

THE EFFECT OF GOVERNMENT SPENDING ON EDUCATION, HEALTH AND SOCIAL PROTECTION SECTORS TOWARDS THE HUMAN DEVELOPMENT INDEX IN CENTRAL KALIMANTAN

Mailassa'adah¹, Pudjihardjo², Umar Burhan³

^{1,2,3}Brawijaya University, Malang

Email: ¹iyala_la@yahoo.com, ²pudjihardjo@ub.ac.id, ³umar@ub.ac.id

Abstract

Education and health are becoming the main capitals that must be owned by a nation to improve its potency. In addition to education and health, social protection is a policy that designed by the government in order to finance all kinds of efforts that purposed to assist citizens who have social problems to become capable in fulfilling their basic needs. This study aims to determine the effect of government expenditure on education, health and social protection sectors towards the Human Development Index, and what sector that most influential to the HDI among those three. The results of this study showed a positive and significant impact in all sectors particularly for the government spending on the education sector as the most influential one. This study uses a quantitative approach, the characteristics of the data and information used by researchers in this study are macro in nature, so the quantitative approach is relevant to this research.

Keywords: IPM, Government Spending, Education, Health, Social Protection

1. INTRODUCTION

Economic development that emphasizes on the growth only view the successful development of a region based on high economic growth, without considering other aspects, such as income inequality, high poverty etc. Human resource development sees people as inputs in the production process, as is the case with other production factors namely, land, capital, and machinery. Humans are used as a means to pursue high levels of output but in this process, humans are not the inheritors of what has been produced. Development that has a basic needs approach only oriented to fulfill basic human needs in order to get out of the poverty crisis without having a choice in improving the quality of life. While development with human welfare sees humans in the development process only as recipients rather than as participants who participate actively in development. The objective of the development today is not only focusing on the economic growth and higher incomes but also prioritizing on the improvement of human life quality. As explained by the World Bank's World Development Report 1991 (Todaro and Smith, 2006), the main challenge of development is to improve the quality of life through better education and the enhancement of health

standards. Suharto (2011) argues that besides education and health, the government creates a social policy is basically as a response to the public issues that namely to address social problems or fulfilling the needs of society in the form of social protection for its citizens. Furthermore, study by Razmi (2014) shows that government expenditure in health sector influence human development in Iran. Meanwhile, Edeme (2014) in his research states that government social spending (education, health, rural infrastructure development and water resources, agriculture, housing) can affect the success of human development. In the future, public services such as education, health and social protection is expected to enhance the capacity of human capital. Then Martins and Veiga (2013) in his journal entitled Government Size, Composition of Public Expenditure, and Economic Development results indicate that the magnitude of government spending has an effect on the growth rate of the Human Development Index (IPM), especially in high-income and advanced regions. The field of defense, education and social protection have a relationship of U curve with human development. While the health field has an inverted U curve relationship. Fattah, Muji (2012) under the title Government Expenditure Allocation Toward Human Development Index at Jeneponto Regency, South Sulawesi,

Indonesia. This research was conducted in Jeneponto district of South Sulawesi using data from 1998-2007. The study used multiple regression models to estimate and analyze the effect of government spending on HDI in Jeneponto. The results show that the allocation of government spending on education, health and infrastructure has a positive and significant effect on improving HDI. Thus, spending on human development through the provision of basic services will greatly affect the quality of human capital in the future.

Indonesian human development continues to progress from year to year. During the 2009-2013 period, the Human Development Index (HDI) of Indonesia has increased by 2.05 points, from 71.76 into 73.81. But this progress still only put Indonesia on a medium level of human development. The consistent increase of HDI that occur from year to year seems not able to produce a powerful leverage. United Nations Development Programme (UNDP) noted that Indonesia's HDI in 2013 remained in the 'medium' category, has not been able to reach the 'high' level. Moreover, in context of Central Kalimantan Province HDI, the Human Development Index (HDI) of Central Kalimantan province in the 2009-2013 period was increased from 74.64 to 75.68, which ranks seventh out of 33 provinces in Indonesia, as shown in the figure below:

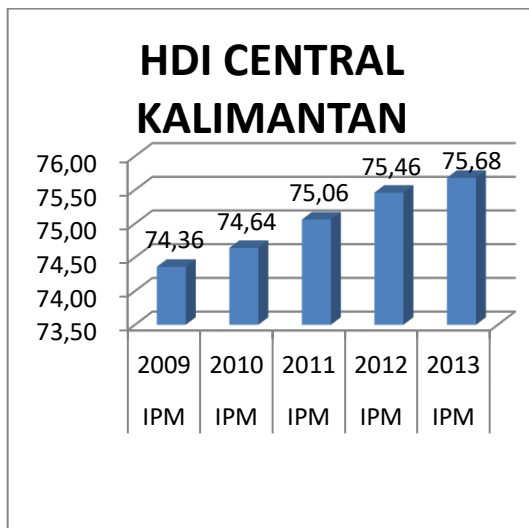


Figure 1. HDI Central Kalimantan Province from 2009 to 2013

But the success in human development is not simply measure from the high achievements of HDI in a region, but also consider the acceleration of the HDI improvement. Annual

reduction shortfall measurement is used to measure the acceleration of HDI development in one period of time. Literally "reduction" means decreasing. Reduction shortfall itself can be interpreted as a reduction in the rest of the steps towards the ideal value which is a picture of the flow of HDI to achieve the ideal figure. During this shortfall reduction concepts often confused / mixed up with the concept of growth. On the concept of growth, the greater the value of the HDI, with a similar change, will produce smaller growth. While the concept of reducing the shortfall, the greater the value of the HDI, with a similar change, will produce greater growth. Bottom line, if the value of the HDI is already high, then, even the improvement of value of small components can yield high value of reduction shortfall.

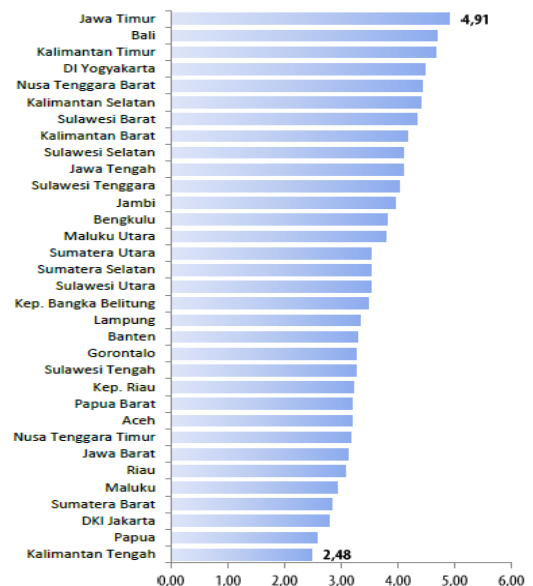


Figure 2. Value Reduction HDI shortfall Indonesia Year 2011-2013

The figure shows the rate of increase in the provincial HDI per year ranged from 2.48 to 4.91 percent, with East Java as the province with the highest HDI acceleration, while Central Kalimantan is considered as the province with the slowest rate of HDI movement with value of shortfall reduction of 2,48%. Central Kalimantan is a province with the lowest HDI growth rate of 33 provinces in Indonesia in the period of 2011-2013. The acceleration of Central Kalimantan's HDI in 2009 was 1.84 and in 2013 dropped to 0.88. Meanwhile, the government spending on education, health and social protection sectors tend to increase.

From the background above, this study aims to determine the effect of government spending on education, health and social protection sectors towards the achievement of human development index, and also to address what is the most influential sector regarding the development of HDI in Central Kalimantan. Panel data were used in this study for the estimation and it was measured by Eviews 7 software.

2. RESEARCH METHODS

This study uses a quantitative approach which is a systematic scientific study of the parts with phenomena and relationships. Characteristics of data and information used by researchers in this study is macro, so the quantitative approach relevant to this research. Research using panel data with a time lag of three years (t-3) for the education and health sectors, for the education sector it uses the ratio of education function spending to the Regional Revenue and Expenditure Budget or Anggaran Pendapatan dan Belanja Daerah (APBD), while for the health sector it uses the ratio of health function expenditure to the Regional Revenue and Expenditure Budget using the unit of analysis of the district and the city in province of central Kalimantan from the year 2009 to 2013. This study analyzed the effect of government spending on education, health, and social protection of all districts / cities in Central Kalimantan Province towards its Human Development Index. This study is using the model of multiple linear analysis. For the purposes of this analysis, the determination of variables is based on the previous research and theory of government spending. The allocation of economic growth for human development is a function of three things, namely the total public sector expenditure, how much is allocated to sectors related to the improvement of human development and how these funds are allocated into these sectors (Ramirez, Ranis and Stewart, 1998 in Anang Wijayanto, 2014). Government spending on human development through the provision of basic services will greatly affect the quality of human capital in the future. Suharto (2009) which the specification of the model as a model estimation using three independent variables. The general form the model used is as follows:

$$IPMit = \beta_1 + \beta_2PENDINGit-3 + \beta_3KESit-3 + \beta_4PERSOSit + \mu it$$

which:

IPMit	=	Districts/Cities HDI (i) in Central Kalimantan in year (t)
PENDINGit-3	=	Education expenditures based on education function spending toward the total Spending of Districts/Cities (i) in year t-3 (in Rupiah)
KESit-3	=	Health expenditures based on health function spending toward the total Spending of Districts/Cities Government (i) in year t-3 (in Rupiah)
PERSOSit	=	Social protection expenditures based on social protection spending towards the total spending of Districts/Cities Government (i) in year t (in Rupiah)

3. RESULTS AND DISCUSSION

The results of estimation using panel data effect of government spending on the Human Development Index (HDI) was found to have a positive and significant influence in all sectors: education, health and social protection.

Independent Variables	Coefficient t	t statistic	Prob
Constants	3.53E-07	1.63E-06	1.000
Education (-2)	0.240627	4.039568	0.000
Health (-2)	0.116457	2.103074	0.039
Persos	0.177001	5.246428	0.000
R ²	0.843		

The results of the estimation using dependent variable which is HDI and the independent variables in the form of government spending on education, health, social protection sector show the positive effect with coefficient of education, health and social protection sector respectively 0.240, 0.116 and 0.177. The higher government spending on education, health, social protection will further enhance human development in the area. This finding is consistent with study conducted by Fattah, Muji

(2012) in South Sulawesi Jeneponto that stated government spending on education, health, infrastructure affects human development.

3.1. Effect of Government Spending on Education Sector towards the HDI

HDI is an important indicator for measuring the level of success in the development of human quality. Moreover, education is one of the reflections of human development success and it is the government's task to carry out the development. Education is a component of the HDI, it influences on higher job opportunities and better salaries. This is in line with the concept of human development by UNDP which is the process of expanding choices for people as well as a level that can be achieved from these efforts. Government spending is channeled to the field of education programs such as 9-year compulsory education, scholarships, school buildings, the revitalization of school buildings and the provision of equipment to support learning. It is marked by the increasing number of schools from 1,753 in the year 2009 to 3,298 in 2013 in all regencies / cities in Central Kalimantan, followed by the increasing number of students from 20,554 in 2009 to 52,646 in 2013. It was conducted as an effort to enhance sustainable students' participation due to the relatively large population of young ages that required more adequate supporting education facilities. Furthermore, with the increment of literacy rate or Angka Melek Huruf (AMH) from 97.69 in 2009 to 97.99 in 2013, and Average Length of School or Rata-rata Lama Sekolah (RLS) of 8.02 in 2009 to 8.17 in 2013, meaning that the government's efforts through expenditures education is considered successful. The Indicators of RLS and AMH are the combination of indicators that used as an index of education, as one of the components that construct the HDI. The positive effects of government spending on education can also be seen from the increment of school participation rate except APS age group 13-15 years, which is decreased slightly in 2013. APS is a basic indicator that is used to observe the access of inhabitants to school-age facilities. So, we can say that the policy of government spending on education is an investment that can directly improve the quality of people as well as the HDI.

This is in line with the research conducted by Sanggelorang, Rumate, Siwu (2015), that the local government spending in the education

sector has a significant influence on the HDI, where any change in expenditure will be followed by changes in the HDI. The Increment of spending on basic education sector that distributed evenly will accelerate human development (Gupta, Clements, and Tionson, 1998). In macro theory, according to Adolf Wagner's theory, government spending and government activities are increasing. This tendency by Wagner called the law is always the increasing role of government. The essence of Wagner's theory is the increasing role of government in the activities and economic life of society as a whole. Thus, the policy of the local government to increase the education budget will influence more of local government expenditure on education sector towards the IPM.

3.2. Effect of Government Spending on Health Sector towards the HDI

Health factor is one of crucial needs for human development. The development in health sector is intended to improve the degree of public health. The degree of community health can be seen through mortality, morbidity and nutritional status. The achievement of health development goals is a serious concern for all levels of health workers and stakeholders in Indonesia. Provision of health facilities become one of the efforts to improve the health development in Central Kalimantan province. Health status in Central Kalimantan province is illustrated by the Life Expectancy Rate or Angka Harapan Hidup (AHH), Infant Mortality Rate or Angka Kematian Anak (AKK), Mortality Rate or Angka Kematian Ibu (AKI), morbidity and nutritional status of some diseases. Health is a basic need for human, because through healthy body, a person can do all the activities to meet the necessities of his or her life such as education, work and socializing.

Government spending on health sector is an investment undertaken by the government for the health sector in the development process. Health expenditures are intended for the construction and rehabilitation of health facilities and Health Operational Assistance or *Bantuan Operasional Sekolah* (BOK),

Which focuses on the promotion of preventive health measures, immunization, public nutrition improvement, health promotion,

environmental health and disease control, and other health efforts. The positive and significant effect of government spending health sector is characterized by the increasing number of health facilities such as community health centers or Pusat Kesehatan Masyarakat (Puskesmas) that increased from 1,186 to 1,237 in 2009 in all districts / cities in Central Kalimantan. The decrease of infant mortality cases in Central Kalimantan from 352 in 2009 to 158 in 2012 was also showed a positive sign, in terms of government attention in health sector, particularly towards the health of infants. It was shown a positive correlation with the increase of Neonatal Coverage Visits or *Kunjungan Neonatal* (KN1) from 83,20 in 2009 to 92.29 in 2013. Furthermore, the Infant Mortality Rate (IMR) is showing the socio-economic conditions of local people, because infants are the most vulnerable age group related to the impact of changes in social and economic environment. The indicator of IMR is directly related to the target of child survival and also reflect the socio-economic conditions, living environment and health. Indicators that associated with morbidity and infant mortality are important and often used to measure the progress of a region, in particular, the improvement in the field of health.

Moreover, the number of Maternal Mortality Rate (MMR) also decreased from 73 to 62. MMR is one of the sensitive indicators that depict the welfare of people in a country. Subsequently, Nutritional status in Central Kalimantan also experienced a positive trend, which shown by the decline of malnutrition cases from 27.6 in 2010 to 23.3 in 2013. The nutritional status of a person has a close relationship with general health issues due to its status as the predisposition factor that can aggravate infectious diseases directly and at the same time can cause health problems for the individual. In addition, the health sector was shown a positive condition through the increment of life expectancy (AHH) from 71.10 in 2009 to 71.47 in 2013. AHH shows the degree of health status of an area that is used as the basis of government health programs in order to achieve better public health quality.

The increasing degree of public health means the greater government spending will bring a positive effect on human development in the district / city Central Kalimantan province that through the improvement of AHH as one of IPM components. So, the goal of health

development that set by the government to provide sustainable health financing in sufficient quantities and also allocated and utilized it equitably, effectively and efficiently can be absorbed optimally. This is in line with research by Razmi (2012) who found a positive and significant influence between government health spending to the HDI due to government health spending is a service that is used for disease prevention. The portion of the government's budget is used to improve public health, public awareness, promotion of health and development of the role of non-governmental organizations active in health. The results of the study showed a positive and significant relationship between government spending on the health sector human development index.

3.3. Effect of Government Spending on Social Protection Sector towards the HDI

The Social protection program is one of the efforts to achieve the welfare of the nation, particularly for those who are poor and vulnerable to poverty. Based on the target beneficiaries, social protection programs can be divided into several groups. One is the social protection program targeting the individual beneficiary and / or household, such as Rice Subsidy Program for the Poor or *Beras untuk orang miskin* (Raskin), Community Health Insurance Program, Poor Students Assistance Program or *Bantuan Siswa Miskin* (BSM), Family Hope Program or *Program Keluarga Harapan* (PKH), and Direct Cash Assistance Program or *Bantuan Langsung Tunai* (BLT). Moreover, the government spending on of social protection sector as the variable that affects the HDI is emphasis on supporting or assisting the poor people and people that vulnerable to poverty due to their status as parties who significantly affected when economic shock is occurred such as the rising price of goods and fuels. Those groups need special attention because of their income levels are low which lead to the decrement of their purchasing power that in the end will bring a negative influence in terms of their daily needs' fulfillment and also the condition of social gap between the rich and the poor. So based on those facts, social protection expenditure variables are selected in this study in order to examine their influence on the Human Development Index.

4. CONCLUSIONS, SUGGESTIONS, AND POLICY IMPLICATIONS

4.1. Conclusions

This study aims to determine the effect of government spending on the education sector, health sector and social protection sector on the Human Development Index (HDI) in the Central Kalimantan Province. The enhancement on education budget can bring implications to the improvement of public services quantity and quality in education field such as the increasing number of students, educational facilities and a wider range of up to the outposts. Moreover, the increment on health budget can implicate to the improvement of public health which is reflected in the enhancement of life expectancy, the decline of Infant Mortality and Maternal Mortality figures, the decrement of malnutrition number. In addition, the improvement on the social protection budget can bring implications to the enhancement of people's purchasing power. Through good education and health, the ability to absorb and manage the economic resources will be increased that accompany with the use of technology to support creativity and innovation. Social protection program is a supporting instrument to provide a decent life for people who are not able to meet the needs resulting from economic and political shocks. The expenditure on health, education and social protection sector are used by the government to meet the basic needs of society in order to bring prosperity to people and also as an effort for human development which reflected in the Human Development Index. So, the human capital will be increased through the education, health and social welfare.

In this study, the most influential Government spending is one education sector. It is seen from the regression coefficients government spending in education which is greater than the expenditures on health and social protection sector.

4.2. Suggestion

In addition to education, health, decent living standards that are components of HDI formation, perhaps the government needs to evaluate additional other support components such as security conditions. Because humans are not enough just by education, health and decent living but a person's security conditions also

greatly affect human life, because if a person feels insecure then he cannot do activities well.

4.3. Policy Implications

Government expenditure on education sector needs to be improved in order to support the 13-15 years old school-aged that currently declined in context of participation number. The government should give more scholarships along with more guidance for students and parents regarding the continuity of their education. Through higher education, human beings can improve their capability in context of productivity and creativity. Furthermore, health spending should give more emphasis on prevention activities, such as providing programs that can support public health, healthy living and the education about nutrition. Meanwhile, for the social protection expenditure budget, the government should enhance and rectify the quality of beneficiary data from being misplaced.

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