ABSTRACT
This study is aimed to identify the direct effect of government spending (education, health, and infrastructure) towards poverty, as well as indirect effect towards government spending and poverty through regional economic growth in Gerbangkertasusila, East Java Province. This study utilized path analysis during the 2009-2015 research period. Research result exhibits that government spending in education, health, and infrastructure sector tends to give direct impact to poverty scale, in particular, direct government spending on infrastructure contributes significantly to poverty scale in the Gerbangkertasusila region.

KEY WORDS
Government spending, regional economic growth, poverty scale, path analysis.

Economy growth is an appropriate indicator to describe development progress in a territory. Government policy was made to encourage economic growth, among others is investing in a variety of the public’s capital. One of them is the form of development called infrastructure. Other than that, human capital such as science through education. Education plays an important role in reflecting the quality of a human being. Education is capable of broadening one’s view, mindset, and creativity. In producing qualified human being, health plays an important role, therefore human can perform its activity productively. In enhancing quality, health is one of the human capital spendings to substantiate the development of human being, all at once has indirectly had an important role in public economic growth condition. In economic activities, economic growth indicates physical production and service development applied in one country, such as the increase in the total production of industrial goods, infrastructure development, the number of schools, production of the service sector and capital goods (Sadono, 2010).

The government’s role, such as government expenses in the form of spending and investment, are the government’s tool of intervention to economic development which is considered effective.

Established Fiscal Decentralisation aimed to enhance and leveling the public welfare. As well as enhancing regional autonomy, minimizing government subsidies, and performing equitable development for each region. By applying the regional autonomy system and fiscal decentralization, the central government authorizes the regional government to manage the regional revenues independently, to increase public welfare by developing its regional economic development. This is in line with Sulistyowati (2013) stating that policy in increasing spending in education, health, and infrastructure in the same value will increase employment in all sectors, thus reducing poverty. The government’s policy in increasing its spending caused significant impacts, such as in healthcare and infrastructure.

In other words, the government spending is not only to determine poverty issues but also become an incentive to economic growth prospect in the region. The routine budget plays an important role in supporting government mechanism system to run well, as well as for as an effort to enhance efficiency and productivity possessing goals and objectives at the development level.

Economic growth and poverty are important indicators to determine the success of development in a region which endeavor to achieve economic growth without prejudice to discourse such as priorities on education, health, and infrastructure spending. In development matters, the government needs to consider how important it is to develop
infrastructure sector, particularly in Java territory to support the sustainability of spending and balanced development throughout the country. Mankiw (2003) stated that economic growth will result in additional public income in one certain period because economic activity is a process of using production factors to produce output, then this process will, in turn, produce a flow of remuneration to production factors owned by the society.

Infrastructure spending is government capital spending in the form of budget expenditure for fixed and other assets acquisition that provide multipliers on fiscal benefits to anticipate a wider impact of regional economic growth. Correlated to public welfare, high economic growth and low poverty reflect better public welfare rate. According to Keynesian stream, economic development exhibits existence of mutual economic growth and government spending. This is due to the improvement of economic performance by increasing the infrastructure budget, the development of megapolitan transportation, which aims to manifest equal development distribution between the regions, especially in East Java, and generally in eastern Indonesia. By increasing public welfare and life quality, higher and proper level of education is needed, encouraged by a secured health and infrastructure development will carry economic development well and lower poverty level.

This study explains the direct and indirect effect of government spending to poverty level through regional economic development. This study aims to direct analyze government spending in the education, health, and infrastructure sectors towards regional economic growth. Secondly, indirectly analyze government spending education, health, and infrastructure sectors to poverty level through regional economic growth in Gerbangkertasusila in East Java.

LITERATURE REVIEW

This study is focused on the fiscal decentralization theory, based on the fiscal federalism theory developed by (Hayek, 1945), his theory emphasizes that economic growth can be achieved by way of decentralization, by delegating authority of the central government to local governments to regulate their own territory or commonly called regional autonomy (otda).

Development aims to accelerate regional economic growth and encourage the improvement of public’s welfare and accelerate fiscal incentive given to the society (Shah, 1994). By accelerating public welfare it is expected that it will affect poverty level, thus enabling the region/territory to be self-supporting. To that end, the government creates policy to achieve success in regional development, exhibited through government spending in education, health, and infrastructure expenditure.

According to Keynes, the government policy may affect aggregate demand (thus affecting the macro situation) approaching full employment position, formulated in formula:

\[ Y = C + I + G, \]

Where: \( Y \) = revenue, \( C \) = Household Consumption, \( I \) = Companies Spending, \( G \) = Government Spending.

It is explained that to achieve an economic growth level in one country, the Government intervention is needed in the form of government spending. Where the government spending may be allocated to many sectors, either in the form of routine expenditure or even development expenditure. To avoid stagnation in the economy, the government strives to enhance the total number of government spending (G) to a more higher level than the national income until it could compensate the tendency to consume (C) in the economy (Dumairy, 1997).

Generally, economic growth rests on the PDRB, recent economic growth is directly based on government policy through fiscal decentralization utility program. Where the said government program promotes poverty reduction, reducing inequality income distribution, and decreasing unemployment rates. Structural transformation is a provision to increase and
sustain growth, as well as reduce poverty rate and supporting sustainable development itself (Todaro, 1999).

By allocating government spending, it is expected that it will increase the regional economic growth as well as decrease the poverty level in Gerbangkertasusila area. Todaro and Smith (2010) stated that health and education are inputs for national production function in its role as the human capital component, meaning that productive spending in human resources, has its own target to increase growth and economic development to reduce the poverty rate. (Monday et.al 2014) Similarly stated that government spending on infrastructure sectors such as roads, communications, electricity, etc. can reduce production costs all at once increasing private sector spending and the probability that companies are able to boost economic growth and reduce the poverty rate.

Economic growth and the low poverty rate is not development’s final goal. Instead, its priority is to prepare the people as qualified human resources by establishing inclusive growth program (Tambunan, 2016), becoming a more inclusive economic development. Opening access to every member of society to all available opportunity, until regional income or regional welfare are increased, as well as lowering poverty rate.

Sennoga (2010) states that the composition of public spending and its aim in increasing economic growth and reducing the poverty rate in developed countries, requires decreased efficiency in public sector by reallocating non-productive public expenditure such as public administration and security, giving more emphasize in productive sectors causing high GDP growth rates and accelerating poverty reduction.

Menyah (2013) stated proof of long term relation between government spending and PDB, to support Wagner’s hypothesis from public sector development. Development of government spending towards income proofs exhibiting Keynesian view on “expenditure can be an effective policy instrument to accelerate economic growth” until it is suggested to form a fiscal policy as the stabilizer to enhance the economic growth. Osundina (2014) claimed that government expenditure on infrastructures such as buildings and construction caused a negative effect but significant to reducing poverty.

An empirical study of Khan’s case (2015), requires a promotion to social expenditure such as for education health and social with great portion allocation from budget needed for public welfare for the sake of equal development.

METHODS OF RESEARCH

This study utilized path analysis method. This method was used to analyze both direct and indirect relation. Path analysis technique was used to test large contribution shown at path coefficient at path diagram based on a causal relation between variables. The direct impact which is the direction of the relation between two variables without a go-between of another variable (Pardede & Manurung, 2014).

This study utilized secondary data from 2009 – 2015. Data used is a panel data in Gerbangkertasusila area covering 7 Regencies/Provincial Cities in East Java: Gresik Regency, Bangkalan Regency, Mojokerto Regency, Mojokerto City, Surabaya City, Sidoarjo Regency and Lamongan Regency.

This study utilized different t-test independent sample to prove that each group is statistically different. Chow test and Haustman test were used to identify a precise regression. Normality test (Jarque-Bera) is used to ensure that data is normal in scale. This study involved classical test assumption in autocorrelation form (Durbin-Watson) and heteroscedasticity (Park test). This study utilized standard data with z-score. Regression Analysis is performed using Eviews7.

Based on diagram above, EDU is the ratio of government spending on education to total expenditure (in percentage); HLT is the ratio of government spending on health to total spending (in percentages); IF is the government spending ratio in infrastructure to the total spending (in percentage); EGR is a regional economic growth (in percentage); and PVT is the poverty level (in percentage). Below are research’s structural equation.
The substructure equation 1 of government spending directly affects regional economic growth:

\[ EGR = p_{EGREDU} EDU + p_{EGRe1} e1 \]
\[ EGR = p_{EGRHLT} HLT + p_{EGRe1} e1 \]
\[ EGR = p_{EGRIFR} IFR + p_{EGRe1} e1 \]
The substructure equation 2 of the regional economic growth directly affects poverty level:

\[ PVT = \rho_{PVTEGR} EGR + \rho_{PVTe2} e2 \]

The substructure equation 3 of the government spending affects directly poverty level:

\[
\begin{align*}
PVT &= \rho_{PVTEDU} EDU + \rho_{PVTe2} e2 \\
PVT &= \rho_{PVTHLT} HLT + \rho_{PVTe2} e2 \\
PVT &= \rho_{PVTFIR} IFR + \rho_{PVTe2} e2
\end{align*}
\]

The substructure equation 4 of the government spending affects indirectly poverty level through regional economic growth:

\[
\begin{align*}
PVT &= (\rho_{EGREDU} EDU \times \rho_{PVTEGR} EGR) + \rho_{PVTe2} e2 \\
PVT &= (\rho_{EGRHLT} HLT \times \rho_{PVTEGR} EGR) + \rho_{PVTe2} e2 \\
PVT &= (\rho_{EGRIFR} IFR \times \rho_{PVTEGR} EGR) + \rho_{PVTe2} e2
\end{align*}
\]

RESULTS AND DISCUSSION

**Data Description.** By using poverty (PVT) and regional economic growth (EGR) as endogenous variables and ratio of government spending on education (EDU), health (HLT), and infrastructure (IFR) as exogenous variables. Table 4.1 exhibits average value of five variables in Gerbangkertasusila region. This indicates that the average value of all variables fluctuates. The decrease is in 2013-2015 for EGR, EDU, HLT variables while PVT increased in the same period.

<table>
<thead>
<tr>
<th>Territory</th>
<th>Year</th>
<th>PVT</th>
<th>EGR</th>
<th>EDU</th>
<th>HLT</th>
<th>IFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gerbangkertasusila</td>
<td>2009</td>
<td>14.90</td>
<td>5.00</td>
<td>12.69</td>
<td>11.68</td>
<td>11.57</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>13.90</td>
<td>6.60</td>
<td>12.82</td>
<td>11.78</td>
<td>11.40</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>12.97</td>
<td>7.03</td>
<td>12.78</td>
<td>11.95</td>
<td>11.67</td>
</tr>
<tr>
<td></td>
<td>2012</td>
<td>12.19</td>
<td>7.23</td>
<td>12.85</td>
<td>11.54</td>
<td>12.03</td>
</tr>
<tr>
<td></td>
<td>2013</td>
<td>11.96</td>
<td>6.77</td>
<td>13.26</td>
<td>12.03</td>
<td>12.42</td>
</tr>
<tr>
<td></td>
<td>2014</td>
<td>11.52</td>
<td>6.58</td>
<td>13.06</td>
<td>12.52</td>
<td>11.88</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>12.16</td>
<td>5.92</td>
<td>13.00</td>
<td>12.49</td>
<td>12.85</td>
</tr>
</tbody>
</table>


Tabel 2 – Regression results of substructures I to IV

<table>
<thead>
<tr>
<th>n/n</th>
<th>Variable</th>
<th>Standardized Direct Effect</th>
<th>Standardized Indirect Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substructure I</td>
<td>EDU → GER</td>
<td>0.069294</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>HLT → GER</td>
<td>0.111448</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>IFR → GER</td>
<td>0.154370</td>
<td>-</td>
</tr>
<tr>
<td>Substructure II</td>
<td>EDU → PVT</td>
<td>-0.026190</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>HLT → PVT</td>
<td>-1.320888</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>IFR → PVT</td>
<td>0.154370</td>
<td>-</td>
</tr>
<tr>
<td>Substructure III</td>
<td>GER → PVT</td>
<td>-1.880981</td>
<td>-</td>
</tr>
<tr>
<td>Substructure IV</td>
<td>EDU → PVT → GER</td>
<td>-</td>
<td>-0.130340</td>
</tr>
<tr>
<td></td>
<td>HLT → PVT → GER</td>
<td>-</td>
<td>-0.209631</td>
</tr>
<tr>
<td></td>
<td>IFR → PVT → GER</td>
<td>-</td>
<td>-0.290367</td>
</tr>
</tbody>
</table>

Note: significant α = 5%, Substructure I = direct effect; Substructure II = direct effect, Substructure III = direct effect, and IV = indirect effect.

The high and low level of data in the table exhibits that there are still many problems affecting public welfare in Gerbangkertasusila area, one of which is in 2014 due to presidential term change in the Republic of Indonesia. The event caused the government
budget expenditure spent more for the interest of the country than the public interest. Other than that it is also caused by the disturbance in the global economy, but Gerbangkertasusila is still above national average.

On different test using independent sample t-test with \( \alpha = 5\% \). The results exhibit probability in each of the Regency /City groups is \( 0.000 <0.05 \). Examination utilized normality test Jarque-Bera with \( \alpha = 5\% \). The result of each group exhibits probability is more than 0.05. Autocorrelation test used Durbin-Watson test (DW) with \( \alpha = 5\% \) resulted in each group exhibiting DU< DW < 4 – DU. It indicates that there is no autocorrelation. Heteroscedasticity test using Park test with \( \alpha = 5\% \), the result in each group shows probability > 0.05 until there is no heteroscedasticity.

**Direct Effect Of Government Spending to Poverty.** The result of regression from the direct effect of government spending in the education sector, health and infrastructure to poverty, is exhibited in Table 1.2 (Substructure II). In Gerbangkertasusila, government spending affected directly and significantly. Government spending aimed at education and health sector when regional government budget is increased, resulted in decreased poverty level by 1\%. Government expenditure on infrastructure sectors did not affect poverty level, but it is still in safe position.

This condition is caused by government spending on infrastructure sector which is a positive contribution for Gerbangkertasusila and is able to decrease the poverty level by 29\%. Infrastructure plays an important role as public access for basic daily life needs. Especially with roads, bridges, access to clean water, electricity, and habitable housing facilities. In addition, infrastructure spending can be enjoyed directly by Gerbangkertasusila region population directly without waiting for a long time. A similar condition occurred to government spending in education and health sector.

Gerbangkertasusila infrastructure development, especially in East Java Province can be said to be developed evenly, it is proved by economic growth level which is increasing every year. The economy experienced equity. The result of this study substantiates Osundina Research (2014) in Nigeria, which stated that the government spending for infrastructures such as buildings and construction have a negative effect and significant in reducing poverty. The Nigerian government was suggested to keep on maintaining a stable government expenditure for buildings and construction to accelerate reducing poverty in the years to come.

**Indirect Effect of Government Spending to Poverty through the Regional Economic Growth.** The regression result of government spending’s indirect effect on education, health and infrastructure sectors to poverty is exhibited in Table 1.2 (Substructure II, III and IV). Odhiambo’s view (2015) stated that there is a causal relation between government spending and economic growth, such view is in line with Keynesian theory. To achieve good economic growth in a country, there are three mandatory sectors such as education, health, and infrastructure (public works and spatial planning) that ought to be well allocated. On the second point of view, he states that economic growth leads to government expenditure, which is connected to Wagner law, when regional economy per capita income increases, government spending will also increase relatively.

In Gerbankertasusila region, government spending for education, health, and infrastructure sectors are more focused on needs parallel to the economy growth in East Java Province. Considering that the need for an adequate infrastructure requires a huge financing to improve every areas. Particularly in satellite/horseshoe areas for getting equitable economic activities in East Java Province, the government spending on infrastructure sector is more prioritized. Otherwise, the government ought to continue boosting the equity of infrastructure development and synergize the existence of infrastructure. The government should be coordinating and synergizing between districts/cities in developing aforementioned infrastructure. But at the time when the central government proclaimed Suramadu Bridge, where its construction planning aims to connect Surabaya and Bangkalan regency, with hope that factories and harbors would be built and development will be spread evenly between two aforementioned regions. But, its development does not occur until recently, which is caused by coordination and synergy
failure which has not been established strongly. Not only that, there are other cases such as decentralization issues, which is expected that every Regency/City possess the authority to regulate their respective territories.

Nevertheless, the biggest problem is egocentricity between territories. A good and intense communication is expected to be conducted between regional government and central government to create a synergy in developing infrastructure inter Gerbangkertasusila region, East Java province. There will not be an Inter-regional rivalry and no imbalances. It will result in an annual decrease of the poverty level, higher regional economic growth, and more adequate and equitable infrastructure development spread evenly to remote areas in Gerbangkertasusila.

CONCLUSION AND POLICY IMPLICATION

In direct relation to the government spending with poverty level in Gerbangkertasusila area exhibits government spending on education and health sectors having a significant negative effect on the poverty level. Government spending on infrastructure sector caused a significant positive effect. It indicates that poverty level is a stable situation and safe position. Regarding the indirect effect of government spending on poverty through regional economic growth caused significant negative effect. This is exhibited by increased government spending in education, health, and infrastructure sectors. The 1% effect tend to increase poverty level through the regional economic development.

Gerbangkertasusila area possesses significantly high contribution either direct effect or indirect to reduce poverty level, which is government spending in the infrastructure sector.

The development of education, health and infrastructure facilities must be prioritized in particular at Mojokerto City, Mojokerto Regency, Lamongan Regency, Gresik Regency and Bangkalan Regency especially in education sector. Government Spending on education sector must be directed to all programs that will enhance the academic quality, enhance non-academic quality, and competence of qualified educator. The health sector in Mojokerto City, Lamongan Regency, Bangkalan Regency, Gresik Regency and Mojokerta Regency ought to be improved in order to prevent diseases in public daily life. Improving toddlers and elderly people nutrition intake to improve their immune system, and providing more health access such as BPJS, health insurance with better classes and facilities.

Government spending on Infrastructure sector in Mojokerto City, Mojokerto Regency, Bangkalan, and Lamongan Regencies should be more enhanced and stabilize coordination and synergy function in infrastructure development planning in order to avoid inequality among regions in Gerbangkertasusila.

Egosectoral among central government and regional governments should be minimized to create continuity among regions. It will not only be enjoyed by Gerbangkertasusila region, but also by the whole East Java Province.

REFERENCES


