

# The Effect Of Government Expenditure On Health Performance

Muhammad Dzul Fadlli, Moh. Khusaini, Wildan Syafitri

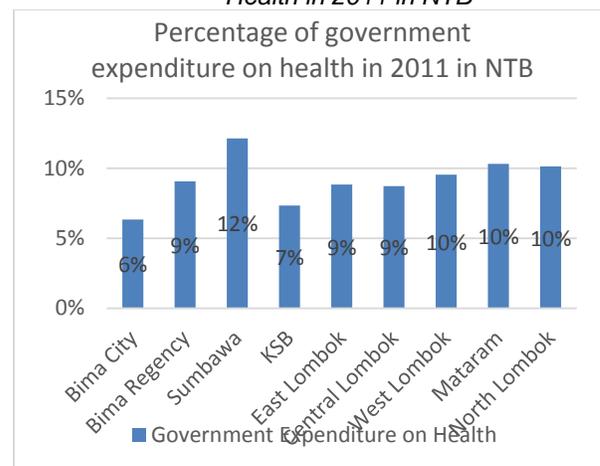
**Abstract:** This study aims to evaluate the impact of the government's role in the health sector. An evaluation with Logic Model assesses the use of inputs in the form of government spending on health functions toward the outcome in the form of a health index. This study uses quantitative methods with data in the form of unbalanced panels from 10 districts / cities in NTB in 2010-2016. The independent variable is the government expenditure on the health function, and the control variable in the form of household consumption expenditure while the dependent variable is the health index. Analysis was carried out by panel regression with the random effect estimation method. The result shows that the government expenditure on the health function has no effect on the health index.

## INTRODUCTION

The government has a role in influencing the economy. The government has the role of allocation, distribution and stabilization. The economic consequences of these roles can influence various economic variables. The role of the government is manifested in various forms of policies and programs / activities. Each policy has a different purpose and its impact on the economy also varies. The form of policy and government's partiality will be reflected in the budget allocation issued. The role of the government will only be effective if it is supported by a system of good governance. One good government can be seen from the accountability of the performance of its government agencies. Performance accountability of government agencies maintains that governance is oriented towards achieving results / objectives. Therefore, the use of the government budget requires to use the principle of performance-based budgets. In the sense that the use of government budgets must be able to achieve the set targets / objectives. To assess the performance of the government, performance measures are taken to assess accountability or accountability for the outcomes achieved from the use of the budget. (KemenpanRB, 2016) Government agencies that are considered accountable or whose performance accountability is "good" are agencies that are based on the evaluation results that have a minimum score of > 60 or with the title "B" (Good). The better the evaluation results, the better the level of effectiveness and efficiency of budget use compared to the achievement of its performance and the better the quality of the development of a culture of bureaucratic performance in the agency. (KemenpanRB, 2016)

Government agencies that are considered accountable or whose performance accountability is good according to (KemenpanRB, 2015) are agencies that are based on the results of the evaluation to obtain a minimum predicate of "B" or "Good". Different from the year before 2015, that is accountability, which is good if you get a minimum title of "CC" or Good enough". (KemenpanRB, 2014). From table 1 it can be seen that the percentage of achievement of accountability on a national average for provincial and regency/city governments is still relatively low. The lowest is achieving good categories, namely at the district / city level. The low level of accountability indicates that the regency / city government is not able to carry out the administration well, accountably and is oriented towards achieving results. Likewise, the condition of the dominant NTB government gets a CC value, and only in 2016 can it increase to B. The low performance accountability of government agencies can be an early warning for not achieving policy objectives taken. In this case, performance-based budgeting that wants the use of the budget to provide optimal results is indicated not to be achieved by the low performance accountability of government agencies. So that this needs to be studied and evaluated to what extent the role of the government can have an impact on development. The government's role in this case will be reflected in government expenditure. While the development seen in this study is in terms of health development as measured by the health index. Government expenditure on health can be seen in graphic below:

**Graph 1** Percentage of Government Expenditures on Health in 2011 in NTB



**Source:** processed from BPS data

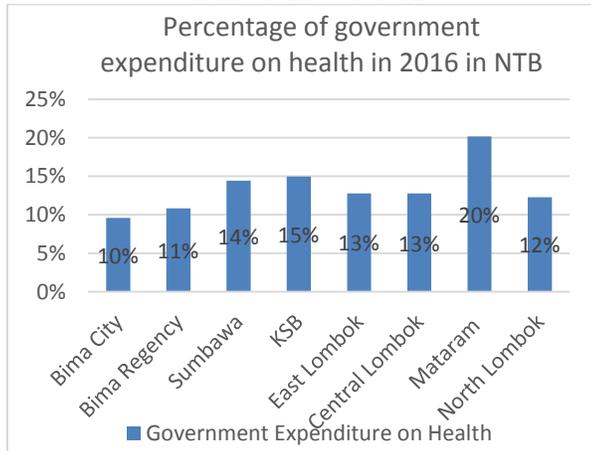
**Table 1** Percentage of Government Agencies whose accountability for performance is "good" on a national average:

|   | 2010  | 2011  | 2012  | 2013  | 2014  | 2015       | 2016      |
|---|-------|-------|-------|-------|-------|------------|-----------|
| Province (%)  | 31.03 | 63.33 | 75.76 | 84.85 | 87,88 | 50         | 64,71     |
| Regency/ City (%)                                     | 3.31  | 12.22 | 24.37 | 36.56 | 44,9  | 8.58       | 14,53     |
| Accountability Score of Government Institution in NTB | -     | -     | CC    | -     | CC    | CC (58,65) | B (60,64) |

**Source:** processed from LAKIP Kemenpan RB, [www.menpan.go.id](http://www.menpan.go.id)

Individually, it was seen that many health expenditures in 2011 were not in accordance with the Law. This shows that the regional government is not optimal in fulfilling the laws and regulations. The Regional Government is still obliged to allocate funds for health at a minimum of 10% of the APBD in accordance with the provisions of Law Number 36 of 2009 concerning Health, especially activities that directly touch the interests of the community. (Ministry of Health of the Republic of Indonesia, 2018). Whereas in 2016 has met the minimum required. The percentage data on government expenditure on health is shown in the graph below:

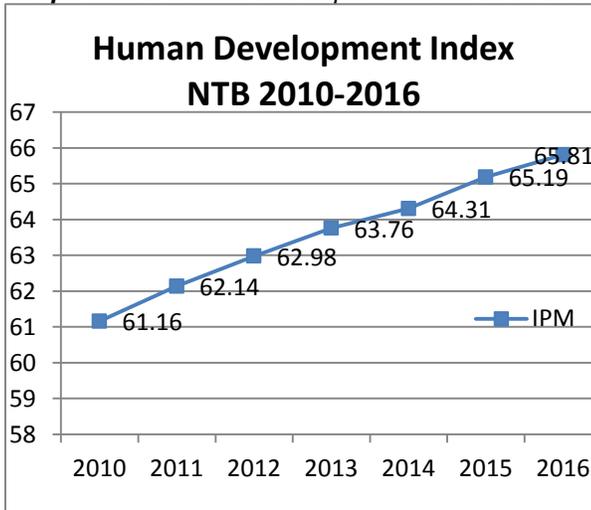
**Graph 2** Percentage of Government Expenditures on Health in 2016 in NTB



Source: processed from BPS data

In the graph above shows that government spending on health meets the minimum standard of 10%. These government expenditures must encourage health improvements in NTB. One of the better indicators to describe the results of development is using human development index (HDI). Particularly in health sector, the component of HDI can be used. In health is measured by health index. The condition of the human development index in NTB from 2010-2016 continues to increase. As shown by the following graph:

**Graph 3** NTB Human Development Index 2010-2016



Source: processed from BPS data

From the graph shows that the human development index continues to experience improvements from year to year. The increase in the index shows an improvement in development in NTB including on the forming side, namely in terms of health. Although there are several regions in 2011, they have not fully met the minimum standard of 10% APBD for health, but in the majority (in part of 2011 and 2016), local governments have allocated a large amount of the 10% budget for health. These expenditures should encourage health improvements in NTB. Given the fact that government accountability at the district / city level is still low, the question is that can the role of government agencies have a real influence on improving human development (human development index). With the low accountability of municipal district government agencies it actually leads to the assumption that the role of the government becomes ineffective and does not have an impact on development. Many poor people lack adequate access to health. Government programs can help to set a minimum standard of living that is appropriate for them so that they deserve assistance. Government programs can be in the form of direct cash assistance, service of goods and services in direct medical care, subsidies, and various incentives for poor people to be able to meet their needs. Or in other forms indirectly that can provide benefits to the poor such as increasing certain goods and services that can be consumed by the recipient. (Hyman, 2010) The government basically has a role that helps improve public health. However, looking at some of the facts that the regency / city government on a national average does not perform well, it raises the question whether the role of the government really can affect the development of the health sector. So it needs to be further evaluated regarding the development impact of the government's role. Thus, in this study, the authors conducted an evaluation of the impact of development carried out by the NTB regional government in health. In this case is to see the effect of government expenditure on health functions as evidence of the government's role toward performance indicators as a measure by the health index. So this research takes a topic of Analysis of the Effect of Government Expenditures on the Health Index". This study aims to determine the effect of government spending on health in the achievement of health index in NTB in 2010-2016.

**PREVIOUS RESEARCH**

Research from (Sasana, 2012) about the effect of government spending on the human development index in districts / cities in Central Java from 2006 to 2008. Data analysis was performed using Fixed Effect Model (FEM). The results show that government spending has a positive and significant influence on the human development index in districts / cities in Central Java Province. (Handayani, Kadir, & Taryono, 2015) analyzed Government expenditure on Health in Riau Province in the period 2003-2012 and its effect on the Human Development Index (HDI). Analysis method with multiple regression. The results show that government spending on the health sector in Riau province has a positive and significant effect on the HDI. Government spending on the health sector in all districts in Riau Province has a negative and not significant effect on HDI in Riau Province. This research (M., Rumate, & Siwu, 2015) aims to determine the effect of health government

spending on the Human Development Index. The analytical model used is multiple regression. The regression results show that the variable government expenditure in the health sector has a negative effect, which is equal to -0.438 and does not statistically affect the human development index in North Sulawesi. Research (Rahmadian, 2016) aims to analyze the effect of government spending in the health sector on the Development Index in Central Java in 2010-2014. Analysis method with regression with fixed effect model. The results showed that the health budget variable had a positive and not significant effect on the human development index in Central Java, this was because government spending allocated to health was only 5% and the community had not felt it directly. This study (Sarma & Sharma, 2014) examined the impact of increased social sector spending on crude birth rates (CBR), crude mortality (CDR) and infant mortality (IMR). While an increase in spending in the social sector has been shown to have a non-significant impact on IMR, this has a significant impact on CBR and CDR. It was found that Assam had less satisfactory performance than national level standards regarding this statistic. Compared to the education index and GDP index, the life expectancy index has a better impact on ranking human development. Research (Yaqub, T.V., & R.O., n.d.) examines the effectiveness of public health spending influenced by governance in Nigeria. Public health expenditure data and governance variables captured by the corruption perception index are regressed on infant mortality, under-five mortality and life expectancy, using the least squares and the two-stage least squares. The results show that public health spending has a negative effect on infant mortality and under-five mortality when governance indicators are included. (Astri, Nikensari, & W., 2013) examined the effect of local government spending on the health sector on the Human Development Index (HDI). This study uses secondary data on government spending in Indonesia in 2007-2008 with inferential statistical methods. The results showed that local government spending on the health sector had no effect on the HDI. (Sirag, Mohamed, Mustapha, & Abdullah, 2017) examine the impact of public health financing on health outcomes (infant mortality). This study uses panel data for 171 countries categorized into three income levels: low, middle and high income countries, for the period 1995-2012. The findings reveal the importance of financing public health in improving the health of the population. In particular, financing public health is negatively related to infant mortality rates in all income groups. In addition, socio-economic factors, such as income and education, appear to be equally important in reducing infant mortality. (Makela, Dandona, Dilip, & Dandona, 2013) examined Social Sector Expenditures and Child Mortality in India from 1997 to 2009. Methods of data analysis with mixed-effect regression. The result is that an increase in public expenditure on health is not significantly associated with a reduction in mortality in infants or at the age of 1-4 years, but a 10% increase in health public expenditure is associated with a 3.6% reduction in mortality in boys aged 1- 4 years. A 10% increase in overall social sector expenditure was associated with a reduction in mortality in both boys (6.8%, 3.5-10.0%) and girls (4.1%, 0.8-7, 5%) are 1-4 years old. (Novignon, Olakojo, & Novignon, 2012) examined the effect of health care spending on population health status and to examine the

effects of public and private sources of expenditure in sub-Saharan Africa (SSA). This study uses data from 1995 to 2010 which included 44 countries in SSA. Data analysis method with panel data regression analysis. As a result, health care spending significantly affected health status through increasing life expectancy at birth, reducing infant mortality and mortality. Public and private health care expenditure shows a strong positive relationship with health status. (Stenberg et al., 2014) calculated the cost of strengthening the health system and six investment packages for maternal and newborn health, children's health, immunization, family planning, HIV / AIDS, and malaria. Simulation modeling is used to estimate the health and socio-economic returns of this investment. Increasing health spending by just \$ 5 per person per year up to 2035 in 74 countries can generate up to nine times that value in economic and social benefits. These returns include greater gross domestic product (GDP) growth through increased productivity, and the prevention of unnecessary deaths. (Craigwell, Bynoe, & Lowe, 2012) examined the effectiveness of public expenditure for health care by evaluating life expectancy. Analysis using the Least Squares Panel with data containing 19 Caribbean countries during the period 1995-2007 for health care in 1980-2009. The results show that health expenditure has a significant positive impact on health status. (MCNAB, 2001) examined the effect of fiscal decentralization on infant mortality. This study uses an unbalanced panel data model that covers more than 20 years and more than 50 countries. His findings that fiscal decentralization reduce infant mortality.

## LITERATURE REVIEW

There are two reasons why the government intervenes in the economy, namely the existence of market failures and redistribution. The first reason, market failure raises problems that cause the market economy to produce results that are not efficient. The second reason, Redistribution is carried out in order to shift resources from several groups in society to others. (Jonathan Gruber, 2011) One of the roles of the government is manifested in the form of fiscal policies taken by the government. Fiscal policy relates to government expenditure policies. Government spending in Indonesia uses a performance-based budgeting system. Performance Based Budgeting is a budgeting that is based on performance planning, which consists of programs and activities to be implemented as well as performance indicators to be achieved by a budget entity (Indrawati in (Domai, n.d.). Through performance-based budgets, the linkages between money values and performance results can be identified. Thus, the program can be carried out effectively. If there is a difference between the plan and realization, it will be possible to evaluate the input sources and how they relate to the outputs and outcomes. So that the program's effectiveness and efficiency can be assessed (Menuju & Kelola, 2003) The principles in implementing performance-based planning and budgeting are as follows:

1. Performance Oriented Budget Allocation (output and outcome oriented).
2. Flexibility in managing the budget to achieve results while maintaining the principle of accountability

3. Allocation of the budget to fund an activity based on the tasks and functions of each work unit in accordance with the purpose of its establishment.

The government sets strategic priorities equipped with performance indicators and targets (to improve the relationship between performance and funding) in order to achieve development goals, which are then implemented in the form of regulatory interventions and budget interventions. (Bappenas, 2012) Performance according to (Presidential Regulation of the Republic of Indonesia Number 29 of 2014) is "output / outcome of activities / programs that have been or will be achieved in connection with the use of budget with measurable quantity and quality". While performance indicators are a measure of the success that will be achieved from the planned program and activity performance". An indicator is a measure used to measure the effects of a program. Indicators tell how much progress or changes have been made to a particular goal, result, or output. (Milwaukee Public Schools Research and Development, 2014) Evaluation greatly relies on data (performance indicators) generated through monitoring during the program or project implementation cycle. Performance indicators are a simple and reliable way to document changes in the conditions of development (yield), production, or delivery of products and services (output) that are connected to development initiatives. (UNDP, 2009) Performance indicators are a measure of the success of a program or activity (Bappenas, 2012). Performance indicators are signs that function as a measure of the achievement of an activity, program or target and goal in the form of output (output), outcome (outcome), impact (impact). Output (output) is a final product in the form of goods or services from a series of processes on development resources so that the results (outcomes) can be realized. Results (outcome) are the conditions that want to be achieved or maintained in the beneficiaries in a certain period of time that reflects the functioning of the output of several activities in one program. Impact (impact) is a condition that you want to change in the form of development / service results obtained from achieving outcomes in several programs. (Perencanaan et al., 2017).

### Government Expenditure on Health

Government expenditure on health is usually interpreted to include these costs together with expenditures from the public budget. This refers to market failures where the private market cannot be expected to function at all. In this case the public budget for the health sector is needed to provide public goods in the health sector. (Musgrove, 1996) Government expenditures in the health sector are government expenditures according to health functions that are used in the context of implementing government affairs that are the authority of the province or district / city. According to regulations (Menteri Keuangan Republik Indonesia, 2011) that expenditure based on health functions is divided into 6 sub-sections. The classification of government expenditures for health sub-functions consists of medicines and health supplies, individual health services, public health services, family planning, health research and development, and other health.

### Health Index

An indicator for measuring human development by UNDP is an indicator called the Human Development Index (HDI) or Human Development Index (HDI). HDI can measure the welfare of the community both from the economic dimension and the social dimension. The concept of human development sounds different when compared to the classical concept of development which focuses primarily on economic growth, not improving the quality of human life. The HDI is formed by 3 (three) basic dimensions, namely:

- a. Long life and healthy life
- b. Knowledge
- c. Decent living standards

Indicators to measure health are dimensions of longevity and healthy life. This dimension is measured through life expectancy (AHH). Each HDI component is standardized with minimum and maximum values before being used to calculate the HDI. The health component measured by this life expectancy is standardized and will later become a health index. From these index values, the value of the human development index will be calculated later. The Human Development Index is calculated from three indices, namely the education, health and expenditure index. The Health Index is one of the standardized dimensions of health (life expectancy) with minimum and maximum values before being used to calculate HDI. Value Health index in the form of a unit of numbers. The Health Index is calculated from Health indicators in the form of standardized Life Expectancy. The Health Index can be formulated as follows:

$$\text{Health Index} = \frac{\text{AHH} - \text{AHH}_{\min}}{\text{AHH}_{\max} - \text{AHH}_{\min}}$$

According to (BPS, 2014) that Life Expectancy at Birth - AHH (Life Expectancy-e0) is defined as the average estimated number of years a person can take from birth. AHH reflects the health status of a society. AHH is calculated from the results of the population census and survey. For standardization in the calculation of the Human Development Index, a minimum AHH of 20 years is used, and the maximum AHH is 85 years.

### Human Capital

According to (Jonathan Gruber, 2011) that there are a number of public benefits (positive externalities) for health that might justify the government's role in its provision and imperfections in the market for health care services resulting in demands for government activities in fields such as research, information provision and distribution service. According to (Hyman, 2010) that the government can play a role in the health sector because:

#### a. There is asymmetrical information

The market for medical care is one of the asymmetrical information in which medical care sellers get better information about costs and quality than the buyers with whom they trade. In addition, according to (Hindriks & Myles, 2004) that asymmetric information leads to inefficiency and that inefficiency can take a number of different forms.

### b. Other Features Contribute to High Inefficiency and Medical Costs.

Another factor is the cost of medical services such as the soaring cost of malpractice insurance. Some of these costs have been passed on to patients as higher costs. To reduce the risk of malpractice suits and keep their malpractice insurance premiums under control.

### c. The existence of positive externalities

Some positive externalities are associated with a reduction in infectious diseases. Public Health Services have also been active in providing information and encouraging personal health practices that limit the spread of diseases.

### d. The existence of income inequality and health care

Ensure access to medical services for all citizens regardless of their ability to pay or employment status is seen by many as the desired function of the government. According to this view, health care must be guaranteed its rights, both available to all as if it were a public good.

### Demand for Goods/Service

The quantity / quantity of goods requested is the number of products that the household will buy in a certain period if he can buy all he wants at the current market price. Of course, the number of products that the household finally buys depends on the number of products actually available on the market. The expression, if you can buy everything you want, is very important in the definition of the quantity / quantity requested because of the possibility of the amount offered and the amount requested is not the same. The relationship between the quantity / quantity of goods and services requested has a negative relationship with the price of these goods / services. The law of demand reads When the price rises, the quantity demanded decreases; with the price drop, the quantity demanded increases. (Case, Fair, & Oster, 2012a) Household decisions about the number of items requested according to (Case et al., 2012a) depend on several factors, namely:

- Price of the item.
- Household income.
- Total accumulated family wealth.
- Prices of other products
- Household tastes and preferences.
- Household expectations / expectations about future income, wealth and prices.

Household income is the sum of all wages, salaries, profits, interest payments, rent, and other forms of income received by households in a certain period of time. You can spend or consume more or less of your income in a certain period. While Wealth is the total value of what a household has minus debt. Another word for wealth is net worth - the amount left over by the household if it sells all of its property and pays all its debts. Households with higher income and higher accumulated savings or inheritance wealth can buy more goods and services. In general, we would expect higher demand at higher levels of income / wealth and lower demand at lower levels of income / wealth. Goods whose demand increases when income is higher and whose demand falls when lower income is called normal goods. Movie tickets, eating in restaurants, phone calls, and shirts are normal items.

## RESEARCH METHOD

This research uses a positivist approach. Because in this study trying to provide confirmation / justification of the realities that occur by doing logical analysis and validation by basing knowledge / theory that is consistent with the information we obtain. The positivist approach to scientific inquiry is based on acceptance as the fact that the world around us is real, and that we can know about these realities (Nicholas, 2011). The place of this research is the Regency / City in the province of West Nusa Tenggara (NTB). This study took all 10 existing districts / cities. The regencies / cities are Bima City, Mataram City, Bima Regency, Dompu Regency, Sumbawa Regency, West Sumbawa Regency, East Lombok Regency, Central Lombok Regency, West Lombok Regency and North Lombok Regency. While the research period was used, namely in the period 2010 to 2016. Data collection methods used in this study are secondary data. So that in this study using data that has been published by other parties. The research data is sourced from the Central Bureau of Statistics and the Ministry of Finance. The data analysis technique used in this study is by using panel data regression. The use of regression analysis in order to determine the effect of the independent variables that exist on the dependent variable. And the data used in this study is panel data because it is a combination of time series data with data between regions (cross-section). The specification of this research model is made in the form of the following equation:

$$IK = \alpha_1 + \beta_1 PK_{it} + \beta_2 KRT_{it} + \varepsilon_1$$

Information:

PK: Government expenditure on health functions

IK: Health Index

KRT: Household consumption

In this study examine the effect of government expenditure on health functions on the health index. while the variable in the form of household consumption here acts as a control variable. The health index value is obtained through the following calculations:

$$\text{Health Index} = \frac{AHH - AHH_{\min}}{AHH_{\max} - AHH_{\min}}$$

Information:

AHH = Life Expectancy

Minimum AHH = 20 years

Maximum AHH = 85 years

Estimating (estimating) parameters in panel data regression has random effects. After estimating, the next step is to do the testing. This test is carried out with several tests, namely:

### a. Partial Test (t Test)

Partial test is used to determine the significance of each independent variable (independent) individually in explaining the dependent variable in the model. This test is carried out using the t test, where:

H0:  $\beta = 0$  means the coefficient value is zero,

(H1:  $\beta \neq 0$  means the coefficient value is different from zero.

**b. Test of Overall Regression Equations (Test F)**

The F test is carried out to test whether all independent variables (independent) together influence the dependent variable. The significance of testing F can be seen from the magnitude of the probability value of the p-value. If the p-value of the F-statistic is smaller than  $\alpha$  of 5% or 0.05 then all independent variables significantly have a joint influence on the dependent variable. Vice versa, if the p-value of the F-statistic is greater than  $\alpha$  of 5% or 0.05, together all the independent variables (independent) are said to not significantly affect the dependent variable (dependent).

**c. Testing R2 (Coefficient of Determination)**

R2 testing is used to test the extent to which variations of the independent variables are able to explain the dependent variable. Or in other words to see how much the power of the independent variable (free) can explain the dependent variable (bound). R2 values range from 0 - 1, and if the value approaches 1, the model is getting better. The method for calculating R2 is as follows:

$$R^2 = 1 - \frac{ESS}{TSS} = \frac{RSS}{TSS}$$

Information:

TSS = Total Sum of Squares

RSS = Regression Sum of Squares

ESS = Error Sum of Squares

**FINDING AND DISCUSSION**

**Description of West Nusa Tenggara**

West Nusa Tenggara based on its geographical position, has boundaries: North - Java Sea and Flores Sea; South - Indian Ocean; West - Lombok Strait and Bali Province; Timur - Sape Strait and East Nusa Tenggara Province. (BPS of West Nusa Tenggara Province, 2017). West Nusa Tenggara consists of two islands with 10 districts / cities.

**Figure 1** Map of the Administrative Region of NTB



**Source:** (Kemendagri, 2015)

District / city areas in NTB are divided into two islands, namely:

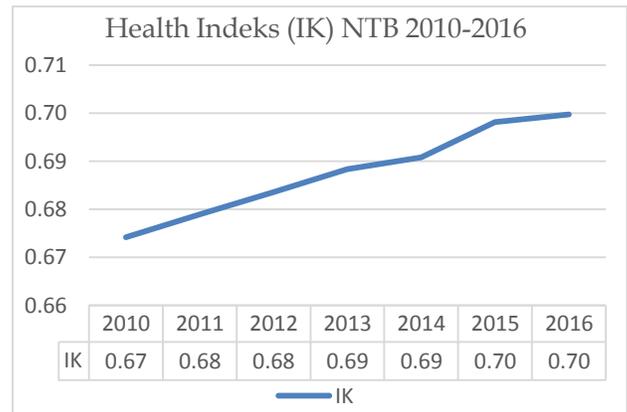
- Lombok Island has administrative areas, namely West Lombok Regency, Central Lombok, East Lombok, North Lombok and the City of Mataram

- Sumbawa Island has 5 administrative regions namely Sumbawa, Dompu, Bima Regency, Sumbawa West Sumbawa and Bima City.

**Health Index in West Nusa Tenggara 2010-2016**

The description of the development of the health index in NTB is shown by the following picture:

**Graphic 4** NTB Health Index 2010-2016



**Source:** processed from BPS data

In graphic 4 above shows the rate of health index value in 2010-2016. It is seen that the health index continues to experience a yearly increase. If further examined about changes in the value of the health index, it can be seen that in general there is progress at the district / city level. This is in line with the increasing health index value. BPS classifies the human development index value in 4 groups, namely the HDI value of less than 60 means low HDI, HDI value between 60 to less than 70 means medium HDI, HDI value between 70 to less than 80 means HDI is high, and HDI value is greater than the same with 80 means HDI is very high. The value of the HDI-forming indices when compiled with these criteria, it will be seen that the district / city health index value in NTB has improved. This can be seen in the comparison map of the health index values in 2010 and 2016 compiled based on BPS groupings seen below:

**Figure 2** Map of changes in health index values Health 2010



**Source:** Processed from Geoda

From the health index, it can be seen that many districts / cities experienced health improvements during the period 2010-2016. In 2010 there were 8 city districts with a moderate health index. And in 2016 only 4 municipal

districts were in the moderate category. 4 districts have experienced an increase in the health index value. In 2010 there were only 2 who had high health index values, namely only the City of Bima and the City of Mataram, but in 2016 it had increased to 6 districts / cities.

### Estimation and Hypothesis Testing

In this section will explain the results of estimation and hypothesis testing of the equation model used. The equation model used in this study is the model of the effect of health expenditure on the health index. The estimation results and hypothesis testing of these equations can be presented in the following table:

**Table 2.** Result of Estimation and Testing

| <i>IK = f (PK, KRT)</i> |                  |                      |             |
|-------------------------|------------------|----------------------|-------------|
| <i>Variabel</i>         | <i>Koefisien</i> | <i>Nilai Uji t/F</i> | <i>Prob</i> |
| <i>C</i>                | -0.0725962       | -1.30                | 0.192       |
| <i>PK</i>               | 0.0006127        | 0.79                 | 0.432       |
| <i>KRT</i>              | 0.049369         | 13.60                | 0.000       |
| <i>R<sup>2</sup></i>    | 0.8858           |                      |             |
| <i>Uji F</i>            |                  | 204.15               | 0.0000      |

**Source:** Stata 14.0

Information:

IK: Health Index

PK: Government expenditure on health functions

KRT: Household Expenditures

The research hypothesis is to examine the effect of input in the form of government expenditure on health functions and control variables in the form of household consumption towards the outcome outcomes in the form of a health index. The hypothesis equation can be written as follows:

$$IK = \alpha_1 + \beta_1 PK_{it} + \beta_2 KRT_{it} + \varepsilon_1$$

Then substituted with the estimated value of the test results obtained by the equation as follows:

$$IK = -0.0725962 + 0.0006127 PK + 0.049369 KRT$$

From the results of testing the hypothesis obtained a constant value of -0.0725962. The coefficient value for government expenditure on health function (PK) is 0.0006127 with a probability value of 0.432 so that the probability is above the  $\alpha$  value of 5%. This shows that from the partial test that the variable government expenditure health function has no effect on the health index. And the coefficient for household consumption is 0.049369 with a probability value of 0.000 so that the probability value is below the value of  $\alpha$  of 5%. Household consumption variables partially influence the health index. Whereas through a simultaneous test (F test) a probability value of 0,000 is obtained which is below  $\alpha$  of 5%. The results of the F test provide a conclusion that together the independent variables affect the dependent variable in the form of a health index. From the results of hypothesis testing for this equation model, it can be explained that government expenditure on the health function does not affect the health index. While the household consumption variable has a positive effect on the health index. If household consumption rises by one percent assuming ceteris

paribus, the health index will increase by an average of 0.049369 percent. To test how well the equation model in explaining the effect of independent variables on the dependent variable R2 testing is used. From the results of R2 testing the value is 0.8858. This shows that the variable government expenditure on health and household consumption functions can explain the effect on the health index of 88.58%.

### Discussion

According to (Hyman, 2011) that the government is directly involved in medical and health research and also provides a number of funds for the construction of medical facilities such as hospitals. Government spending on health care is done through direct payments to doctors, hospitals, and other health care provided through two public health insurance programs. Many programs try to prolong life by avoiding accidental deaths. Like health programs of various types that involve benefits in the form of decreasing mortality and reducing loss of human welfare due to injury or illness. The Health Index is one of the components of the HDI in the health dimension (life expectancy), so that it can reflect public health. Health index is standardized from life expectancy. According to (BPS, 2014) that Life Expectancy Figures describe the average estimated number of years a person can take from birth. Life expectancy reflects the health status of a community. Thus government spending to improve public health can encourage improvements in public health reflected in the health index. From empirical testing it is proven that government expenditure on health functions does not affect the health index. This is evident from the results of the t test which shows a probability value of 0.432 greater than the value of  $\alpha$  of 5%. Thus, H0 is accepted, so it is concluded that government expenditure does not affect the health index. The test results are not in accordance with the theory that was built, but in line with various other previous studies. As Research from (Hakim & Sukmana, 2017) shows that government spending in the health sector has a not significant negative effect on the Human Development Index (HDI) in 16 OIC Countries. Research from (M., Rimate, & Siwu, 2015) resulted in a variable government expenditure in the health sector having a negative effect, which was equal to -0.438 and statistically did not affect the human development index in North Sulawesi. Research from (Handayani, Kadir, & Taryono, 2015) states that government expenditure on the health sector in all Riau sub-districts has a negative and not significant impact on the Riau province's human development index. Research from (SUKIRNA, Putra, & Jumhur, 2014) resulted in health government expenditures having a positive and insignificant effect on the Human Development Index directly, while indirectly through economic growth showed no significant negative effect on the Human Development Index. Research from (AKBAR, 2016) states that government spending on health, infrastructure and social assistance has no effect on the Human Development Index in the province of Yogyakarta Special Region. Research from (Rahmadian, 2016) shows that health budget variables have a positive and insignificant effect on the Human Development Index in Central Java, this occurs because government spending allocated to health is only 5% and the public has not felt it directly. So that the increase in government spending in the

health sector every year does not show a significant effect on the Human Development Index in Central Java. The results of the analysis (Deshpande, Kumar, & Ramaswami, n.d.) sought to examine whether there was a relationship between health care expenditure and national life expectancy. The results of his research show that there is no significant correlation between health care expenditure and life expectancy in developing countries, but it does exist in developed countries. In developing countries, not the quantity spent but the quality of expenditures that affect health services. In developed countries, expenditure may be more efficient and thus more effective. Research from (Adeel, 2016) on the impact of government spending on the Pakistani health sector provides empirical results that the impact of health spending on Pakistan's health sector is very insignificant at a significance level of 5% percent. The results show that budget allocations are very large but their use is not appropriate because of dishonesty and corruption. (Sarma & Sharma, 2014) sought to explore the impact of increasing social sector spending on infant mortality. The result is that the increase in expenditure in the social sector proved to have a non-significant impact on the mortality rate (IMR). It was found that Assam had less satisfactory performance than national standards based on these statistics.

## CONCLUSION AND SUGGESTION

### Conclusion

Government expenditure on health functions has a large allocation and in general has met the minimum standards set by law at 10%. Here I want to test the expenditure whether it has been felt by the community the benefits. So the first goal in this study has to evaluate the effect of government spending on health functions on the health index. In this study it was concluded that government expenditure on health functions did not affect the health index in NTB in 2010-2016. This condition can be suspected because the quality of government expenditure is less accountable.

### Suggestion

1. Further research in order to be able to extend the year of research as well as more complete data so that it can use balanced panel data because in this study using data with a relatively short period of time and non-balanced panels
2. The government is advised to increase its role in public services again to provide health given the government's role that has not been felt to improve the health index. And it needs to improve the performance of government agencies to ensure better public services

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