

Impact of budget allocation policy and fiscal decentralization towards economic growth

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Abstract: The government's role in economic affairs is aimed at several objectives, one of which is redistribution. The most obvious contribution that can be seen from the government is through spending or the type of spending. Each level of government has its own share of expenditure, be it at the central or regional levels. This is one form of implementation of decentralization, especially in the fiscal sector. Fiscal decentralization itself is intended for various purposes, but one of the most frequently found is for reasons of reducing the central government's financial burden, so that budget efficiency can be more affordable and able to impact output growth. In general, many studies have identified a related effect between fiscal decentralization and economic growth but have mixed results, especially between developed and developing countries. Therefore, the main objective of this study is to see how government spending influences economic growth at the district/city level in Indonesia. This research also wants to see how several additional variables (Regional Independence, Competitiveness Index, HDI, and poverty rate) influence economic growth at the district/city level.

This study uses a mixed approach. Quantitatively, the samples in this study are 415 districts/cities in Indonesia from 2016-2021 which will be estimated through the Panel Data Regression analysis technique. Furthermore, for the qualitative approach, a systematic literature review (Systematic Literature Review) will be used using PRISMA to filter articles up to the use of bibliometric (keyword) analysis to see the interrelationships between each node in each keyword.

The main findings in this study indicate that government budget allocations in certain fields significantly influence economic growth. Meanwhile, other variables such as (Regional Competitiveness Index, HDI, and Poverty Level) have a significant influence on economic growth in 415 Indonesian Regencies/Cities. The results of the systematic review (SLR) show that there is indeed a relationship between each independent variable and the dependent variable. In addition, each variable has a large density, which means that this study has been done a lot before.

The recommendation of this study is to further harmonize program and policy coordination between the Central Government and the Regional Governments up to the District/City Governments, so that monitoring/auditing is easier. In the end, this will increase the effectiveness and efficiency of governance in Indonesia.

Keywords: Fiscal Decentralization, Budget Allocation, Economics Growth, Panel, Data Regression, SLR

Introduction

Throughout the history of economic development, social and economic disparities between countries still occur even in the current era of globalization (Acemoglu & Robinson, 2017), and this leads to conditions of extreme poverty. Likewise in Indonesia, the poverty sector is still a major issue in government programs. Poverty is the inability to meet a minimum standard of living. Several studies (among them: Djameluddin, 2014; Jajang, et al., 2013; Harmes, et al., 2017; and Nisa, et al., 2019) explain that the cause of poverty in Indonesia is the problem of income inequality. The Indonesian government, in the context of reducing poverty and income inequality, implemented a fiscal decentralization system in early 2001. The move from centralization to decentralization had significant implications for fiscal management at the district/city government level. These implications include: (i). an increase in the ratio of

regional government spending to central government spending by 30%; (ii). increase in local government spending by an average of 40%; and (iii) the adoption of a new and improved intergovernmental fiscal system (Hofman & Kaiser, 2002). The consequence of the implementation of the decentralization system is that there is fiscal decentralization between levels of government to guarantee the implementation of regional government affairs in the delivery of public services to the community.

However, the Central Government continues to carry out good governance. One illustration of the implementation of good governance is the government's support for development priorities in the regions. Support can be seen from the planned central government expenditure budget, in accordance with its functions, and has been running well. The budget allocation policy is a reflection of the size of the government in an economy (contribution to economic activity). As is known, the consumption expenditure sector dominates 60% of the total structure of Indonesia's Gross Domestic Product (GDP). The Government Expenditure sector (G) only contributes no more than 10%. Even though it has a relatively non-dominant contribution, the size of government spending can have an impact on economic growth. Loizides & Vamvoukas (2005) states that government size influences economic growth; both in the short term and long term.

The budget for the education function in the APBN for the 2022 fiscal year is allocated IDR 169,230.4 billion, an increase of 8.3% when compared to the 2021 outlook. The budget allocation for the education function will be carried out by several relevant ministries/agencies such as the Ministry of Education, Culture, Research & Technology, and the Ministry of Religion, as well as other ministries/agencies that have education units; both official and non-official. Meanwhile, in the 2017 – 2020 period, the average growth in the realization of the health function budget reached 22.5% per year. This increase was partly due to the policy of expanding the coverage of Contribution Assistance Beneficiaries (PBI) participants in the National Health Insurance Program (JKN) as well as an increase in the value of contribution assistance for JKN PBI participants. Meanwhile, in 2021, the health function budget is IDR 182,812.4 billion, growing 74.0% compared to 2020 due to the handling of Covid-19.

On the other hand, based on data from the Central Statistics Agency (2022), the poverty severity rate in 2022 has decreased compared to the previous year from 0.42% (2021) to 0.385% (2022). The Poverty Depth level also decreased in 2022 compared to 2021. However, the poverty rate in 2023 was found to have increased due to food inflation that occurred in Indonesia (Ministry of Finance, 2023). An increase in the poverty rate will certainly have an impact on people's welfare which of course also has implications for the performance of the Human Development Index (IPM) and HDI performance affects economic growth.

Economic growth is indeed one of the important aspects in driving the level of human welfare. With more productive economic activity, it will increase economic growth and also a country's per capita income. The government plays an important role in boosting economic productivity (especially in times of recession or crisis), even though its contribution tends to be small in Indonesia. So that in this case, the right target government budget allocation will have an impact on the level of budget effectiveness, especially the real impact on economic growth. Therefore, the focus of this study will identify the relationship between government budget allocations and other productivity factors on economic growth in Indonesia.

Theoretical Background

National Income and Fiscal Decentralization Theory

According to Meade (1960), national income is income received by factors of production from production activities and sales of goods and services for the results of production activities carried out. In general, the fundamental concept of national income is shown by the interaction between households, the government, and producers, through several types of markets and how money flows which affect fluctuations in productivity in a certain period (see, among others: Pass & Lowes, 1988; Mankiw, 2007; Blanchard & Johnson, 2013; and Suparmoko & Sofilda, 2017).

Along with the regional autonomy policy, Indonesia is familiar with the fiscal decentralization policy. Fiscal decentralization is the granting of authority to regional governments in allocating funds that have been granted by the central government to regional governments in accordance with the tasks and authorities that have been delegated. Related to regional income sources, there are two types that can be categorized as sources (Hamzah, 2008), namely: (i). Regional Original Revenue (PAD); and (ii). Balancing Fund. PAD sources can be divided into several sub-sections namely: (i). Regional tax results; (ii). Regional retribution results; (iii). Regional company results; and (iv). Results of separated regional wealth management. Meanwhile, the Balancing Fund according to Law No. 25 of 1999 is a fund originating from APBN proceeds allocated to regions to finance regional needs in the context of implementing decentralization. The Balancing Funds are sourced from Land and Building Tax, Land and Building Rights

Acquisition Fees (BPHTP), Special Allocation Funds (DAK), General Allocation Funds (DAU), and up to natural products.

Public Finance Theory

According to Gruber (2013), finances are related to the following matters, namely: (i). Imposition of taxes and granting of subsidies; (ii). Restrictions or mandates on private sector buying or selling; (iii). Provision of public goods and services; and (iv). Public financing. Of the four ways, the provision of subsidies is an aspect that is relevant to this research, so that the theoretical basis for state finance is relevant for development. But before that, subsidies were the result of tax collection as a function of wealth redistribution.

Until recently, taxes were the largest source of revenue for state governments anywhere in the world. Because taxes are the main source of state revenue, the government also seeks to collect them on various types of tax objects. In this case, the tax imposed has an impact on the market, especially on budgetary constraints, costs, company incentives, to the supply of labor (Atkinson & Stiglitz, 1980; Mankiw, 2007; and Rosen & Gayer, 2008). By definition, according to Musgrave & Musgrave (1989) and Gruber (2013), tax is an instrument collected from the private sector without leaving a burden on the government to provide an obligation to taxpayers, such as: payroll tax, personal income tax, corporate income tax, wealth tax, and consumption tax.

Tax obligations will certainly cause a separate burden for each tax subject because it can disrupt economic aspects, for example in the composition of costs in the private sector and at the same time cause dead-weight loss (Rosen & Gayer, 2008; Atkinson & Stiglitz, 1980), also states that there are three types of effects produced by the tax itself, namely income effects, substitution effects, and financial effects. Actually, the main effect lies in the income effect and substitution effect only, but in this case there are other effects that can be considered namely financial effects. These financial effects are related to the imposition of taxes that can have an impact on the reorganization of the financial structure and transaction structure in the market.

On the other hand, subsidies are reserves or financial assistance and other resources to support business activities provided by the government. In this case, subsidies can be divided into two types, namely direct subsidies and indirect subsidies. Direct subsidies can be in the form of cash assistance, interest-free loans, and so on. Meanwhile, indirect subsidies can be in the form of rent discounts, depreciation exemptions, and so on (Pass & Lowes, 1988). According to Suparmoko (2016), subsidy policies are a form of government spending in the form of transfers or subsidies known as negative taxes. This is because for recipients of subsidies, these funds will increase income in real terms. Meanwhile, according to Gruber (2013), subsidies are payments made by the government to the private sector which can reduce costs in carrying out consumption and production.

Theory of Economics Growth

The economic progress of a region shows the success of development, although it is not the only indicator of the success of development (Smith & Todaro, 2015). There are three kinds of measures to assess economic growth, namely output growth, output growth per worker, and output growth per capita. Output growth is used to assess production capacity growth which is influenced by an increase in labor and capital in the region. Growth in output per worker is often used as an indicator of changes in the competitiveness of the region through productivity growth. While the growth of output per capita is used as an indicator of changes in economic welfare.

There are several schools of thought on the theory of economic growth. The first is the theory of Rostow and Harrod-Domar. Rostow's theory explains that there are stages that a country passes through in economic growth. One way to accelerate economic growth is to strengthen national savings. This theory is further clarified by the Harrod-Domar theory which states that the more portion of GDP that is saved will increase the capital stock, thereby increasing economic growth. Both theories explain that high levels of savings and capital stock will increase economic growth. This shows that there are other factors that influence economic growth, such as the quality of human resources and supporting infrastructure (Smith & Todaro, 2015).

Theory of Poverty

Understanding of the theory or view of poverty cannot be separated from the evolution of the development paradigm in developing countries. In general, the initial period of development in developing countries was marked by the main issue of increasing economic growth as the main goal of development. Economic growth is measured by the rate or change in the value of GDP per capita or GNP per capita. Development orientation has shifted towards human development. This development paradigm requires conditions for equitable development, reduction of unemployment, liberation of poverty, and elimination of injustice. Among these issues, poverty is the dominant issue in the

development paradigm (Misturelli & Heffernan, 2010).

The basic needs approach is the development of an economic welfare approach in analyzing poverty. This approach offers an alternative measure that is more appropriate to the meaning of well-being (and poverty). The basic needs approach was originally initiated by the ILO and adopted by the World Bank (Stewart & Roberts, 2019). The emergence of the basic needs approach started the era of human development (human development) as a development goal in the 1970s and continued until the 1980s. The emphasis on human development is based on the fact that there is inequality in the achievement of education and health indicators between high-income countries and low-income countries. Underdevelopment in poor and developing countries is not only in the low GDP per capita, but also in terms of education and health. On this basis, a rebalancing of development objectives was carried out. The focus of development is not only to emphasize increasing per capita income, but also to pay attention to its physical value or intrinsic value. Rebalancing (rebalancing) development goals are then framed in terms of basic needs (Ravalion, 2015).

Research Methodology

This study uses a combination of quantitative and qualitative methods. According to Creswell (2009) in this quantitative approach the research will be pre-determined, statistical data analysis, and statistical data interpretation. The analysis technique that will be used is the panel data analysis method. The advantages of using panel data analysis are as follows: (i). Panel data are able to account for individual heterogeneity explicitly by allowing for individual-specific variables; (ii). The ability to control heterogeneity makes panel data used for testing and building more complex behavior models; and (iii). Panel data is based on repeated cross-sectional observations (time-series), so the panel data method is suitable as a study of static adjustment (Gujarati, 2012; Baltagi, 2005; Cheng, 2014; and Davidson & MacKinnon, 2004).

The data used is secondary data obtained from the Central Statistics Agency (BPS) report, which includes data on 415 districts from 33 provinces in Indonesia, from 2016-2021. The data is data on Education Budget Allocation (X_{1it}), Health Budget Allocation (X_{2it}), Public Service Budget Allocation (X_{3it}), Regional Independence (X_{4it}), Regional Competitiveness Index (X_{5it}), Human Development Index (X_{6it}), Depth Index Poverty (X_{7it}), Poverty Severity Index (X_{8it}), as independent variables and one dependent variable, namely income per capita (Y_{1it}). So the equation can be written as follows:

$$Y_{1it} = \beta_0 + \beta_1.X_{1it} + \beta_2.X_{2it} + \beta_3.X_{3it} + \beta_4.X_{4it} + \beta_5.X_{5it} + \beta_6.X_{6it} + \beta_7.X_{7it} + \beta_8.X_{8it} + e_{1it}$$

Meanwhile, qualitative analysis will be carried out by mapping specific literature reviews through systematic literature review (SLR) analysis techniques. Systematic review itself is a research method for identifying, evaluating, and interpreting all the results of certain research, certain topics, or phenomena of concern (Kitchenham, 2004). The SLR technique is usually used in meta-analyses. According to Stanley & Jarell (1989) and Lipsey & Wilson (2001), meta-analysis is a form of survey research that uses written reports as survey objects rather than groups of people. Several studies, particularly in the social sciences, have used meta-analysis, such as psychology (Saphiro & Shapiro, 1982; Rosenthal, 1984; and Smith, et al., 1980), management science (Assmus & Oyinlola, 1984; and Stanley & Jarell, 1989), even in the field of macroeconomics (Farly, et al., 1981; and Doucouliagos, 2005).

Results and Discussion

Panel Data Regression Analysis

Through a series of model tests (Chow test, Hausman test, and LM test), it was concluded that the correct model is the Fixed Effect Model (FEM). The processing results for testing the fit model are shown by the Adjusted R^2 value of 72%, which means the independent variables (Education Budget Allocation, Health Budget Allocation, Public Service Budget Allocation, Regional Independence, Competitiveness Index, HDI, Poverty Depth Index, and Poverty Severity Index) has an effect of 72% on the economic growth of districts/cities in Indonesia. Meanwhile, for the F test, a statistical F value of 16.00160 was obtained with a p-value of $0.000 < 0.05$, so it can be concluded that it is proven that there will be at least one independent variable that has a significant effect on the dependent variable as can be seen in Table 1.

Table 1
Results of the Coefficient Determination Test (R²) and F-Test

| Model | R-Square | Adjusted R-Square |
|-------|----------|-------------------|
| gPDRB | 0.765510 | 0.717670 |
| Model | Value F | Value Sig. |
| gPDRB | 16.00160 | 0.000000 |

Source: Data processed by E-Views

From the t-test used to test the effect of each independent variable on the economic growth of districts/cities in Indonesia, the results can be seen in Table 2 below.

Table 2. Partiel t-Test

| Variable | Model gPDRB | | |
|----------|-------------|------------------------|----------|
| | Coeffisient | T _{statistic} | P-value |
| EDUC | -1.28E-05 | -3.856247 | 0.0001** |
| HEALTH | 2.22E-05 | 3.040232 | 0.0024** |
| PU | 5.09E-05 | 8.135382 | 0.0000** |
| KD | 6.83E-05 | 0.606643 | 0.5442 |
| IDSD | -0.004826 | -4.644905 | 0.0000** |
| IPM | -0.015403 | -5.458273 | 0.0000** |
| IKKP1 | -0.007379 | -4.018843 | 0.0001** |
| IKKP2 | 0.010136 | 3.902917 | 0.0001** |

Source: Data processed, * = 10%, ** = 5%

From the results above, it appears that only the Regional Independence variable has no significant effect on the economic growth of districts/cities in Indonesia. These results are in accordance with several previous studies, both abroad and in Indonesia. Seeing the study conducted by Davoodi & Zou (1998) shows results where fiscal decentralization in developing countries actually has a negative impact on economic growth. As for the OECD countries, similar things were also found, especially in the aspect of revenue decentralization (Thornton, 2007). One of the reasons that can be considered for this is that the distribution of local government budget allocations has not been in accordance with the goals of the central government (problems of program coordination/accuracy/synergy), so the allocations that occur are less effective and tend to be inefficient.

For the variable Education Budget Allocation, Competitiveness Index, Human Development Index and Poverty Depth Index have a negative and significant effect on the economic growth of districts/cities in Indonesia. The allocation of the education budget does not directly increase economic growth. The results are not in accordance with previous findings, namely in the study of Muktharov, et al. (2020) which shows results where government spending, particularly in the education sector, has a statistically positive and significant influence. There are two factors that can be taken into consideration why the education budget has a negative influence in Indonesia: (i). The education budget is still not on target for beneficiaries (misuse).

Meanwhile the regional competitiveness index, these results are in accordance with several previous studies related to the level of competitiveness with economic growth (Amar & Hamdi, 2012; and Rajagukguk, 2016). However, the direction of influence of the results of this study is different from the studies mentioned earlier. A study conducted by Mihaela (2016) states that the level of competitiveness does not have a significant effect on economic growth. On the Human Development Index, these results are also consistent with the study of Susanto & Rachmawati (2013), where HDI has a significant effect on economic growth. However, these results are not in accordance with the direction of the coefficients. One of these differences is the impact of fund management to increase HDI inefficiency and this happened in one of the provinces in Indonesia (Iskandar, 2017). Furthermore, on the poverty depth index, these results are in accordance with the studies of Skare (2016) and Breunig & Majeed (2020), where the poverty variable has a significant effect on economic growth. This result is also in line with the improved performance of the Poverty Depth Index from year to year (BPS, 2022).

Variable Health Budget Allocation, Public Service Budget Allocation and Poverty Severity Index have a positive and

significant effect on the economic growth of districts/cities in Indonesia. These results are consistent with the studies of Skare (2016) and Breunig & Majeed (2020), where the poverty variable has a significant effect on economic growth. Positive results indicate a decrease in inequality of expenditure of the poor (index increases).

Result Analysis of Systematic Literature Review

Initial work on the Systematic Literature Review (SLR) approach was filtering articles through a number of inclusion and exclusion criteria which was carried out with the help of the Preferred Reporting Items for Systematic Reviews and META Analysis (PRISMA) diagram, as shown in the following table:

Table 3. Tabulation of Inclusion and Exclusion of Data Source

| 2013 – 2020 | Keyword Used (Publish or Perish) | | | |
|------------------------|--|---|---|---------------------------|
| | Government Expenditure > Economic Growth | Fiscal Decentralization > Economic Growth | Human Development Index > Economic Growth | Poverty > Economic Growth |
| Recorded | 75 | 48 | 11 | 140 |
| Gross Total | 274 | | | |
| Excluded | 36 | 20 | 6 | 81 |
| Included | 39 | 29 | 5 | 59 |
| Total Article Included | 132 | | | |

Source: Data processed

Referring to Table 3, the keywords used in searching for articles and data sources in the Publish or Perish (PoP) software, with the publication time criteria between 2013 – 2022 (10 years) are: (i). Government Expenditure > Economic Growth; (ii). Fiscal Decentralization > Economic Growth; (iii). Human Development Index > Economic Growth; and (iv). Poverty > Economic Growth. Based on the search for these keywords, 274 data were generated (n = 274), with details: i). Keywords Government Expenditure > Economic Growth = 75; (ii). Fiscal Decentralization > Economic Growth = 48; (iii). Human Development Index > Economic Growth = 11; and (iv). Poverty > Economic Growth = 140. Furthermore, from the 274 available data, the first exclusion criterion was used, namely the data to be used as input must be published in the form of articles and not in other forms (Chapter in Book, Review, Book, Note, etc.). For the first criterion, 128 data were found in a form other than articles, so in this case, the remaining data was (n = 146). The next criteria used are articles that have keywords. In this case, 14 articles were filtered that did not have keywords in the data in the form of articles, so that as many as (n = 132) eligible articles remained for further analysis.

Then in the second stage, partial network mapping is carried out on each keyword used. First, the mapping results will be shown on keywords that refer to the main research theme, namely Government Expenditure > Economic Growth (n = 39). There are 6 clusters that are mapped in 39 articles, as follows:

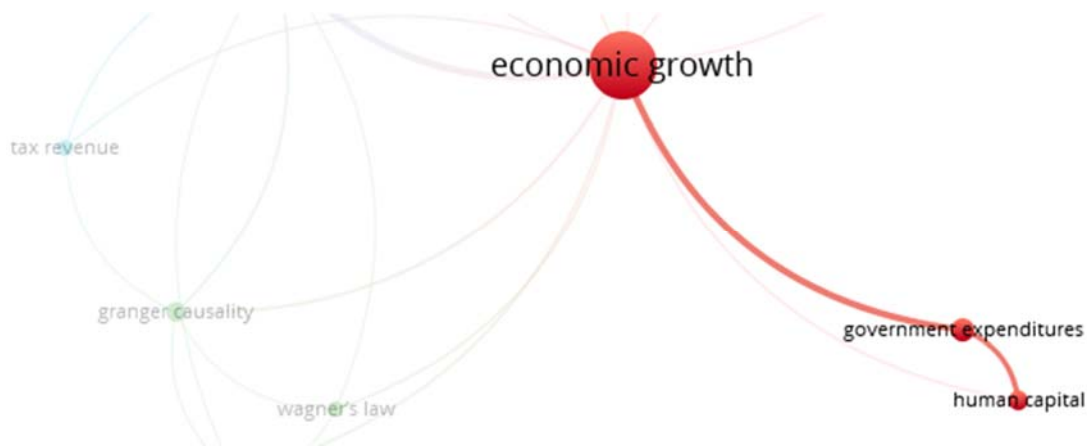
Table 4: Daftar Klaster Kata Kunci Government Expenditure > Economic Growth

| Cluster | Items | Total Items |
|----------------|-------------------------|-------------|
| 1 (Red) | Economic Growth | 3 |
| | Government Expenditure | |
| | Human Capital | |
| 2 (Green) | Granger Causality | 3 |
| | Keynesian Hypothesis | |
| | Wagner's Law | |
| 3 (Blue) | ARDL-Bounds Testing App | 3 |
| | Government Expenditure | |
| | South Africa | |
| 4 (Yellow) | Cointegration | 2 |
| | Nigeria | |
| 5 (Purple) | Fiscal Policy | 1 |
| 6 (Light Blue) | Tax Revenue | 1 |

Source: Data processed (2023)

From the following table, it will be shown the relationship between government spending and economic growth. Here is a picture showing what is meant:

Figure 1. Government Expenditure vs Economic Growth



Source: Data processed (2023)

Based on Figure 1, it can be seen that Government Expenditure nodes are related to Economic Growth. Besides that, there is also a connection with the Human Capital nodes. This was found in the study of Muktharov, et al. (2020) which shows results where government spending, particularly in the education sector, has a statistically positive and significant influence.

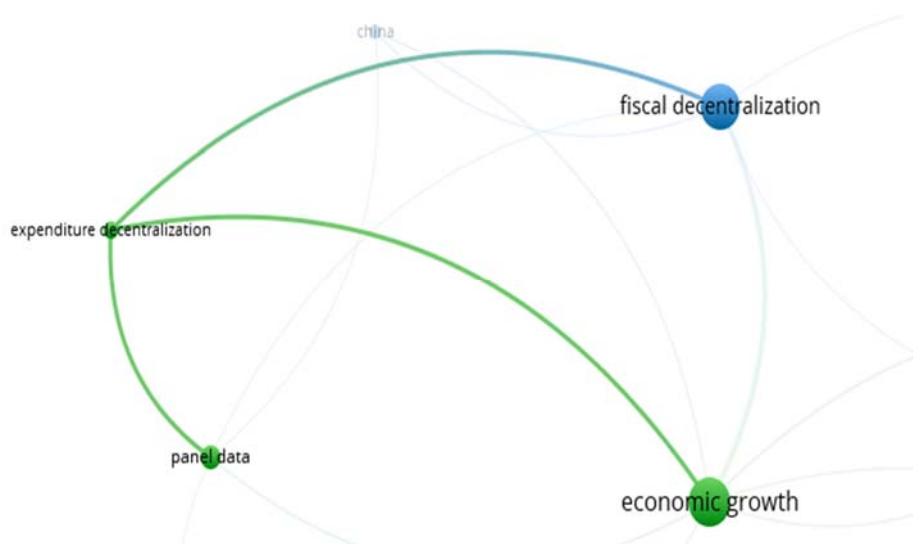
Next, the mapping results will be shown on the keywords Fiscal Decentralization > Economic Growth (n = 29). There are 3 clusters mapped in 29 articles, as follows:

Table 5: List of Cluster of Keyword Fiscal Decentralization > Economic Growth

| Cluster | Items | Total Items |
|-----------|------------------------------|-------------|
| 1 (Red) | Fiscal Decentralisation | 4 |
| | Fiscal Federalism | |
| | Fiscal Policy | |
| | Local Economic Growth | |
| 2 (Green) | Decentralization | 4 |
| | Economic Growth | |
| | Expenditure Decentralization | |
| | Panel Data | |
| 3 (Blue) | China | 2 |
| | Fiscal Decentralization | |

Source: Data processed (2023)

From the table, it will then be shown regarding the autonomy of government spending which has an impact on economic growth. Here is a picture showing what is meant:

Figure 2. Fiscal Decentralization vs Economic Growth

Source: Data processed (2023)

Based on Figure 2, it can be seen that Expenditure Decentralization nodes are related to Economic Growth as well as Fiscal Decentralization and Panel Data nodes. This means that the decentralization of government spending is a reflection of regional/regional fiscal capacity (level of regional independence) in conducting public spending (as found in the article Faridi, et al. (2019).

Next, the mapping results will be shown on the keywords Human Development Index > Economic Growth (n = 5). There are 5 clusters that are mapped in 5 articles, as follows:

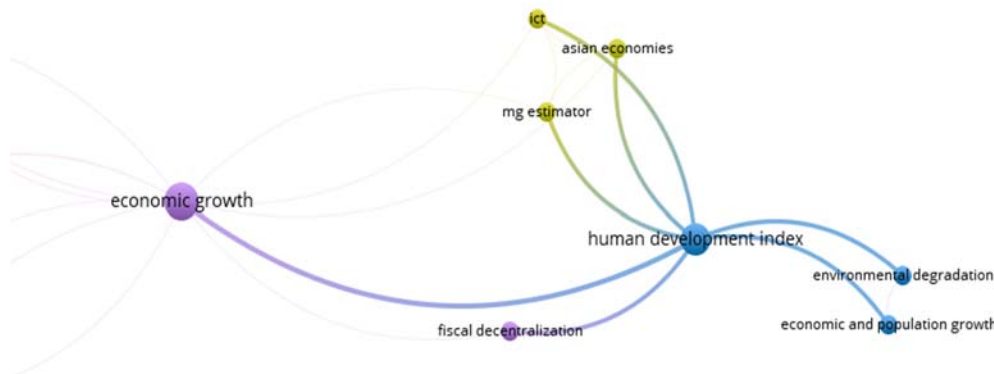
Table 6: Cluster List of Keyword Human Development Index > Economic Growth

| Cluster | Items | Total Items |
|------------|---------------------------|-------------|
| 1 (Red) | 2SLS | 4 |
| | Human Development Index | |
| | Pakistan | |
| | Renewable Energy | |
| 2 (Green) | ARDL | 3 |
| | Human Development | |
| | Terrorism | |
| 3 (Blue) | Economic and Population | 3 |
| | Environmental Degradation | |
| | Human Development Index | |
| 4 (Yellow) | Asian Economies | 3 |
| | ICT | |
| | Mg Estimator | |
| 5 (Purple) | Economic Growth | 2 |
| | Fiscal Decentralization | |

Source: Data processed (2023)

The following figure will show the Human Development Index which influences economic growth. Here is a picture showing what is meant:

Figure 3. Human Development Index vs Economic Growth



Source: Data processed (2023)

Based on Figure 3, it can be seen that, not only have links to the Economic Growth nodes, the Human Development Index nodes also have links to fiscal decentralization and environmental degradation issues. The results of a study conducted by Daud & Soleman (2020) state that the fiscal decentralization variable has a significant and positive effect on the Human Development Index (HDI) in one of the provinces in Indonesia.

Next, the mapping results will be shown on the keywords Poverty > Economic Growth (n = 59). There are 6 clusters that are mapped in 59 articles, as follows:

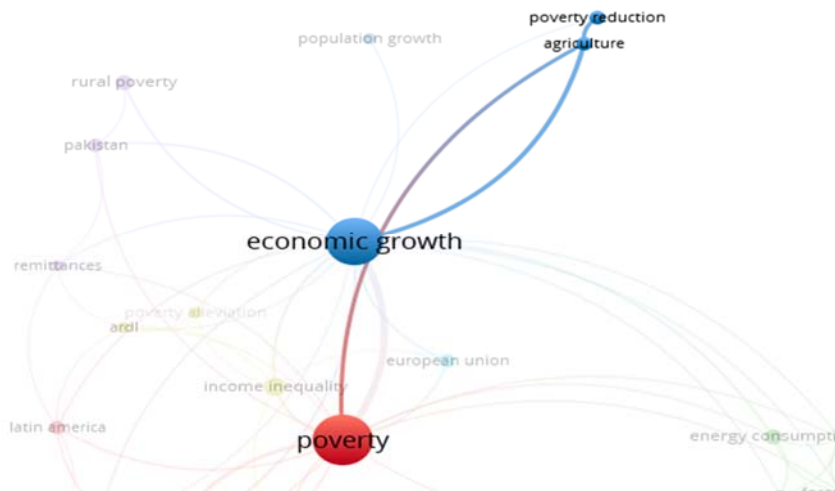
Table 7: List of Cluster of Poverty > Economic Growth Keywords

| Cluster | Items | Total Items |
|----------------|--------------------------|-------------|
| 1 (Red) | Economic Development | 5 |
| | Inequality | |
| | Latin America | |
| | Mexico | |
| | Poverty | |
| 2 (Green) | Carbon Dioxide Emissions | 4 |
| | Energy Consumption | |
| | Forest Area | |
| | Population | |
| 3 (Blue) | Agriculture | 3 |
| | Economic Growth | |
| | Population Growth | |
| | Poverty Reduction | |
| 4 (Yellow) | ARDL | 4 |
| | Growth | |
| | Income Inequality | |
| | Poverty Alleviation | |
| 5 (Purple) | Pakistan | 3 |
| | Remmitances | |
| | Rural Poverty | |
| 6 (Light Blue) | European Union | 1 |

Source: Data processed (2023)

The following table will show a picture of the relationship between economic growth and poverty.

Figure 4. Economic Growth vs Poverty



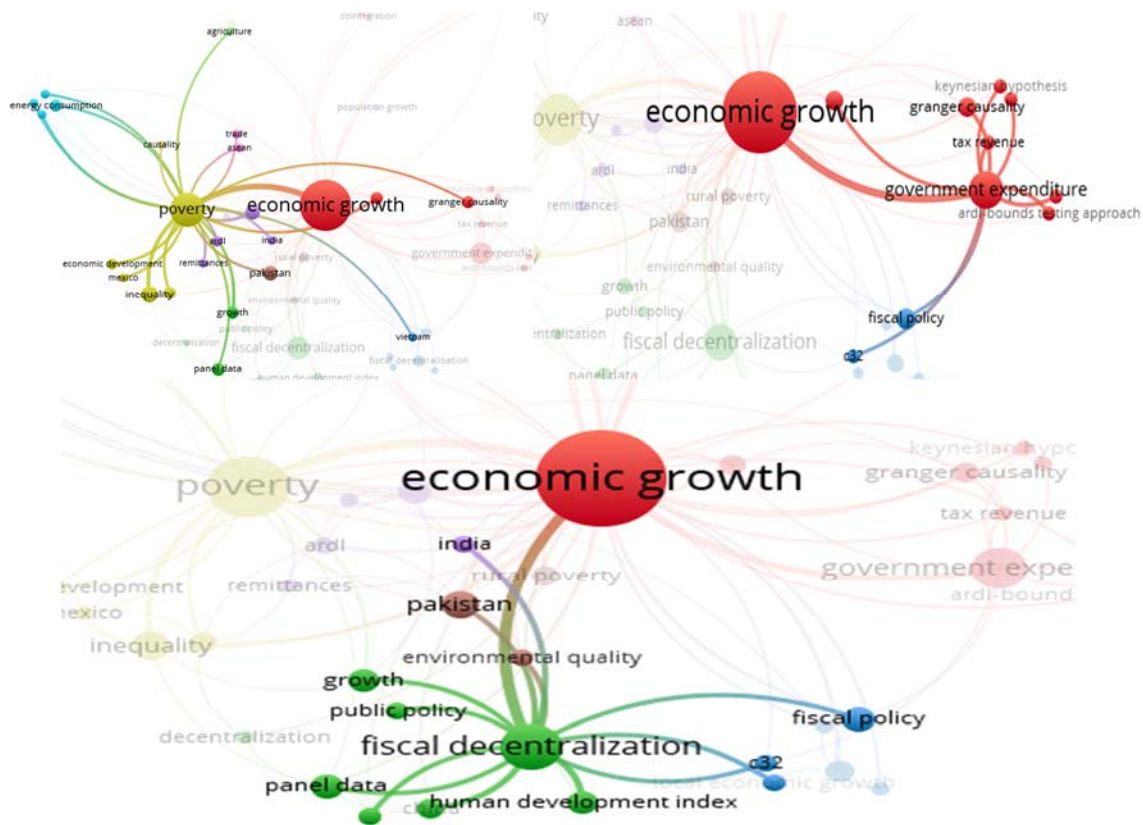
Source: Data processed (2023)

| | | |
|------------------|-------------------------|---|
| | Growth | |
| | Human Development Index | |
| | Panel Data | |
| | Public Policy | |
| 3 (Blue) | C32 | 6 |
| | Fiscal Decentralization | |
| | Fiscal Federalism | |
| | Fiscal Policy | |
| | Local Economic Growth | |
| | Vietnam | |
| 4 (Yellow) | Economic Development | 5 |
| | Inequality | |
| | Latin America | |
| | Mexico | |
| | Poverty | |
| 5 (Purple) | ARDL | 5 |
| | Income Inequality | |
| | India | |
| | Poverty Alleviation | |
| | Remittances | |
| 6 (Light Blue) | Carbon Dioxide Emission | 4 |
| | Energy Consumption | |
| | Forest Area | |
| | Population | |
| 7 (Orange) | Education | 3 |
| | Government Expenditure | |
| | Human Capital | |
| 8 (Brown) | Environmental Quality | 3 |
| | Pakistan | |
| | Rural Poverty | |
| 9 (Pink) | Asean | 2 |
| | Trade | |
| 10 (Light Pink) | Cointegration | 2 |
| | Nigeria | |
| 11 (Light Green) | Agriculture | 2 |
| | Poverty Reduction | |
| 12 (Light Blue) | Population Growth | 1 |
| 13 (Ivory) | Causality | 1 |

Source: Data processed (2023)

As for each keyword, it can be seen that as a whole, it is related to the Economic Growth nodes. Here is a picture showing what is meant:

Figure 6. Nodes Economic Growth Network



Source: Data processed (2023)

Based on Figure 6, it can be seen that each keyword is related to economic growth and has a large frequency. This indicates: (i). There is a correlation in the literature between government expenditure variables and economic growth; (ii). There is a link in the literature between the variables of fiscal decentralization and economic growth; (iii). There is a link between the human development index and economic growth; (iv). There is a correlation in the literature between poverty levels and economic growth; and (v). Studies on the determination of economic growth with independent variables such as: government spending, fiscal decentralization, human development index, and poverty rate have been carried out a lot.

Government spending variables, both qualitatively and quantitatively, show a link with economic growth. Government spending which is the object of this research is productive government spending. Productive expenditure can be interpreted as capital expenditure/investment. The influence on economic growth will be felt in the long term. For example, spending on education in the long run will improve HR skills and impact on productivity levels. The same is true for capital expenditure (infrastructure), which will have an impact on increasing accessibility/connectivity between regions. In the short run, government spending will also increase output, but will tend to increase the interest rate. The significance of the effect of the HDI variable on economic growth is also supported by findings from systematic studies where an increase in HDI will have an impact on environmental sustainability. Meanwhile, the regional independence variable, in the literature, has a relationship with the economic growth variable which tends to accelerate the level of output. However, in the study results, the influence of regional independence variables does not have a significant effect. These two results draw a conclusion that, in general/globally, literature on regional self-reliance (fiscal decentralization) with economic growth has been found and the two are indeed found to be interrelated. However, this insignificant condition occurs specifically in Indonesia which can be related to the level of quality of human resources in carrying out the implementation process.

Conclusion and Policy Recommendations

Conclusion

Based on the results of the analysis carried out, both quantitatively and qualitatively, there are several conclusions that can be built, namely:

1. The budget allocation for education has a significant effect on the economic growth of districts/cities in Indonesia. The link between the education budget and the quality of Human Resources (HR) can also be seen in the results of the keyword network analysis, where the Government Expenditure nodes are linked to Economic Growth through the Human Capital nodes.
2. The budget allocation for the health sector has a significant effect on the economic growth of districts/cities in Indonesia. Referring to the previous results, the ineffective and inefficient management of government spending is due, among other things, to the quality of human resources.
3. The budget allocation for public services has a significant influence on the economic growth of districts/cities in Indonesia. This result means that, for example, public services, infrastructure, are also part of productive spending.
4. Regional independence has no significant effect on the economic growth of districts/cities in Indonesia. This result differs from systematic studies which found a link between the two.
5. The regional competitiveness index has a significant effect on the economic growth of districts/cities in Indonesia. These results are consistent with several previous studies regarding the significance of the effect of the level of competitiveness on economic growth.
6. The Human Development Index (IPM) has a significant effect on the economic growth of districts/cities in Indonesia. However, these results do not match the coefficient direction. Qualitatively, the results of the analysis related to HDI are not only related to economic growth, but also to fiscal decentralization and environmental sustainability issues.
7. Related to the index of poverty depth and poverty severity, both have a significant effect on the economic growth of districts/cities in Indonesia.

Policy Recommendation

Based on the existing implications, the results of this study recommend, especially to the government, to:

1. Improving coordination of programs and policies between the Central Government and Regional Governments up to Regency/City Governments. Improved coordination will align the goals that have been previously set, so that the possibility of achieving effectiveness in absorbing the budget is increasingly possible.
2. Monitoring/auditing/control strictly and periodically in accordance with the severity of the ineffectiveness and inefficiency of budget absorption that occurs. Control is carried out to maintain coordination between government lines on the right track.
3. Increasing the budget allocation for education, research, and technology as a form of investment in developing the quality of Human Resources (HR). Apart from that, cooperation with domestic and international institutions is needed in increasing the quality distribution of human resources in Indonesia.

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