it} = P_{zx1}X_{1it} + P_{zx2}X_{2it} + P_{zx3}X_{3it} + P_{zx4}X_{4it} + P_{zy}Y_{it} + \varepsilon 2 \quad (2)$$

The path diagram in this study can be described as follows:

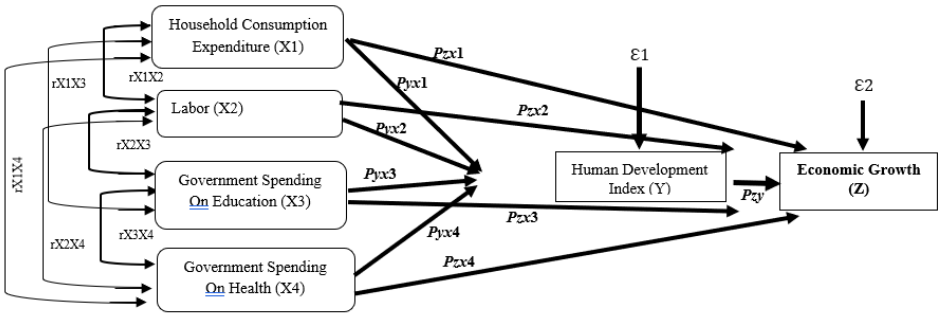

Fig 1. Path Analysis Model Diagram

Where Z = Economic Growth, Y = Human Development Index, X1 = Household Consumption Expenditure, X2 = Labor, X3 = Government Spending on Education, X4 = Government Spending on Health, P =Coefficients, r(x1,x2 ,x3,x4) = Correlation coefficient between independent variables, i = 26 Regencies/Cities of West Java Province, t = Year period (2012-2019), Ɛ1, Ɛ2 = Term Error, P (yx1, yx2, yx3, yx4, zx1 ,zx2, zx3, zx4 zy) = Path coefficients of variables (independent, intervening, and dependent).

3 Result

Independent Variable Correlation Results

Table 1. Correlation Independent Variables

		X1	X2	X3	X4
X1	Pearson Correlation	1	0,068	0,075	0,314**
	Sig. (2-tailed)		0,332	0,280	0,000
	N	208	207	208	208
X2	Pearson Correlation	0,068	1	0,808**	0,542**
	Sig. (2-tailed)	0,332		0,000	0,000
	N	207	207	207	207
X3	Pearson Correlation	0,075	0,808**	1	0,763**
	Sig. (2-tailed)	0,280	0,000		0,000

		X1	X2	X3	X4
	N	208	207	208	208
X4	Pearson Correlation	0,314**	0,542**	0,763**	1
	Sig. (2-tailed)	0,000	0,000	0,000	
	N	208	207	208	208

Source : Analysis Result

From the results of table 1, we can see that the output results of the correlation the independent variables are correlated with each other. But, for the variable correlation between household consumption expenditure with labor, and household consumption expenditure with government spending on education is removed, because the correlation value of household consumption expenditure with labor is 0.068 and the prob value. of 0.332 ($\alpha = 0.05$) so that $0.332 > 0.05$ and the correlation value of household consumption expenditure with government spending on education is 0.075 and the prob value. of 0.280 ($\alpha = 0.05$) so that $0.280 > 0.05$. So household consumption expenditure with labor and household consumption expenditure with government spending on education have a positive but not significant relationship.

Statistical Test Results

Table 2. Partial Test Results of Sub-Structure I

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	66,664	3,583		18,607	0,000
X1	2,065	0,061	0,926	33,879	0,000
X2	-3,024	0,650	0,201	-4,654	0,000
X3	0,403	0,595	0,039	0,678	0,498
X4	0,365	0,853	0,018	0,427	0,669

Table 3. Partial Test Results of Sub-Structure II

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-8,499	3,208		-2,649	0,009
X1	-0,150	0,086	-0,307	-1,756	0,081
X2	0,599	0,372	0,181	1,611	0,109
X3	0,121	0,324	0,053	0,374	0,709
X4	-0,797	0,464	-0,183	-1,718	0,087
Y	0,176	0,038	0,800	4,601	0,000

Source : Analysis Result

Based on the results of sub-structure I and II, the results of the path analysis equation are obtained as follows:
Equation of the results of sub-structural tests I and II:

$$Y_{it} = 0{,}926X_{1it} + 0{,}201X_{2it} + 0{,}039X_{3it} + 0{,}018X_{4it} + \mathcal{E}1 \quad (3)$$

$$Z_{it} = -0{,}307X_{1it} + 0{,}181X_{2it} + 0{,}053X_{3it} - 0{,}183X_{4it} + 0{,}800Y_{it} + \mathcal{E}2 \quad (4)$$

Based on the results of above, there is a path diagram of sub-structure I with II and the direct, indirect and total effects of sub-1 and II as follows:

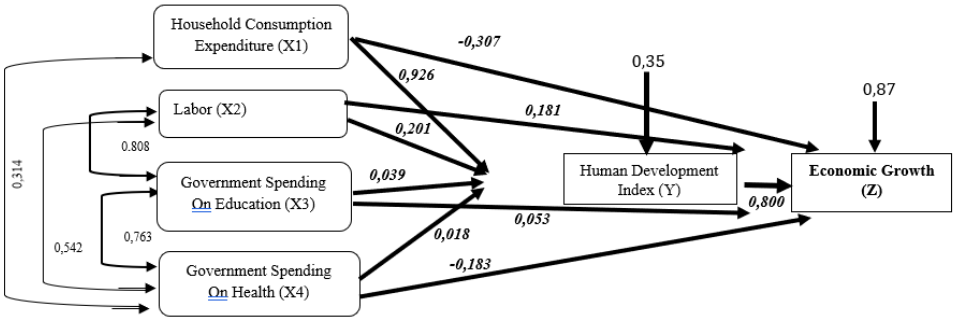

Fig 2. Results of Sub-Structure Path Diagrams I and II

Table 4. Direct, Indirect and Total Sub-Structure Effects I

Variable Effect	Direct Effect	Indirect Effect				Total Effect
		With X1	With X2	With X3	With X4	
X1 → Y	0,857476				0,005233	0,862709
X2 → Y	0,040401			0,006333	0,001960	0,048694
X3 → Y	0,001521		0,006333		0,000535	0,008389
X4 → Y	0,000324	0,005233	0,001960	0,000535		0,012867
Total Effect						0,932659

Table 5. Direct, Indirect and Total Sub-Structure Effects II

Variable Effect	**Direct Effect**	**Indirect Effect**	**Total Effect**
		With Y	
X1 → Z	0,094249	-0,2456	-0,151351
X2 → Z	0,032761	0,1448	0,177561
X3 → Z	0,002809	0,0424	0,045209
X4 → Z	0,033489	-0,1464	-0,112911
Y → Z	0,64		0,64
Total Effect			**0,022508**

Table 6. F and R2 Test Results for Sub-Structure I

Variable	**F-Stat**	**Sig.**	**R-square**
X1,X2,X3,X4	354,617	0,000	0,873

From the results of table 6, we can see that the results of the F test on sub-structure I have a probability value of 0.000 < (α = 0.05) then H0 is rejected, so that household consumption expenditure, labor, government spending on education, and government spending on health simultaneously has a significant impact on the human development index in 26 districts/cities of West Java province. And, the coefficient of determination (R2) is 87.3%.

Table 7. F and R2 Test Results for Sub-Structure II

Variable	**F-Stat**	**Sig.**	**R-square**
X1,X2,X3,X4,Y	12,838	0,000	0,242

From the results of table 1, we can see that the results of the F test on sub-structure II have a probability value of 0.000 < (α = 0.05) then H0 is rejected, so that household consumption expenditure, labor, government spending on education, government spending on health, human development index simultaneously has a significant impact on the economic growth in 26 districts/cities of West Java province. And, the coefficient of determination (R2) is 24,2%.

4 Discussion

Impact of Household Consumption Expenditures on the Human Development Index

Based on the results the path coefficient of the household consumption expenditure on the human development index of 0.926 with a probability value of 0.000 < (α = 0.05). This means that household consumption expenditure has a positive and significant impact on the human development index in 26 districts/cities of West Java Province. The results of this study are following studies by [4]. In Keynesian theory, it is said that the level of household consumption expenditure depends on income. This is because, income is one of the measurements used in calculating the components of HDI, that is per capita expenditure component. So, with the increase in income, the household consumption will increase and finally, the human development index will also increase.

Impact of Labor on Human Development Index

From the results path coefficient of the labor on the human development index of 0.201 with a probability value of 0.000 < (α = 0.05). This means that the labor has a positive and significant impact on the human development index in 26 districts/cities of West Java Province. The results of this study are under research by [6]. According to Samuelson and Nordhaus (2001) in [7] what is the input for labor is the quality and quantity of the community which can be seen from skills and knowledge. Increasing this inputs will result in high work productivity which will result in a large of workers and production results. The more production results, the increase in income, and the consumption of labor will increase. The increase in income and consumption causes per capita spending, which is one of the components of the HDI will increase. And finally, the human development index will also increase.

Impact of Government Spending on Education with the Human Development Index

Based on research results the path coefficient of the government spending on education on the human development index of 0.039 with a probability value of 0.498 > (α = 0.05). This means that government spending on education has a positive and insignificant impact on the human development index in 26 districts/cities of West Java Province. The results of this study are following studies by [8], [9]. Investment in education is something that must be done by the government by providing good educational facilities and infrastructure. One of these facilities and infrastructure can be done by providing a budget for the education sector. [8] Efforts made by the government in the field of education can be through improving the quality of education and training for educated workers (Teachers) or the the quality of students which of course can have an impact on the average length of school results (RLS) and long school expectations (HLS) which is the component of HDI.

Impact of Government Spending on Health with the Human Development Index

Seen from the results the path coefficient of government spending on the health sector on the human development index of 0.018 with a probability value of 0.669 > (α = 0.05). This means that government spending on the health sector has a positive and insignificant impact on the human development index in 26 districts/cities of West Java Province. The results of this study are under studies by [8], [9]. One way of improving human resources can be done through

increasing the quality of human capital, namely by requiring a decent life, one of which is in terms of health. Efforts can be made by the government to improve a good health system, one of which is through the government spending on health. The expenditure in the health sector can be done by providing health facilities or services for the workforce (number of doctors and medical personnel) or for the whole community which can later increase the quality of the productivity of the community in this case the life expectancy rate (AHH) which is the components HDI [17].

Impact of Human Development Index on Economic Growth

From the results the path coefficient of the HDI on economic growth of 0.800 with a probability value of $0.000 < (\alpha = 0.05)$. This means that HDI has a positive and significant impact on economic growth in 26 districts/cities of West Java Province. The results of this study are following research by [10]. Then, this research is in line with the endogenous growth theory by P. Romer in 1996 which states that capital accumulation consisting of physical capital, human capital, and health capital can contribute to economic growth. Human capital is seen based from the quality of human development, the increase in human capital will affect economic performance through the quality and productivity of the population in this case the workforce. And then, [4] high-quality human development can give the population the ability to manage which are sources of economic growth.

Impact of Household Consumption Expenditures on Economic Growth

Based on research results the path coefficient of household consumption expenditure on the economic growth of -0.307 with a probability value of $0.081 > (\alpha = 0.05)$, but when using $(\alpha = 0.10)$ then $0.81 < (\alpha = 0.10)$. This means that household consumption expenditure has a negative and significant impact on economic growth in 26 districts/cities of West Java Province. The results of this study are following research by [1]. Keynesian theory [11] states that economic growth is influenced by household consumption expenditure. This is because with an increase in consumption, the production of consumption goods will also increase so that it will have an impact on improving the economy. However, this research shows results that are not in accordance with this theory, this is because household consumption is more dominant in efforts to improve the quality of human development as seen from the consumption used by households in human resource needs.

Impact of Labor on Economic Growth

Seen from the results the labor path coefficient on economic growth of 0.181 with a probability value of $0.109 > (\alpha = 0.05)$. This means that labor has a positive and insignificant impact on economic growth in 26 districts/cities of West Java Province. The results of this study are under research by [7] In the Neo-Classical theory by Solow economic growth can be influenced by labor by looking at the populations, this is because the population can increase in the workers so that the production increases and the output will increase. Increased labor and large output results will have an impact on improving the economy.

Impact Government Spending on Education on Economic Growth

Based on the results the path coefficient of government spending on education on economic growth of 0.053, the probability value is $0.709>(\alpha = 0.05)$. This means that government spending on the education sector has a positive and insignificant impact on economic growth in 26 districts/cities of West Java Province. The results of this study are in accordance with research by [12], [13]. One of the investments that can be to increase poductivity in education sector is by developing facilities and infrastructure in the education sector. Development can be done with government spending on education. The impact of this development can make human life of a higher quality and of course, the productivity of human resources (labor) also increases, so that labor productivity in producing goods and services will

increasse and the output obtained will be greater, and finally impact on the economy will increase.

Impact of Government Spending on Health on Economic Growth

From the results the path coefficient of government spending on health on the economic growth of -0.183, the probability value is 0.087 > (α = 0.05), but when using (α = 0.10) it is 0.87 < (α = 0.10). This means that government spending on health has a negative and significant impact on economic growth in 26 districts/cities of West Java Province. The results of this study are in accordance with research by [4], [14]. The efforts to support the health aspect are through government spending on health. This research shows that the results show that the government in supporting the health aspect focuses more on health services or infrastructure that can only have an impact on the quality of human capital, therefore the government must be able to allocate its expenditure to facilities and infrastructure health appropriately. With increasing health, people will be able to work optimally as human capital. The community's ability to work optimally can have an impact on increasing economic growth.

5 Conclusion

From the research results it can be concluded that Household consumption expenditure and labor have a positive and significant impact on the human development index in West Java Province. Government spending on education and government spending on health has a positive and insignificant impact on the human development index in West Java Province. The human development index has a positive and significant impact on economic growth in 26 districts/cities of West Java province. Household consumption expenditure and government spending on health have a negative and significant impact on economic growth in West Java Province. Labor and government spending on education have a positive and insignificant impact on economic growth in West Java Province. Household consumption expenditure, labor, government spending on education, and government spending on health simultaneously have a significant impact on the human development index and economic growth in West Java Province.

6 Reference

[1] M. Hopkins, “Human development revisited: A new UNDP report,” *World Dev*, vol. 19, no. 10, pp. 1469–1473, 1991.

[2] R. M. Solow, “A contribution to the theory of economic growth,” *Q J Econ*, vol. 70, no. 1, pp. 65–94, 1956.

[3] I. Ghozali, “aplikasi analisis multivariate dengan program IBM SPSS 21 Update PLS Regresi. semarang: Badan penerbit Universitas Diponegoro,” *Information Technology*, vol. 2, no. 2, 2013.

[4] V. Koilo, “A methodology to analyze sustainable development index: evidence from emerging markets and developed economies,” 2020.

[5] B. H. Baltagi and F. Edition, “Professor Badi H. Baltagi (auth.)-Econometrics-Springer Berlin Heidelberg (2008)”.

[6] W. B. Reddaway, “The General Theory of Employment, Interest, and Money [1936],” in *Keynes’ General Theory: Reports of Three Decades*, Springer, 1964, pp. 99–108.

[7] F. Hussin and N. Saidin, “Economic growth in ASEAN-4 countries: a panel data analysis,” *Int J Econ Finance*, vol. 4, no. 9, pp. 119–129, 2012.
[8] J. M. Buchanan, R. D. Tollison, and G. Tullock, “Toward a theory of the rent-seeking society,” *(No Title)*, 1980.
[9] E. Manik, A. Affandi, S. Priadana, D. Hadian, and D. A. Puspitaningrum, “Comparison of normality testing with chi quadrat calculations and tables for the statistical value departement of elementary school education student at the University of Jember,” in *AIP Conference Proceedings*, AIP Publishing LLC, 2023, p. 020018.
[10] A. T. Basuki and N. Prawoto, “Analisis regresi dalam penelitian ekonomi dan bisnis,” 2016.
[11] H. Djulius, X. Lixian, A. N. Lestari, and S. F. Eryanto, “The Impact of a Poor Family Assistance Program on Human Development in Indonesia,” *Review of Integrative Business and Economics Research*, vol. 11, no. 4, pp. 59–70, 2022.
[12] A. M. Emara, “The impact of corruption on human development in egypt,” *Asian Economic and Financial Review*, vol. 10, no. 5, p. 574, 2020.
[13] T. Aidt, J. Dutta, and V. Sena, “Governance regimes, corruption and growth: Theory and evidence,” *J Comp Econ*, vol. 36, no. 2, pp. 195–220, 2008.
[14] Y. Hsing, “On the relationship between inflation and unemployment: New evidence from six industrialized nations,” *J Post Keynes Econ*, vol. 12, no. 1, pp. 98–108, 1989.