



## Growth and Employment Determinants Factors in North Sulawesi Province

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### ABSTRACT

Employment opportunity in order to increase employment opportunities become one of the important issues in economic development that can be realized with a variety of development activities. This study aims to identify and analyze the effect of government spending as education, health, and other sectors on employment, either directly or indirectly through private investment, human development index, economic growth and economic structures in North Sulawesi. This study uses panel data in 15 districts and cities that exist in the province of North Sulawesi. Data analysis technique used is *structural equation model* (SEM) using AMOS version 20.0. The results showed that the presence of the strong influence of the education sector, government spending, and the health sector on employment both directly and indirectly to private investment, index of human development, economic growth, and economic structure, so that the first and second hypothesis can be accepted. While other sectors of government spending has no significant effect on employment both directly and indirectly towards private investment, human development index, economic growth and economic structures, so the third hypothesis be rejected.

**Keywords:** Government Spending Education Sector; Health Sector; Other Sectors; Economic Growth and Employment.

### 1. Introduction

One of the critical problems faced by Indonesia today is the problem of unemployment. Unemployment is a labor issue that now has reached the condition is quite alarming. Number of unemployed and half-employed are increasing. Employment which supporting increasing employment opportunities become one of the important issues in economic development that can be realized with a variety of development activities.

Total employment and unemployment in North Sulawesi shown in Table 1 since 2000 has increased along with the increasing number of people enter productive age. This pattern of increase in unemployment occurred until 2004, when the unemployment rate is as much as 186, 805 people. After 2004 the unemployment rate has been fluctuated and in 2009 increased by 2,923 people compared to the previous year. Similarly, the pattern of employment in 2000 until 2005, after an increase from year to year.

United Nations Development Programme (UNDP) in its report on Human Resource Development (Human Resources Development) in 2000 said that: "People are the real wealth of nations. The main objective of development is to create a potential environment for people to enjoy long life, healthy and productive life running".

Thus, the strategy of national development goals and objectives should really pay attention to aspects of human resources in entering employment, orientation to increase the Gross Domestic Product / GDP (Gross Domestic Product / GDP) must first be followed by an increase in the quality of education, health and skills adequate hence the development GDP increase was followed by an increase of labor productivity (Tambunan, 2001).

Another objective could be achieved by an increase in the achievement of economic development among other high economic growth, alleviate poverty, maintaining price stability by always considering the inflation rate, maintaining the

balance of payments, inadequate attention to the balance of trade, income distribution more equitable, growth investments and reduce the unemployment rate (Tambunan, 2001).

This study aimed to analyze the effect of government spending as education, health, and other sectors on employment, either directly or indirectly through private investment, human development index, economic growth and economic structures in North Sulawesi. Identification of previous research relevant to the topic of this study include Sasmal (2011); Were (2001); Kandenge (2007); Ledyeva et al (2006); Heintz et al (2008), Davies (2009); Bataineh (2012); Razmin (2012); Loizides et al (2005); Prasetyla (2013), and Nurudeen et al (2010)

## 2. Materials and Methods

### Income Budget and / Regional Government Spending

Public sector budget has several major functions: first as a planning tool, both as a means of control, a third as a tool of fiscal policy, the fourth as a political tool, fifth as a means of coordination and communication, as a tool performance assessment sixth, seventh and eighth as a motivational tool as a means of creating a public space.

### Theory Assessment about Investing

There are three forms of investment spending that is (1) business fixed investment (business fixed investment) includes equipment and structures that companies buy for the production process, (2) residential investment (residential investment as) includes the purchase of new housing to live and landlords who purchased for rent, (3) inventory investment (inventory investment) includes items that the company be placed in the warehouse, including materials and equipment, semi-finished goods and finished goods (Mankiw, 2000).

### Studies Theory of Human Development Index

HDI / HDI originated from the idea of the limitations of income per head as a basis for monitoring development of outcomes. Perceived limitation is the inconsistency of income when correlated with various aspects related to humans, such as human life, health and skill in reading (dosser et al, 1991).

### Studies Theory of Economic Growth

Smith introduced an offer that drives the growth model, in which the output associated with labor, land and capital. Thus, the increase in output growth, which is related to population growth, investment, growth or development of the land and increase productivity (Grabowski et al, 2007). According to Glasson (1997) factors of capital, labor, land or natural resources as well as technology and transportation systems, and social and political influence in a region of potential output.

### Structure Theory of Economic Studies

Economic development in the long-term period following the growth of national income going to bring a fundamental change in the economic structure of the traditional economy with agriculture as the primary sector to the modern sector, which is dominated by non-primary sectors especially manufacturing industries with increasing returns to scale (positive relation between growth output with productivity growth) are dynamic as the main engine of economic growth in the Tambunan by Weiss (2001), thus there is a positive correlation between economic growth and changes in the economic structure of society through increased revenue (demand side effect).

### Theory of Employment Studies

Sukirno (2000), provide an understanding of employment as a situation in which all workers who want to work at a certain wage level will easily get a job.

### The location and design of the study

The research was conducted in the province of North Sulawesi using panel data on 15 regencies and cities. Source of the data obtained in this study is secondary data Revenue and Expenditure (Budget) Government spending in particular sectors of the Education, Health and Other, Private Investment / Domestic Investment and Foreign Investment (domestic and foreign), Development Index humans (HDI), Economic Growth, Economic Structure and Employment in North Sulawesi in the form of time series data were then analyzed using structural models.

## 3. RESULTS

### Effect of Government Expenditure on Private Investment in Education Sector

The effect of variable coefficient Education Sector Expenditures ( $X_1$ ) of the Private Investment ( $Y_1$ ) of 0.228 with a t value of 2.561 at a significance level of 0.010. The coefficient indicates that the variable education sector government spending has a positive effect on private investment.

#### **Effect of Government Spending on Education Sector Human Development Index**

Coefficient of government expenditure variables influence the education sector ( $X_1$ ) of the human development index ( $Y_2$ ) of 0.152 with a t value of 1.979 at a significance level of 0.048. The coefficient indicates that the variable education spending have positive and significant at the 5% level for the human development index.

#### **Effect of Government Spending on Economic Growth Education Sector**

Coefficient of government expenditure variables influence the education sector ( $X_1$ ) on economic growth ( $Y_3$ ) of 0.210 with a t value of 2.368 at a significance level of 0.018. The coefficient indicates that the variable is government spending has positive influence on the education sector to economic growth.

#### **Effect of Government Spending on Economic Structure Education Sector**

Coefficient of government expenditure variables influence the education sector ( $X_1$ ) the structure of the economy ( $Y_4$ ) of 0.197 with a t value of 2.834 at a significance level of 0.005. This means that the education sector, government spending has positive influence on the economic structure.

#### **Effect of Government Spending on Education Sector Job Opportunities**

Coefficient of government expenditure variables influence the education sector ( $X_1$ ) on employment ( $Y_5$ ) amounted to 0,178 with a t value of 2.191 at a significance level of 0.028. The coefficient shows that the government education expenditure variable positive and significant impact on the employment opportunities.

#### **Effect of Government Spending Health Sector to Private Investment**

Coefficient of government expenditure variables influence the health sector ( $X_2$ ) on private investment ( $Y_1$ ) of 0.322 with a t value of 2.863 at a significance level of 0.004. The coefficient indicates that the variable government health spending has a positive effect on private investment.

#### **Effect of Government Spending on Health Sector Human Development Index**

Coefficient of government expenditure variables influence the health sector ( $X_2$ ) of the human development index ( $Y_2$ ) of 0.207 with a t value of 2.116 at a significance level of 0.034. The coefficient indicates that the variable government health spending has a positive effect on the human development index. T statistic value of government spending influences the health sector to private investment amounted to 2,116 with 0,034 on the significance level of 5% (0.05).

#### **Effect of Government Spending on Economic Growth in the Health Sector**

Coefficient of government expenditure variables influence the health sector ( $X_2$ ) on economic growth ( $Y_3$ ) of 0.230 with a t value of 2.034 at a significance level of 0.042. The coefficient indicates that the variable government spending has positive influence on the health sector to economic growth.

#### **Fourth, Effect of Government Spending on Health Sector Economic Structure**

Coefficient of government expenditure variables influence the health sector ( $X_2$ ) on the structure of the economy ( $Y_4$ ) of 0.175 with a t value of 1.987 at a significance level of 0.047.

#### **Effect of Government Spending on Health Sector Job Opportunities**

Coefficient of government expenditure variables influence the health sector ( $X_2$ ) on employment ( $Y_5$ ) of 0.216 with a t value of 2.147 at a significance level of 0.032. The coefficient indicates that the variable government spending has positive influence on the health sector on employment.

#### **Effect of Government Expenditure on Private Investment in Other Sectors**

Coefficient of influence other sectors of government expenditure variable ( $X_3$ ) on private investment ( $Y_1$ ) of 0.250 with a t value of 2.330 at a significance level of 0.020. The coefficient indicates that the variable in other sectors of government spending has a positive effect on private investment.

#### **Effect of Government Spending in Other Sectors of the Human Development Index**

Coefficient of influence other sectors of government expenditure variable ( $X_3$ ) on the human development index ( $Y_2$ ) of 0.225 with a t value of 2.435 at a significance level of 0.015. This means that other sectors of government spending and a significant positive effect on the human development index.

#### **Effect of Government Spending on Economic Growth in Other Sectors**

Coefficient of influence other sectors of government expenditure variable ( $X_3$ ) on economic growth ( $Y_3$ ) of 0.019 at a significance level of 0.862. The coefficient indicates that the variable in other sectors of government spending has no significant effect on economic growth.

### **Effect of Government Spending on Economic Structure Other Sectors**

Coefficient of influence other sectors of government expenditure variable ( $X_3$ ) on the structure of economic growth ( $Y_4$ ) of 0.164 with a t value of 2.010 at a significance level amount 0.044.

### **Effect of Government Spending on Employment Opportunities in Other Sectors**

Coefficient of influence other sectors of government expenditure variable ( $X_3$ ) on employment ( $Y_5$ ) amounted to 0,203 with a t value of 2.171 at a significance level of 0.030. The coefficient indicates that the variable in other sectors of government spending has a positive effect on employment.

### **Hypothesis Testing**

Testing the research hypotheses developed in this model, can be seen in Table 2. that of all the proposed research hypotheses, only one was rejected. The hypothesis is accepted among other government education spending and significant positive effect on employment, both directly and indirectly through investment, index of human development, economic growth and structure of economic growth, and government health spending hypothesis positive and significant effect on employment either directly or indirectly through investment, index of human development, economic growth and structure of economic growth. Hypothesis is rejected while the other sectors of government spending and a significant positive effect on employment, both directly and indirectly through investment, human development index, economic growth and structural economic growth.

## **4. Discussion**

This study imply that the results of the run of data to answer the research problems that have been formulated. From the statistical results indicate that the hypothesis is accepted that the education sector, government spending and a significant positive effect on employment, both directly and indirectly through private investment, index of human development, economic growth and economic structure. Another hypothesis is accepted that government health expenditures and a significant positive effect on employment, both directly and indirectly through private investment, index of human development, economic growth and economic structure. While the stated hypothesis is rejected the other sectors of government spending and a significant positive effect towards employment, both directly and indirectly through private investment, index of human development, economic growth and economic structure.

North Sulawesi government attempted to approach the national education budget in the amount of 20%, where each year the Indonesian government also continues to work for the constitutional mandate of the national budget to the education budget at least 20% can be realized as well. The amount of government attention to the nation's education can also be seen from the increasing size of the budget of the government to this day and are allocated to the various provinces particularly North Sulawesi, so the realization of the increasing number of educational programs such as free education for elementary school and junior high school, the program scholarships for poor students. Growth of investment in education is increasing characterized by the emergence of educational facilities such as places of training courses and tutoring in this area, thus the education sector, government spending has a strong impact on private investment. These results are consistent with theory and previous empirical studies as an empirical study conducted by Were (2001). Private investment has no significant effect on employment opportunities, these results are not in accordance with Sukirno (2000), he argues that allows a community investment activities continually improve economic activity and employment, increase national income and improve the prosperity of society.

Health sector budget allocation by the government to provide fresh air for the underprivileged population in North Sulawesi. Based on data from the Health department of North Sulawesi, JAMKESNAS program was adopted by the hospital that received the referral program. Even of the number of poor people in North Sulawesi, there were 613 025 people, it turns out that the social programs that have served as many as 485 084 people. In North Sulawesi, there are 29 hospitals that serve JAMKESMAS and Jamkesda program, which consists of 10 government hospitals, 14 private hospitals, five hospitals TNI / police, all spread over 15 districts and cities. By the program automatically increased private investment in the health sector as well as the emergence of pharmacies in private hands and work together with the redemption of a new medication.

In the early stages of economic development, according to Rostow and Musgrave theory regarding the ratio of government expenditure to revenue ratio. national-relatively large. That's because at this early stage the government should provide a variety of facilities and infrastructure. In the middle stages of economic development, government investment is still needed in order to spur growth in order to take off.

## **5. Conclusions and Recommendations**

Aspects of the education sector, government spending, health, and other sectors of government spending and a significant positive impact on private investment, human development index, economic growth, economic structure, and employment opportunities so that when there is an increase in government spending as education, health, and other sectors of government spending will be followed by an increase in private investment, human development index,

economic growth, economic structure, and employment opportunities. For it takes the role of the North Sulawesi government's efforts to conduct a proportional increase in government spending as education, health and other sectors of government spending that an increase in private investment in the province of North Sulawesi. While other sectors of government spending does not significantly influence economic growth. Similarly, the index of human development and economic growth does not significantly impact the economic structure. Then private investment and economic growth has no significant impact on employment. To get economic growth and sustainable employment opportunities will require various efforts by the government to increase the budget allocation to the education and health sectors as well as other allocations thus directly increasing private investment and economic growth ipm and increased. With increasing economic growth will encourage other factors such as the structure of the economy and the expansion of employment opportunities.

## References

- [1] Bataineh Al, Mohamed Ibrahim.(2012).The Impact of Government Expenditures on Economic Growth in Jordan. *Interdisciplinary Journal of Contemporary Research In Business*. October, Vol 4, No..6.
- [2] Davies, Antony.(2009).Human Development and the Optimal Size of Government. *Journal of Socioeconomics*.35 (5): 868-876.
- [3] Dosser & Gunder.(1991).Human development Index. Occational papers publisher London.
- [4] Glasson C.(1997).Planning Local Development Economics. McGraw Hill, International Editions.
- [5] Grabowski, Henry G., and Margaret Kyle.(2007).Generic competition and market exclusivity periods in pharmaceuticals. *Managerial and Decision Economics* 28:491-502.
- [6] Heintz. Oya J C, Zepeda E, (2008).Towards an Employment Centred Development Strategy For Poverty Reduction In The Gambia; Macroeconomic and Labour Market Aspects. International Poverty Centre, Brazil.
- [7] Kandenge FT (2007).The Impact of Domestic Public and Private Investment on Economic Growth in Namibia. African Institute for Economic Development and Planning (IDEP).
- [8] Ledyaeva, svetiana and Mikael Linden.(2006).Foreign Direct Investment and Economic Growth. BOFIT Discussion Paper.17.
- [9] Loizides, John and Vamvoukas, George.(2005).Government Expenditure and Economic Growth: Evidence From Trivariate Causality Testing. *Journal of Applied Economics*. Vol. VIII, No..1.
- [10] Mankiw, N. Gregory(2000).Macroeconomic theory. Trans. Imam Nurmawan. Jakarta. Erland.
- [11] Nurudeen, and Abu Usman, Abdullahi.(2010).Government Expenditure And Economic in Nigeria, 1970-2008 disaggregated Analysis. *Business and Economics Journal*, Volume 2010: BEJ-4.
- [12] Prasetyla, Ferry.(2013).The Role of Government and Private Sector on Economic Development In AEAN 5.3<sup>rd</sup> International Conference on Management Proceedings. ISBN :978-967-5705-11-3.
- [13] Razmin, Javad, Mohammad.(2012).Investigating the Effect of Government Health Expenditure on HDI in Iran. *Journal of Knowledge Management, Economics and Information Technology*. Issue 5.
- [14] Sasmal Joydeb.(2011).Distributive Politics Nature of Government Spending and Economic Growth in a Low Income Democracy. *Journal of Economics, Finance and Administrative Science*.16.
- [15] Sukirno, Sadono.(2000).Macro Economics, Modern Development of Thought of the New Keynesian Kalasik up. Third edition. Jakarta. RajaGrafindo Persada.
- [16] Tambunan, Sincere TH (2001).Economic Transformation in Indonesia. Jakarta. Salemba Four.
- [17] Were M, (2001).The Impact of External Debt on Economic Growth and Private Investments on Kenya, An Empirical Assessment. Kenya Institute for Public Policy Research and Analysis Nairobi, Kenya.

APPENDIX

<b>Table 1: Number of Employment and Unemployment in North Sulawesi, Year 2000-2010</b>		
<b>Year</b>	<b>Employment Opportunities</b>	<b>The number of unemployed</b>
2000	800 083	47 122
2001	735 722	72 232
2002	809 258	94 635
2003	859 539	139 076
2004	797 347	186 805
2005	869 259	130 644
2006	828 550	141 866
2007	908 503	127 996
2008	912 918	108 034
2009	940 173	110 957
2010	936 939	99 635

<b>Table 2: Research Hypothesis</b>		
<b>Symbol</b>	<b>Hypothesis description</b>	<b>Information</b>
<b>H-1</b>	Government Spending in Education Sector and Significant Positive Impact on Employment, either directly or indirectly through Private Investment, Human Development, Growth and Economic Structure	<b>Be accepted</b>
<b>H-2</b>	Government Spending and Health Sector Significant Positive Impact on Employment, either directly or indirectly through Private Investment, Human Development Index, Economic Growth and Economic Structure	<b>Be accepted</b>
<b>H-3</b>	Other Sectors of Government Expenditure and Significant Positive Impact on Employment, either directly or indirectly through Private Investment, Human Development, Growth and Economic Structure.	<b>Denied</b>