

Public expenditures and poverty: evaluation of the government's priority programs in Gorontalo Province

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Article Info

Article history:

Received : 10 May 2015

Accepted : 4 July 2015

Published : 1 October 2015

Keywords:

Public Sector, Poverty, Priority Programs

JEL Classification:

E62, R11, R12

DOI:

<http://dx.doi.org/10.20885/ejem.vol7.iss2.art4>

Abstract

Private investments and exports are still limited to drive the economy of Gorontalo, therefore the government expenditures are certainly needed as a driver for the economic growth which in turn reduce the poverty. This research aims to test the effect of public expenditures on education, health, and infrastructure toward poverty. The research used econometric analysis of panel data of regencies/city in Gorontalo, 2009-2013. The results demonstrated that public expenditures on education and health had negative and significant effects toward the poverty level in all regencies/city in Gorontalo while the public expenditure on infrastructure did not have any effect toward the level of poverty in all regencies/city in Gorontalo.

Abstrak

Investasi swasta dan kegiatan ekspor masih terbatas untuk menggerakkan roda perekonomian Provinsi Gorontalo, maka dari itu pengeluaran pemerintah sangat dibutuhkan sebagai pendorong pertumbuhan ekonomi yang akan berdampak terhadap penurunan angka kemiskinan. Penelitian ini bertujuan untuk mengetahui pengaruh belanja sektor publik di bidang pendidikan, kesehatan, dan infrastruktur terhadap kemiskinan di Provinsi Gorontalo. Menggunakan analisis ekonometrika data panel, enam kabupaten/kota pada periode 2009 – 2013. Hasil penelitian ini menemukan, belanja di bidang pendidikan dan kesehatan berpengaruh negatif dan signifikan terhadap tingkat kemiskinan kabupaten/kota di Provinsi Gorontalo, sedangkan variabel belanja publik di bidang infrastruktur tidak berpengaruh terhadap tingkat kemiskinan kabupaten/kota di Provinsi Gorontalo.

Introduction

Poverty is a global problem, even for a developing country it is an acute social problem. Therefore, the United Nations (UN) has designed a Millennium Development Goals (MDGs) to reduce the poverty as it has impact on social disorder and is a source of inequality, crime and economic chaos. Thus, poverty is a problem which needs to be overcome in many ways, since it is fundamentally the root of problems and its causes are quite diverse.

Even poverty often becomes a "pet" for a regime to be used as a political issue.

Hence, the measurement of it is quite varied depending on where it is directed and what institutions managing it for alleviating the poverty. If the purpose is political, declining trend of poverty data would be used as a reference for the success of poverty alleviation. In contrast, if the aim is to receiving subsidies, then the data usually used is relatively high poverty rate.

If reviewed from the causes of poverty, there are many dimensions, for example 1) a low education level causes in limited information in order to access the knowledge, then leading to low productivity. 2) Low quality and intake of nutrition

among poor children which have an impact on brain development, it stems from lack of access to health care. 3) The limited ownership of land and production resources results in lower earnings. 4) The structure of the economic production does not correspond with the capacity and condition of the community, therefore, industry area inclines to have a large number of poverty.

Considering the complexity of poverty problems, both as causative factors and diverse measurements, hence, the solutions require the involvement of various stakeholders. Among the government itself, the synergy to tackle this problem becomes a must among the various levels of government. Poverty alleviation programs need an alignment, even if the solution can be in different methods. Nationally, the central government has some empowerment programs, such as the Alleviation of Urban Poverty Program (P2KP) and the National Community Empowerment Program (PNPM). At the provincial level and regencies/city, these program are an obligation to be implemented in the area, however, at the same time local government also needs to formulate a different policy from the central government over P2KP and PNPM.

This needs to be carried out by the local governments because there is the tendency of the central government's poverty alleviation program, running by local governments, is claimed as the local governments' program, even it is contended by the head of the region as their own program. In-depth analyses, in fact, some local governments precisely become the "free riders" to the national programs.

Along with the implementation of regional autonomy, the governments in regencies/city have been granted broad authority, including poverty reduction program. In economic field, development planning becomes full authority to the local governments. The model and design for community empowerment are completely dependent on them, as well as the financing

of poverty reduction through the mechanism of the Regional Budget (APBD) which becomes the authority in the area. Nevertheless, the amount of regional budget in almost all regions in Indonesia, including Gorontalo, the average of public spending is much smaller than the proportion of personnel expenditure.

The study of Barro (1990) points out that increased spending on non-productive sectors did not encourage the economic growth itself; instead, the relation was negative. Thus, it is expected that public spending, particularly the obligatory affairs for the local government in the areas of education, health and infrastructure, should be greater than for routine expenditures.

Public spending (government expenditure), which becomes the obligatory affairs (education, health and infrastructure) is believed that the influence is more powerful on economic reforms, particularly the impact on poverty reduction. A study by Dar and Khalkhali (2002) revealed that government policy could affect the economic growth in the long term through fiscal instruments such as, taxes, public sector expenditures and balance of the budget. Moreover, in the middle of the lack of private investments into the region, the public sector expenditures ideally should be a driving factor for economic growth, especially for public spending. In terms of production factors, if investment (I) is low, and household consumption is weak (C), then generally the economic activities related to international economic transactions (XM) is also less developed. Consequently, the public sector spending (G) is considerably necessary.

Furthermore, government spending (public sector expenditures) is basically a reflection of direction of the economy as well as the financial capability in State Budget or Local Budget. Government spending also reflects the government's measures to influence the course of the economy through fiscal policy. It is impor-

tantly needed, with the basic argument that government spending is crucial to the economy particularly in the case of efficiency in the allocation of economic resources. This approach explains that the efficiency of government expenditures can be achieved if the marginal benefit and marginal cost are equal.

Generally, there are two types of government expenditures: the routine expenses or indirect expenditure (current expenditure) and development expenditure or direct expenditure (capital expenditure). Both types of these expenditures have different functions and objectives, but effectively, in the process of development - particularly in the context of the implementation of regional autonomy - the proportion of capital expenditure is much greater in order to enhance the economic growth. Government spending (public sector expenditures) is a crucial factor for growth, inequality and poverty. Government spending on public sectors is basically quite broad, yet at the level of local governments themselves it tends to be limited. Therefore, public sector expenditures, which its effect is small and its elasticity is limited, are under the authority of the central government, apart from the reason that it requires the same standard in the context of the provision of public services, such as public expenditure on defense sector.

Studies on public spending is basically not much done in linking singly with the problem of poverty, yet are simultaneous to the growth or through repair mechanisms of inequality, or improvement of Human Resources (HR). According to Bigsten and Levin (2000), public spending is one of the essential factors for growth, inequality and poverty. This means that the effect of public spending does not stand alone, but also through the mechanisms of other economic activities, such as economic growth and labor absorption.

However, it does not mean that their relationship have no closeness. Mulyaning-

sih (2006) conducted a study in Indonesia about the influence of public spending towards the improvement of Human Resources (HR) quality and poverty. The conclusion indicated that government expenditures on public sectors (education and health) had no effect on poverty. This showed that the allocation of government expenditures on public sectors (education and health) were still low. As the consequence, it was extremely difficult to be able to improve the human development and to reduce the poverty.

While studies Mehmood and Sadiq (2010) using time series data (1976-2010) in Pakistan demonstrated that in the short-term and long-term relationship between poverty and government expenditures, the relationship was negative between public spending and poverty. Other study conducted by Dahmardeh and Tabar (2013) in Iran concluded that the impact of government expenditures on poverty alleviation was immensely constructive.

Since there are divergent opinion and conclusion of various studies, the definition of poverty and its causes are eminently varied. The meaning and definition of poverty have widened progressively, the concept of poverty has gradually evolved from the idea of "a minimum level of subsistence" to the idea of "relative deprivation" which defines that poverty as a failure to maintain the standards prevailing in a certain communities. Thus, the poverty measure has been extended to include many things, not only the income, but also non-revenue, such as primary education, basic health, and access to basic social services. Even the other elements have been added to poverty measurements, including the ability to be autonomous, having voting rights, empowerment and participation.

For the purposes of empirical studies, it is typically used three indicators of absolute poverty (Dollar and Kraay, 2002). First, the poverty headcount index (P0) which is a rough measure of poverty as it

only refers to the proportion of the population living below the poverty line. By this measure, each poor person has equal proportion. This means that there is no difference as the poorest and the most affluent people among the poor. In addition, this method merely counts the heads of the poor (head-count) and is unable to grasp the severity of poverty itself; where as the percentage of the poor population does not describe the intensity of poverty. The formula used to analyze the level of P0 is as follows:

$$P_{\alpha} = \frac{1}{n} \sum_{i=1}^q \left[\frac{z-y_i}{z} \right] \quad (1)$$

Where:

$\infty = 0$

$z =$ Poverty line

$y_i =$ The average spending per capita per month of the population under the poverty line ($i=1,2,3,\dots,q$), $y_i < z$

$q =$ The number of people living below the poverty line.

$n =$ total population

If $\alpha = 0$, then the value would be the head-count index (P0), if $\alpha = 1$ then it would be the poverty gap index (P1), and if $\alpha = 2$ it would be the squared poverty gap (P2).

The second is the poverty gap index (P1) which evaluates the depth of poverty within a region. This index estimates the distance or the difference of the average income of the poor from the poverty line as the proportion of poverty line. This measure illustrates the mean distance below the poverty line which is expressed as the proportion of poverty line. It is a proper indicator of the depth of poverty. By using this measurement, the government as policy maker can estimate the amount of funds required for the alleviation of poverty. The equation specified for estimation is as follows:

$$P_1 = \frac{1}{n} \sum_{i=1}^q \left[\frac{z-y_i}{z} \right] \quad (2)$$

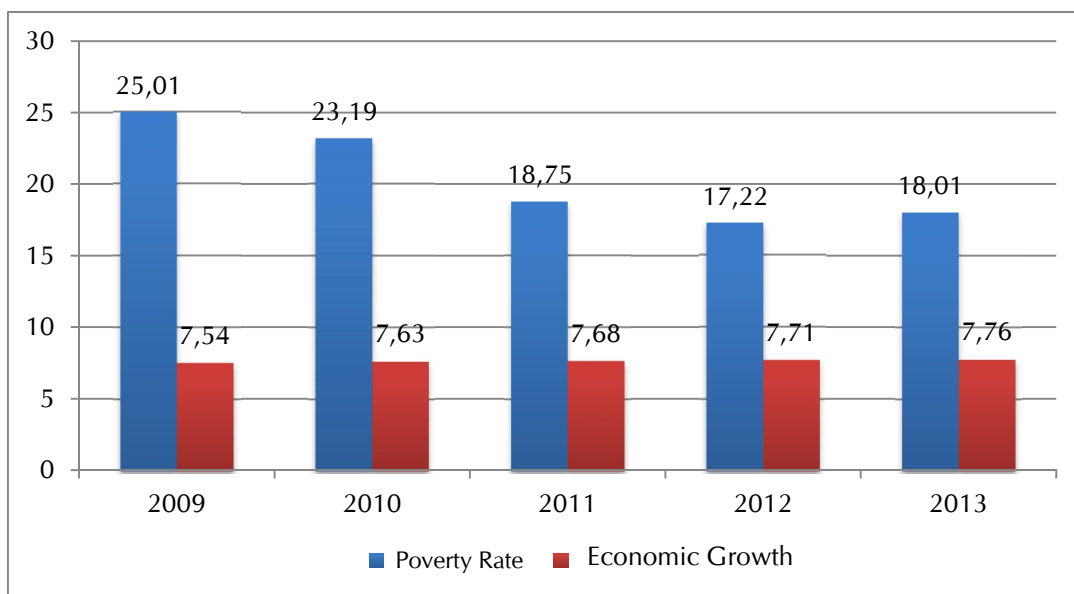
The third is the squared poverty gap (P2) showing the complication or severity of poverty in a region. This P2 index can be simply defined as the average of the average of squared poverty gaps. This P2 measurement has also considered the severity of poverty within the region and inequality of revenue among the poor people. Therefore, this index is often named as poverty severity index. The equation is as follows:

$$P_2 = \frac{1}{n} \sum_{i=1}^q \left[\frac{z-y_i}{z} \right]^2 \quad (3)$$

The establishment of Gorontalo Province was in conjunction with the implementation of regional autonomy in 2001. Long before it became an autonomous region, poverty rate in Gorontalo was very high, yet it constantly declined until 2013 as depicted in figure 1. This decline was believed due to the success of poverty alleviation programs undertaken by central and local governments. Besides, the every-year budget allocation in the provincial budget that is related to public spending increases continuously, although in fact the rise in public spending does not always decrease the poverty rate.

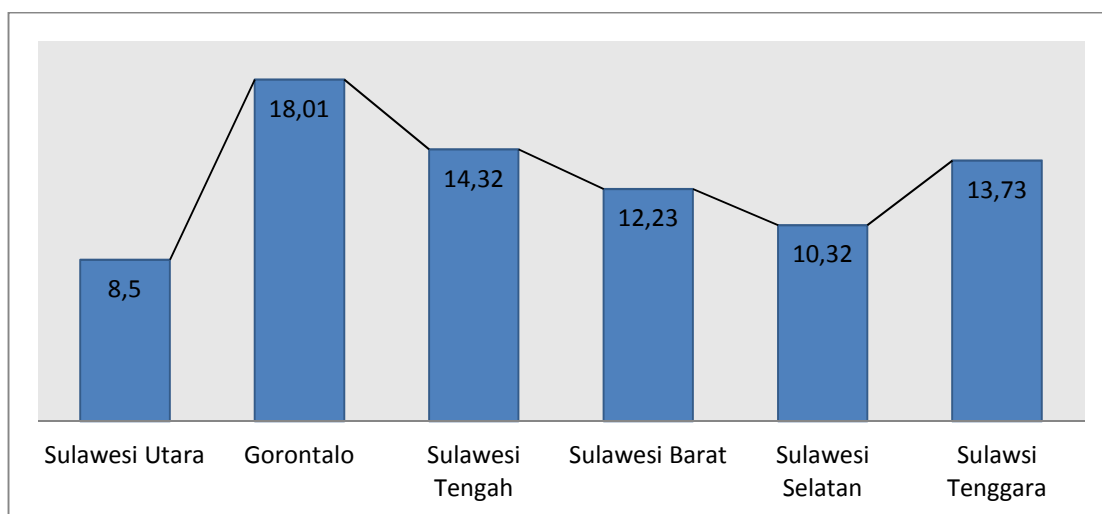
In 2009, the regional spending of Gorontalo province rose from Rp. 527.504 billion in the previous year to Rp.534,505 billion, and the percentage of population living in poverty fell from 20.47% to 18.34%. While in 2010 and 2013, there was an increase in regional budget but it was not accompanied by a decrease in the percentage of poverty. Instead, there was a growth in number of poor people in Gorontalo. As a result, an increasing number of budgeted regional expenditures did not always lower the poverty rate in Gorontalo.

Data in figure 1 depicts that the poverty rate in Gorontalo declined significantly, but the fact showed that the percentage of poverty rate was still the highest in the regions of Sulawesi and the fifth highest after the Papua, West Papua, East Nusa Tenggara and Maluku of 33 provinces in Indonesia.



Source: Statistical Centre Bureau, processed (2015)

Figure 1: Level of Poverty and Economic Growth in Gorontalo 2009 - 2013



Source: Statistical Centre Bureau, processed (2015)

Figure 2: Rating of Poverty Rate in Provinces in Sulawesi, 2013

Poverty alleviation programs which are done by the government in Gorontalo through four primary programs have not been deeply evaluated through scientific study. Even if there is a normative evaluations conducted, proving empirically using statistical tools is still limited, making it difficult to prove whether these excellent programs have a direct or indirect effect toward the poverty rate which is still quite high. The rising of government expenditures either for public or routine expendi-

tures increase every year, similarly, the calculation of the elasticity of coefficient of government expenditures and economic growth in relation to poverty reduction could not be ascertained, whether there is a relation. In this case, this study would be relevant to conduct, therefore, the authors wanted to formulate in the form of research.

As for the purpose of this study: to determine the effect of public expenditure on education toward poverty in Gorontalo,

to determine the effect of public expenditure on the health sector toward poverty in Gorontalo, and to determine the effect of public expenditure on infrastructure toward poverty in Gorontalo.

Research Method

Types and sources of data

The type of data in this research was pooled data which was a combination of time series data in the period of 2001 - 2013 and cross section data of six regencies/cities in Gorontalo. The data of poverty were sourced from Statistical Centre Bureau (BPS) and of expenditures on education, health, and infrastructure were from the Ministry of Finance of the Republic of Indonesia.

Panel data analysis techniques

The data used in this study was secondary data. Source of data acquisition was the Regional Budget (APBD) for regencies/city in Gorontalo between 2001 and 2013 from the Ministry of Finance. The approach used to estimate the parameter of public expenditures and poverty was a panel data approach. The test results for the techniques selection using panel data processing had been statistically tested through the Hausman and Chow test.

Based on the results of Hausman and Chow test, the right model used for both equations - shifts and disparities between regencies/city - was fixed effect approach, by weighting through *coefficient covariance white cross section method*. To obtain *Best, Linear, Unbiased estimator* (BLUE), then the estimator should be freed from the violations of classical assumption, such as multicollinearity, autocorrelation and heteroscedasticity. The equation model is structured as follows;

$$Poverty_{it} = \gamma_0 + \gamma_1 Educ_{it} + \gamma_2 Health_{it} + \gamma_3 Infra_{it} + \varepsilon_{it} \quad (4)$$

Where:

$Poverty_{it}$ = The percentage of poor (P0) in regency/city i in year t (Percent)

$Educ_{it}$ = Budget spending on education per capita (local budget spending on education divided by the total population) in regency/city i in year t (Rupiah)

$Health_{it}$ = Budget spending on health per capita (local budget spending on health divided by the total population) in regency/city i in year t (Rupiah)

$Infra_{it}$ = Budget spending on infrastructure per capita (local budget spending on infrastructure divided by the total population) in regency/city i in year t (Rupiah)

ε_{it} = disturbance variables in regency/city i in year t

Results and Discussion

Gorontalo Province consists of six (6) regencies/city: Boalemo, Gorontalo Utara, Pohuwato, Bone Bolango, Gorontalo Regency and Gorontalo City. Gorontalo province's economy which has gradually accrued since 2001 does not guarantee it to be out of the great problems. Amid the relatively high economic growth, Gorontalo effectively included in the five poorest regions in Indonesia in 2013, as seen from poverty percentage rate of 18.01% which put Gorontalo in fifth position after Papua (31.53%), West Papua (27.14%), East Nusa Tenggara (20.24%) and Maluku (19.27%).

The poor population in Gorontalo by the year 2013 was about 200,970 people, while in 2012 there were 187,732 people. Thus, the number of poor people in the province of Gorontalo raised around 13,238 people. They mostly live in rural areas that are approximately 88.64% and the remaining of the total number of poor people (11.36%) lives in urban areas.

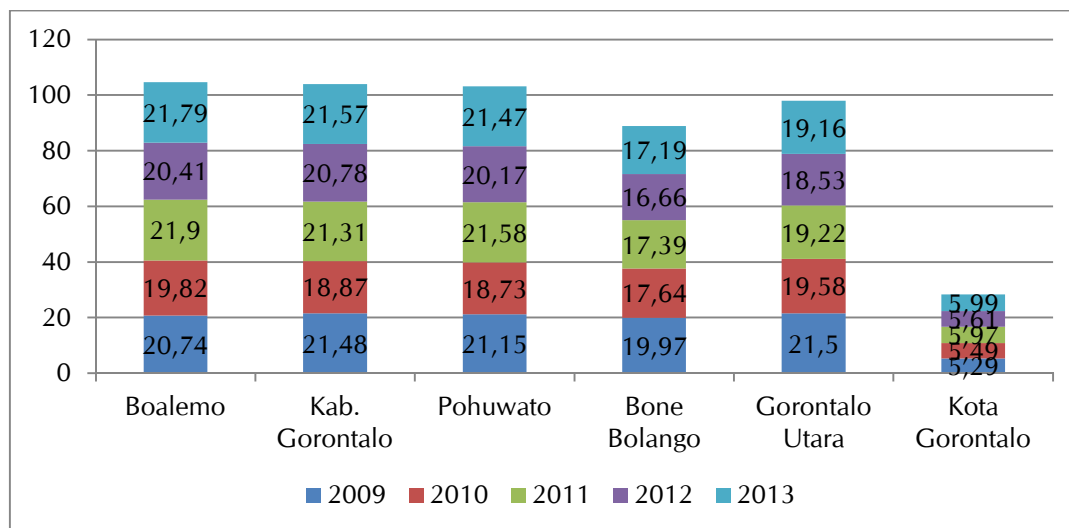
In all areas in Gorontalo, the greatest poverty was at Gorontalo Regency. Figure 3 below illustrates the development of regencies/city contribution toward the number of poor people in the province.

Figure 3 depicts the lowest poverty rate was in Gorontalo City, while the highest one was in Gorontalo Regency. This happened because a large amount of regional budget centered on the city of Gorontalo every year. In this case, the provincial government's role should be strengthened to minimize disparities between re-

gencies/city as well as between communities in Gorontalo.

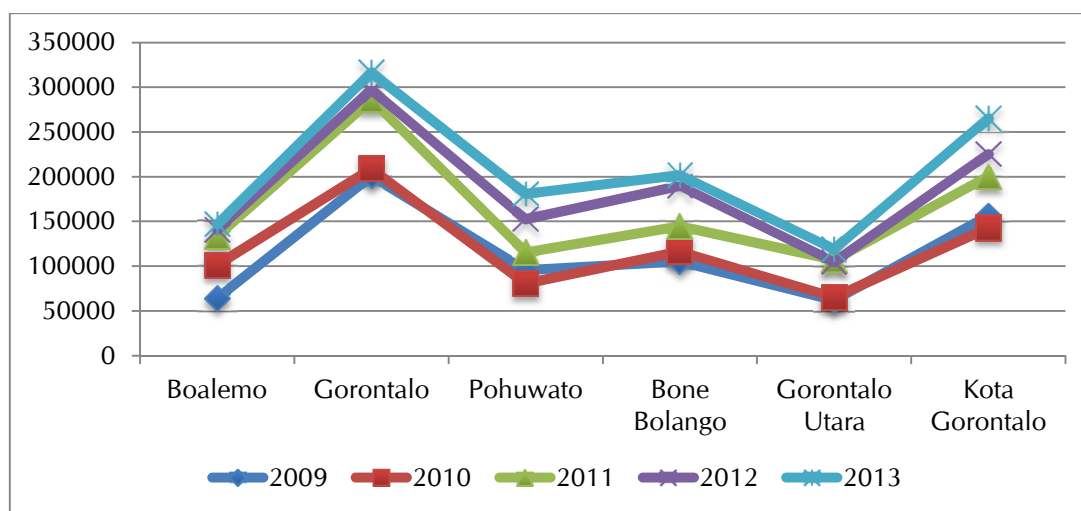
The development of public expenditure on education sector in Gorontalo Province

Education is one of the main concerns in developing an area. The steps taken by the government to develop the education sector could be seen by the government spending on education itself. The development of government expenditures on education in Gorontalo can be seen in the figure 4.



Source: Statistical Centre Bureau, processed (2015)

Figure 3: The Development of Poor Population Percentage in Regencies/City in Gorontalo Province, 2009-2013



Source: Ministry of Finance, processed (2015)

Figure 4: Development of Expenditure on Education Sector (Billions of Rupiah)

If seen from the graph above, the trend of local government expenditure on education in each area was diverse since 2001 until 2013. However, the trend was quite appreciable as it reflected a growth every year although there were declines in the range of time which were not many. Government expenditures for each regency/city had increased from 2001 to 2013, but in 2005, a very large decrease occurred in Gorontalo Regency. This happened as the local budget in the area fell dramatically by 127.60% or more than 1 times of the previous budget in 2004. Then, in 2007 the expenditure on education in that area went down significantly to Rp28.139.833.460 which was several times lower than the education budget in 2006 that was about Rp138.936.219.930. This situation occurred since the affairs budget merely focused on general government sector, in which the budget on that sector was Rp127.211.238.96, the highest amount in 2006. Meanwhile, other areas showed a fairly steady accrual on the education sector expenditure.

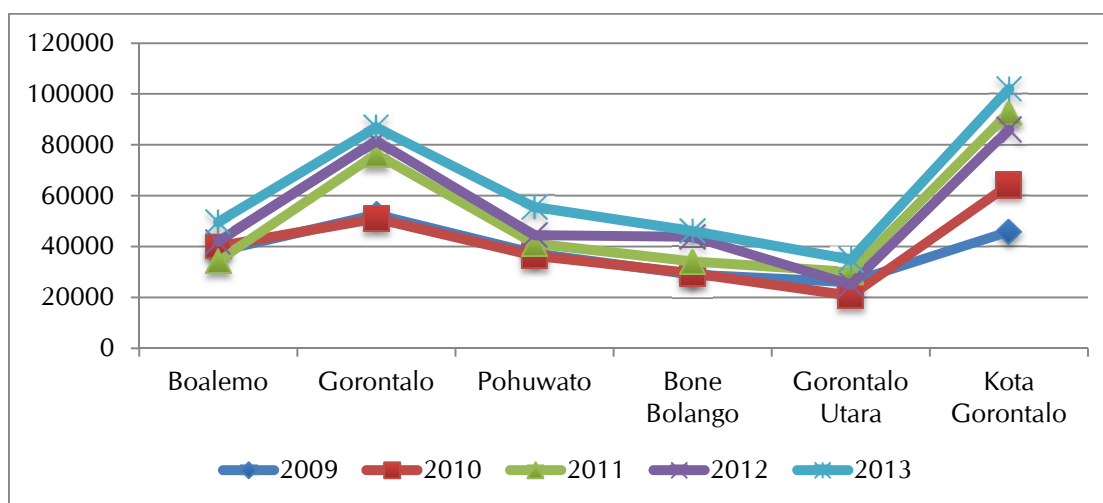
The development of public expenditure on health sector in Gorontalo Province

Health is an important factor in human development. It is one of the priorities in developing Gorontalo province with the aim of

developing the quality of human resources through a number of policies to improve the health services and human resources, where the health development vision is a self-sufficient community in Gorontalo to live prosperously.

Health sector budget is often smaller than the budget for the education sector. Since 2001 until 2013, government budget on the health sector of each region in the province of Gorontalo fluctuated. The highest increase of government expenditure on health sector was in the capital city of Gorontalo which peaked at around Rp. 101 973 304 488 in 2013. Furthermore, in previous years, the expenditure in that city showed a higher rate than other areas in Gorontalo, as shown in Figure 9 that the government expenditures inclined to be concentrated in the capital city annually.

In addition, there are imbalances in the ratio of health services between regencies/city. Gorontalo city is the area with the best ratio of the number of doctors and community health centers per population and per area, while the ratio of physician services in North Gorontalo and Pohuwato was the lowest and the ratio of the lowest health center was in Bone Bolango (Provincial Government of Gorontalo and Gorontalo University, 2014).



Source: Ministry of Finance, processed (2015)

Figure 5: Development of the Health Sector Expenditure (Billions of Rupiah)

The development of public expenditure on infrastructure sector in Gorontalo Province

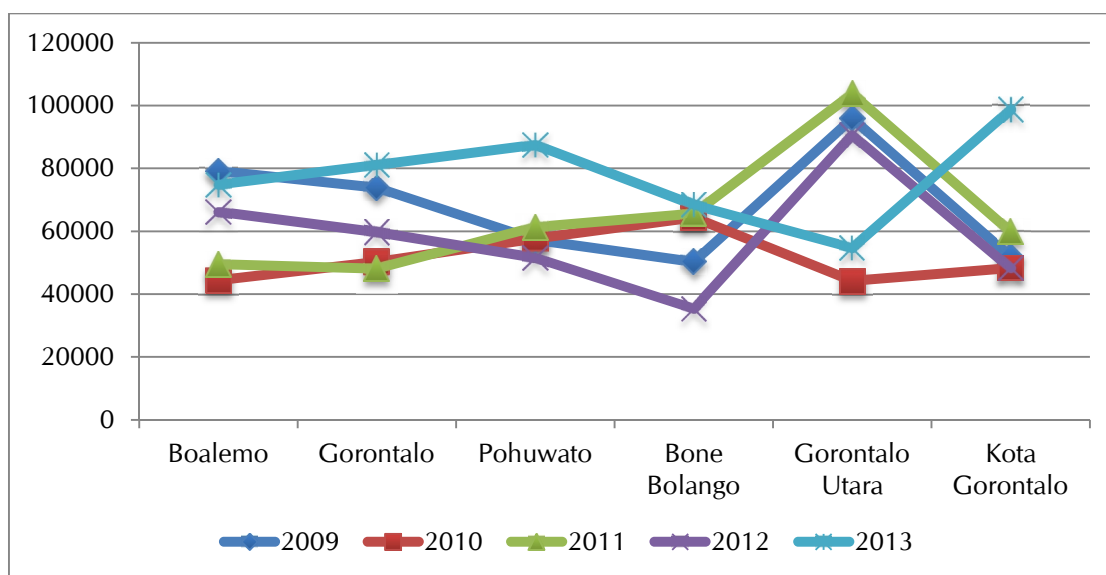
Infrastructure is a crucial factor in developing a region. It includes in the target development of priority programs in Gorontalo. the improvements in infrastructure can enhance the productivity which then will impact on revenues and lead to reducing the poverty. The provision of infrastructure could support strategic sectors, such as education and health. Even though the government expenditures on education and health increase, but the budget allocation for infrastructure declined, it would ultimately reduce the quality of infrastructure that would affect the increasing of production cost and distribution of goods and services.

Figure 6 illustrates the public expenditure on infrastructure in each regency/city in Gorontalo that was high enough fluctuating or can be said inconsistently. In particular years, some areas reflected an extreme growth of the spending on infrastructure sector and also a sharp decline. In 2005, the infrastructure financing in Bualemo was the lowest at around

Rp.924.600.863 among all regencies/city. Nevertheless, it experienced a high rise in the next 2 years. Likewise, a considerable drop happened in 2010, it however continued to increase thereafter. On the contrary, North Gorontalo demonstrated extreme fluctuations, which in 2009 the spending on infrastructure sector has accrued dramatically, but it followed by a sharp decline in the next year. In subsequent years the fluctuations were still quite high.

From 2008 to 2012, local government expenditure on infrastructure sector tended to decrease. That trend must be considered by every local government for it could hinder people to access the education, health, and other basic public services. To achieve the vision and mission of Gorontalo province's development, it is indispensable to have adequate basic infrastructure.

Furthermore, approach model to be estimated was financing factors on education (Educ), the financing on health (Health) and the financing on infrastructure (Infra) toward poverty (Pov). The results of the assessment of the model parameters can be seen in the table 1.



Source: Ministry of Finance, processed (2015)

Figure 6: The Development of Expenditure on Infrastructure Sector (Billions of Rupiah)

Table 1: The Results of Data Regression with FEM Method on Poverty Model

Coefficient	Value	t-Statistic
Educ	-0.062851	-1.865645*
Health	-0.102665	-2.899564***
Infra	0.024380	1.271127
Adjusted R-squared	0.846659	
F-Stat	43.10085	
DW Stat	1.151526	

Note: *, **, *** denote significant at 10%, 5% and 1% level.

The estimation results showed that the variables of financing on education (Educ) significantly affected the poverty reduction, showed by the coefficient value that was -0.062851. This meant that if the education funding per capita increased by 1% (one unit), it would lower the poverty rate by 0.06 %. Moreover, the coefficient value of health financing was -0.102665, meaning that if health funding increased by 1% (one unit), it would reduce the level of poverty in the province of Gorontalo by 0.10%. On the other hand, the coefficient of infrastructure financing was 0.024380 with probability 0.2092. This indicated that the variable of infrastructure financing did not significantly impact the number of poor people in Gorontalo.

There are many experts argue that educational institutions, investments on education, the quality of education and equal access to education play an important role in alleviating poverty and developing economic growth (Chaudhry & Rehman, 2009; Santos, 2009). Education also plays a significant role in reducing income inequality (Dănăcică, et.al, 2010).

From the results of the regression analysis equation, the variable of funding for education sector had a significant effect toward poverty in regency/city in Gorontalo. Thus, the results of the study were consistent with the hypothesis and theory which stated that a rise in education funding would reduce the poverty. These assumptions derived from endogenous theory which emphasize the importance of human capital (Romer, 1990) (Mankiw, et al. 1992), and education is one of the funda-

mental factors for achieving sustainable upturn in the economy through investment in human capital (Ominiya, 2013).

This empirical finding was consistent with the research conducted by Birowo (2011) in Indonesia. It demonstrated that government expenditures on education and industrial sectors had a negative and significant relation toward poverty. With the understanding that whenever there is policy to raise the education budget, it will drain the poverty rated through a range of economic activities.

Sourya (2014) who conducted a study in Laos found the same conclusion that government spending on education supported the poverty reduction in the region. Increased funding for the education sector could provide opportunities for the poor to go to school to gain the skills and broader knowledge in order to improve the quality of human resources. The further effect could improve the productivity, as well as encourage the growth of revenue. Then, these will take the poor out of poverty or offer a proper standard of living.

Public expenditure on health variable had a significant impact on poverty levels in the regencies/city in Gorontalo. This was consistent with the hypothesis and theories used in this study. This result was consistent with research conducted by Awe (2013) in Ekiti Nigeria. He stated that public expenditure on health considerably cut the level of poverty in the state. Increasing of fund for affordable and adequate health infrastructure would facilitate the poor in obtaining health services, then, with a healthy condition, they could carry out their

activity and be productive optimally which might ultimately amplify their income and enable them to be out of the vicious circle of poverty for viably proper life or living above the poverty line.

Malnutrition is the case in most developing countries resulted in underdevelopment of socio-economic. This condition occurred due to the health financing which is quite low. Since the government health policy is effective enough to drain malnutrition, public awareness about immunization and nutrition improvement is also imperative that it will enhance the productivity, as was done by the Government of Sudan (John and Tigani, 2007).

From the results of regression equation which had been conducted, public expenditure on infrastructure variable had no significant effect on the level of poverty in districts of Gorontalo. This empirical finding was contrast with the hypothesis that used in this study. Consequently, the results of this study did not demonstrate the suitability of the theory that public expenditure on infrastructure should negatively affect the level of poverty in the province of Gorontalo. This was in line with the research by Ile, et al (2014) in Ghana that the provision of infrastructure in that country had not contributed much to poverty depletion as expected.

The main problem that caused the expenditure on infrastructure had no effect on poverty in Gorontalo province was many irregularities in infrastructure budget making the funds, which should be used by the poor to improve their lives, were not well-targeted. This situation causes the poor to be difficult in developing and extricating themselves from the poverty. This makes the development of Gorontalo province and poverty alleviation difficult to attain in all areas in the province.

Conclusion

Based on the results of the estimation model and the previous discussion, there are

some important conclusions which can be drawn. Public expenditure on education sector had a significant and negative effect toward the poverty in all regencies/city in Gorontalo. In this case, increased funding on education sector will provide opportunities to poor people in order to improve their skills and knowledge leading to higher productivity. As the improvement of education and productivity, it will be helping the poor in fulfilling a decent living or escape themselves from the poverty line. Public expenditure on health sector had a significant and negative effect toward poverty in Gorontalo. In this case, a rise of financing on health sector might provide the affordable and adequate health facilities and infrastructures, then the poor people will be able to get health insurance needed to enhance their productivity, it will further reduce the poverty. Public expenditure on infrastructure sector had no effect toward the poverty level in Gorontalo. In this case, an increase in infrastructure spending did not affect the poverty rate because there were some irregularities on infrastructure budget which begot difficulties in developing the province as well as eradicating poverty in all areas.

Based on the deductions from this study, some suggestions are expected to be useful for practical purposes. This study used quantitative data of expenditures on each sector of education, health, and infrastructure in Gorontalo. Financing on education and health sectors variables were proved in affecting the level of poverty. Nevertheless, for further research, it is expected to incorporate other variables such as income and productivity as well as other variables that can affect the poor directly. The results of this study indicated that spending on health sector had the greatest impact in reducing poverty in the regencies/city which was around 0.10% for every 1% increase in the financing (one unit). As a result, the government should accrue the expenditure on health sector in order to

provide the poor affordable and satisfactory health facilities. The finding that there was no effect of public expenditure on infrastructure toward poverty reduction in Gorontalo reflected the ability of the government in planning, management and control which were still relatively weak. Therefore, governments in all regencies/city are insisted to rectify and revamp the development of infrastructure to be more focused and targeted in order to ensure the success of development both in terms of equity and the utilization.

References

- Awe, A. A. (2013), "Government expenditure and poverty reduction in Ekiti State, Nigeria," *Research Journal of Finance and Accounting*, 4(5), 95 – 106.
- Barro, J. R. (1990), "Government spending in a simple model of endogenous growth," *The Journal of Political Economy*, 98(5), 103 – 125.
- Bigsten, A. and J. Levin (2000), "Growth, Income Distribution, and Poverty: A Review", *Working Paper in Economics*, No 32, Department of Economics Scholl of Economics and Commercial Law Göteborg University.
<https://ideas.repec.org/p/hhs/gunwp/e/0032.html>, accessed on 5 June 2014, 10.15 East Indonesia Time.
- Birowo, T. (2011), *Relationship between government expenditure and poverty rate in Indonesia: comparison of budget classifications before and after budget management reform in 2004*, Unpublished Thesis, Graduate School of Retsumeikanasia Pacific Japan.
<https://www.yumpu.com/.../relationship-between>, accessed on 16 July 2014, 07.25 East Indonesia Time.
- Chaudhry, I. S. and S. Rehman (2009), "The impact of gender inequality in education on rural poverty in Pakistan: an empirical analysis," *European Journal of Economics, Finance and Administrative Sciences*, 15(1), 174-188.
- Dahmardeh, N. and M. Tabar (2013), "Government expenditures and its impact on poverty reduction (empirical from Sistan and Baluchestan Province of Iran)," *International Journal of Academic Research in Economics and Management Sciences*, 2(1), 2226 – 3624.
- Dănăciță, D., L. Belăcu and L. Llie (2010), "The interactive causality between higher education and economic growth in Romania," *International Review of Business Research Paper*, 4(6), 491 – 500.
- Dar, A and S. Khalkhali (2002), "Government size, factor accumulation, and economic growth: evidence from OECD countries," *Journal of Policy Modeling*, 24(7 – 8), 679 – 692.
- Dollar, D. and A. Kraay (2002), "Growth is good for the poor," *Journal of Economic Growth*, 7(3), 195 – 225.
- Ile, I.U., E.Q. Garr and W.I. Ukpere (2014), "Monitoring infrastructure policy reforms and rural poverty reduction in Ghana: the case of Keta Sea Defence Project," *Mediterranean Journal of Social Sciences*, 5(3), 633 – 643.
- John, N. and A. Tigani (2007), "Health, poverty and human development: a review and further analysis of effects of poverty on health: clinical manifestations and management of a patient of malnutrition in Khartoum," *Sudan Sudaneseese Journal of Public Health*, 2(4), 30 - 41.

- Mankiw, N.G., D. Romer and D.N. Weil (1992), "A contribution to the empirics of economic growth," *Quarterly Journal of Economics*, 107 (2), 407-37.
- Mehmood, R. And S. Sadiq (2010), "The relationship between government expenditure and poverty: a cointegration analysis," *Romanian Journal of Fiscal Policy*, 1(1), 29-37.
- Ministry of Finance, Regional Budget Data FY 2001 - 2013, accessed on 14 Juny 2014, 07.25 East Indonesia Time.
- Mulyaningsih, Y. (2006), *The effect of government expenditure on public sector toward the improvement of human development and poverty reduction*, Unpublished Thesis, Universitas Indonesia.
- Omoniyi, M.B.I. (2013), "The role of education in poverty alleviation and economic development: a theoretical perspective and counselling implications," *British Journal of Arts and Social Sciences*, 15(20), 176 – 186.
- Romer, P.M. (1990), "Endogenous technological change," *Journal of Political Economy*, 5(98), 71-101.
- Santos, M. E. (2009), "Human capital and the quality of education in a poverty trap model," *OPHI Working Paper* 30, University of Oxford
- Sourya, K., (2014). "Public spending, aid effectiveness and poverty reduction in Lao PDR," *Journal of International Cooperation Studies*, 21(2),163 – 177.