

The Measurement of Local Government Spending Quality with Indicators of Sustainable Local Development in Indonesia

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Abstract

Spending Quality becomes an important element in achieving sustainable development in Indonesia today. Through spending quality instruments, can be government control in evaluating the planning and budgeting process does. This study aims to formulate the measurement spending quality of local government and its relation to sustainable development indicators. In this study, the empirical analyses were performed using the Partial Least Squares Structural Equation Models (PLS-SEM), and also supported by Smart-PLS in handling computational work. The findings of this study suggest that the quality of expenditure is formed by five constructs (priority, allocation, time, accountability, and effectiveness), and reflected on fourteen indicators. Indicators of sustainable development is reflected by the construct Effectiveness areas related to basic services (especially education and health), infrastructure, human development and poverty eradication. Effectiveness found indicators that affected quality of spending in the current year (t), the year after (t + 1) and two years after the spending has done (t + 2). Indicators index constituent quality of spending reflects the holistic dimension of planning and budgeting system of regional development, from the planning, implementation and evaluation of performance. Completely indicator of the quality of spending, making the quality index of regional expenditures could potentially be as one of the important indicators in the management of regional development in achieving the goals of sustainable development

Keywords: spending quality, local development, decentralization fiscal, PLS-SEM

1. Introduction

Quality spending of local government's is a central issue of the decentralization policy in Indonesia. It is closely related to improving services, empowerment and community participation, as well as increased competitiveness of the region which is the goal of decentralization in accordance with Act No. 23 Year 2014 on Regional Government. Spending of local government continues to increase with increasing budget transfers from central government. According to the Fiscal Policy Office, transfers to local governments the period 2009-2013 the average increase of 12.67% or \$30.86 billion (32.29% of the state budget) into \$52.86 billion or 31.41% of the state budget (FPO 2013). The increase in transfer spending is higher than the average growth of the national economy which grew 6.25% by year.

The increase in transfer spending boost local government revenues, thereby increasing the ability of the provision of public goods. According to the theory of fiscal decentralization Oates (1999), increased spending on central government transfers to local governments can improve the effectiveness and efficiency of public expenditure is constrained by imperfect information, geographical factors and the limited institutional capacity of the central government. Therefore, Thomas et al. (2000) mentions that sustainability economic growth in the region of fiscal decentralization is determined by the quality of local government spending. It is has become a determining factor for the successful implementation of decentralization in developing countries (Akai and Sakata 2002; Philip and Shah 2012).

But until now there is no instrument to evaluate how the spending quality of local government in Indonesia (MoF 2014). These instruments are necessary in order to improve governance of planning and budgeting. Improving governance should be done as soon as possible to reduce the losses of public financially and socially. So the instrument measuring the quality of local government spending is very strategic in supporting the successful implementation of sustainable development in Indonesia.

2. Literature Review

2.1 Spending Quality

Spending quality literature searches originated from the theory of government spending in the economy. Theoretically, government spending can boost the aggregate output. Government as regulator affect the efficiency of the market. The market became a forum for economic agents to transact the factors of production. The transaction was executed through the velocity of money is distributed among producers of goods and services to consumers. Thus directly or indirectly, government spending affect trading activities between domestic and companies, as well as export and import activities. Mankiw (2006) rewrite the relationship in a deterministic equations, where government spending (G), along with household consumption (C) and private investment (I) and net exports (X-M) is forming national income. But long before that, Samuelson (1958) has warned that the effects of government spending that start from the assumption that the quality of spending done.

The concept of the quality of government spending is now growing with many dimensions. Mikesell (2007) associate the quality of spending by the fiscal administration system that is responsive. Fiscal administration system should be able to assist policy makers in the provision of public services is a priority of citizens. Fiscal administration system should be able to provide a structure to identify trade-offs in resource use and the right of local governments to set priorities to be financed. Shah and Shen (2007) associate the quality of expenditure with performance-oriented budgeting citizens (Citizen-Centric Performance Bageting). Unlike the case with the item-based budgeting system (line item budget formats) and based programs (program budget formats), performance-based budgeting to focus on results into budgetary priorities. Therefore, there is flexibility in setting the input of resources and the design of the program, but must be accountable in terms of the provision of services and performance output. This mechanism allows plans to be realized priority in budget allocations.

Spending quality can only be produced if the ongoing fiscal discipline (Folscher 2007). The importance of fiscal discipline, especially in developing countries due to the high fiscal pressure faced by the region's fiscal uncertainty. The increasing demands of public services due to the high rate of population growth, the rapid migration of people from rural to urban areas, the improvement in the level of education and family welfare cause increased fiscal pressure. Meanwhile, local governments are faced with limited financial capabilities, dependence on central government transfers and low institutional capacity. Sources of revenue must be clearly identified and can add receipts at the right time. Similarly, if the planned expenditures are not able to be realized, then the remaining funds (idle) will increase.

In the end, the quality of expenditure associated with the accountability and effectiveness of the budget. Accountability requires absolute system of participatory budgeting (Moynihan, 2007). Participatory budgeting is a process of decision making related to the distribution of public resources through the involvement of citizens and the negotiation process. The simplest form of accountability according to Peters (2007) is what the administration has done the organization. This administration may be in the form of a report to the legislature, the external check or even to the general public, so it gets an objective assessment and widespread. There are two levels of accountability is accountability antarinstitusi and accountability between the government and public institutions Wampler (2007). Accountability is also about the ability to manage spending to match the scale priroitas set so that limited financial resources can be used effectively and efficiently.

The literature clearly make sense of the various dimensions of the quality of local government spending. The explanation illustrates the interrelationship between dimensions with each other. For example, the allocation of closely related to prioritization. The spending priorities should be appointed from Aspirations and needs of citizens that could not be done without the participation of available space. Participatory budgeting will lead to the effectiveness of spending, which in turn will increase the accountability of expenditure. Therefore, the quality of spending includes multidimensional measure as offered within the definition of quality of spending by Juanda et al. (2014), that the quality of expenditure is allocated based on the spending priorities of regional development is done efficiently and effectively, timely, transparent and accountable. The definition of the quality of this spending which will then be used in this study.

2.2 Sustainable Local Development

Sustainable local development is the implementation of the concept of sustainable development at the sub-

national level. The emphasis of the implementation of sustainable local development in Indonesia has a strategic value in line with the implementation of decentralization and regional autonomy. The implications of this policy, local governments have discretion in determining the work plan and budget allocation at the sub-national level (WB 2007). Thus, the orientation of regional development is very important in influencing the quality of local government spending.

The concept of sustainable development has evolved in four dimensions, namely economic, social, environmental and institutional (UN 2007). The dimensions consist of indicators, such as the economic dimension is characterized by the GDP per capita, trade balance of goods and services, annual energy consumption per capita, etc. Social dimension of the indicators include the percentage of the population below the poverty line, unemployment, wage ratio, etc. Environmental dimensions such as greenhouse gas emissions, concentrations of pollutants, the use of pesticides, the percentage of forest cover, etc. Institutional dimensions such as sustainable regional development strategy, the percentage of the budget for research and development, losses due to natural disasters, etc. These indicators can be adopted as indicators to be achieved or lowered by a local work unit. If it is associated with the planning and performance based budgeting, then these indicators into key performance indicators (KPI). The use of local government spending aimed at achieving KPI set. This result is the size of the effectiveness of expenditure (Mardiasmo, 2004)

2.2 SEM-PLS Analysis

The development of methods of measuring the quality of local government spending is done with the approach of Structural Equation Model-Partial Least Square (PLS-SEM). Generally SEM has two main features of the structural model containing latent variables and measurement model that includes variables measured. In SEM-PLS, latent variables commonly referred to as constructs and variables measured in terms of indicators. PLS-SEM measurement model can handle reflective (reflective measurement model) and formative (formative measurement model).

SEM-PLS increasingly popular in analyse the causal relationship between latent construction, confirmation of theoretical models with empirical data and is equivalent to the analysis of covariance-based SEM (SEM-CB) (Hair et al., 2011). The use of SEM-PLS can overcome the problem of the tightness of the assumptions and limitations of the CB, but still reliable and valid used in confirmatory factor analysis (Asraf 2013). Asraf even conclude from the results of the factor analysis, calculation of SEM-PLS with Smart-PLS software more reliable and valid than the SEM-CB with AMOS. Ayala et al. (2013) using SEM-PLS to validate model in the study of social networks on small businesses. They prove the role of technology related to the quality of decision-making and performance of small businesses in maintaining the continuity of their business. Ahmad et al. (2015) using SEM-PLS modelling to study the behaviour of sharing knowledge among flood victims in Malaysia. Through the structural model is developed, Ahmad et al. can confirm the social cognitive theory with empirical data obtained in the field.

3. Research Methodology

3.1 Logical Framework

The spending quality of local government expenditures are allocated based on the spending priorities of regional development is done efficiently and effectively, timely, transparent and accountable. Priority means something that takes precedence or priority than others. Local government spending priorities that are fundamental means spending is set, and more precedence than any other purposes. Priority is always important because it is associated with the law of scarcity (Schacter, 2005). The spending priorities will affect other constructs. Allocations means expenditure allocation section is provided on an errand. The allocation is determined based on the priorities and scope of the object to be financed. This allocation will determine how much the expectations of planners to obtain the expected changes. Changes that improve productivity in the economy is achieved through consistency of budgetary planning supported (Mullins, 2007). So the priority setting and budget allocations affect other constructs. The influence of government spending on the economy requires a time lag. The time lag depends on the institutional capacity, periodization of the political regime and measure performance indicators (Busatto, 2011). The lag makes the timeliness of budget formulation and execution of important indicators in the local government fiscal management. Transparency is a prerequisite for the participation of citizens in the budgeting process (Moynihan 2007). Transparency means that the opportunity for the citizens to know where and to what use the public budget, so that transparency is closely related to accountability. Their financial audits by external independent agencies as well be the size of budget accountability among institutions and government accountability to the public. Transparency and accountability will drive the cost effectiveness of local governments. Effectiveness relates to the achievement of the target level of performance. These performance targets related to indicators of regional development. The linkage between

fiscal decentralization, governance planning and budgeting, the dimensions of the quality of spending and its relation to the performance of the local government provides a framework for mapping the quality of local government spending (Figure 1).

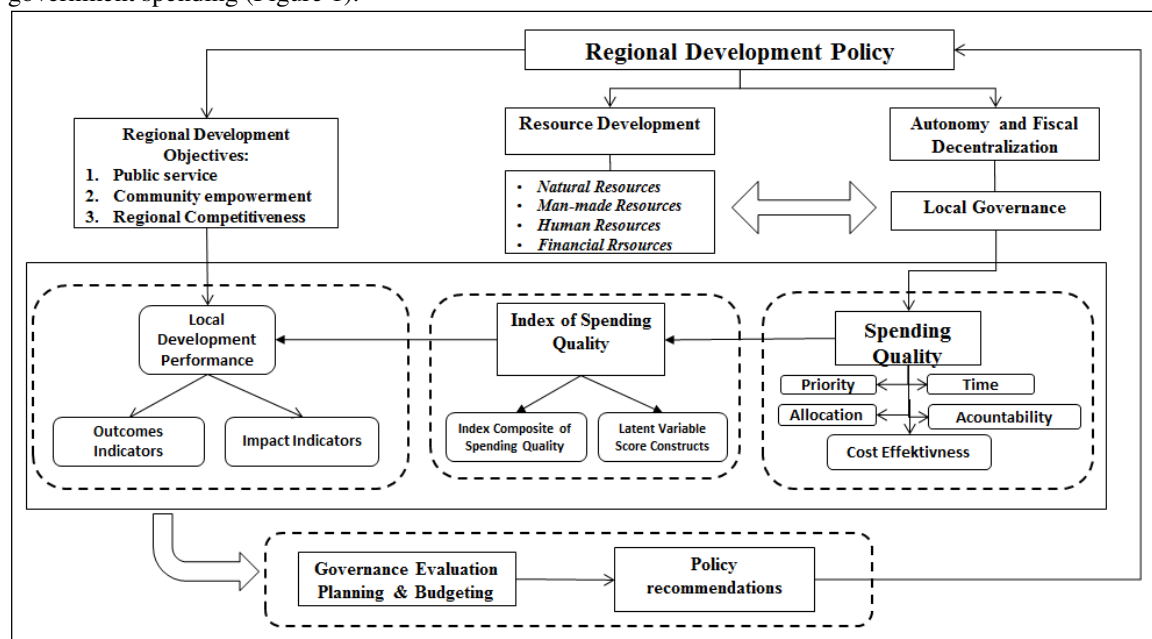


Figure 1. Logical Framework of spending quality local government

Measuring the spending quality of local government require a particular model, given the quality of spending is an abstract concept, unobservable. The validity and reliability of indicators as measured variable should be confirmed in the measurement model for the resulting map quality of spending. This study aims to map the quality of spending, which is preceded by analyzing indicators that can be used in measuring the quality of local government spending, build a model formulation spending quality index calculation and produce a map of the quality of local government spending.

3.2 Data Collecting

The research data in the form of primary and secondary data. The primary data obtained through focus group discussion (FGD), in-depth interviews (depth interview) and observation. FGD conducted to identify the most relevant indicators based on the opinion of financial experts and practitioners in the area of government bureaucracy. The selected indicators also consider the availability of existing data in official institutions. Interview done to experts and implementing financial management areas both central and regional levels. Observations conducted on all stages of planning and budgeting. Analysis of primary data include information resulting in the identification of potential indicators of spending quality that can be used simultaneously performed secondary data collection. Secondary data includes data 33 provinces in Indonesia between the years 2009-2012, which came from government institutions such as the Central Bureau of Statistics (BPS), the Director General of the Regional Financial Balance (DJPK), Ministry of Finance, Director General of Regional Autonomy of the Ministry of the Internal Affair, and the Supreme Audit Agency (BPK).

3.3 Data Processing

The basic algorithm PLS-SEM follow a two-stage approach, the first score of the construct estimated through a four-step process and the second stage of the calculation of the final estimate of the outer weights and loadings (Hair et al., 2011). The first step in phase one, the proxy constructs a score computed in a linear combination of the value of standardized indicators (standardized). Calculations for early iterations until a proxy indicator combination has been done in software PLS-SEM as Smart-PLS. The second step, construct proxy computing to estimate the structural model. The third step, approximation to construct a score based on the results of the calculation of the second step. The fourth step, a proxy for the estimation of coefficients in the measurement model.

After computing the model parameters, further evaluation models. Two stages of evaluation, the evaluation of the measurement model and the subsequent evaluation of the structural model (Hair et al., 2011). Evaluation

of the measurement model, especially concerning the validity and reliability of the formative or reflective indicators used. In the reflective measurement model, construct reliability (CR) becomes the focus of assessment because it is an internal consistency estimate constructs. CR value for explanatory study ranged from 0.60 to 0.70. In addition, the reliability of the indicators shown by the indicator loadings greater than 0.70. Elimination indicators that have a low loading values can increase the value of CR.

The assessment of the validity of the model is focused on convergent validity and discriminant validity. Convergent validity was shown by the average variance extracted (AVE), which should be valued above 0.50. AVE value above 0.50 means more than half of the variation can be explained variance indicator construct. The criteria for evaluation of major structural model is the coefficient of determination (R^2) and the significance of the path coefficients. If the purpose PLS-SEM to explain variation in CONSTRUCTS the target, in this study the construct of quality shopping, then R^2 must be high (Hair et al., 2011). Loading obtained from the PLS-SEM is part of the composite index calculation method quality of spending. Method of preparation of this composite index using methods developed OECD (2008), Kondily (2010) and Octavian (2014) as follows:

- a) The preparation of a theoretical framework as the basis for the selection and combination of single indicators into a composite indicator that is meaningful;
- b) Identification of indicators based on levels of reliability, availability of data, spatial coverage, relevance and relationships between indicators. The use of proxy variables to be considered when the data are difficult to obtain;
- c) Imputation of missing data. This study uses a single data imputation;
- d) Selection indicator, the indicator is selected by considering the reliability and validity of indicators. PLS-SEM analysis has been providing measurement of these parameters;
- e) Normalizing data. Normalization be required because of the difference in the size of the data indicators used. The process of normalization will produce a value comparable indicators;
- f) Weighting. Weighting can be based on theoretical considerations, empirical analysis or expert opinion. This study uses a weighting method to utilize the results of the analysis of PLS-SEM;
- g) Aggregation between indicators and constructs. Aggregation can be done in linear, geometric or multiple criteria. Aggregation linear or geometric, weights express trade-off between indicators, while multiple criteria used to find a compromise between two or more of the goals set. This study, process of aggregation weight indicator is obtained by multiplying the weight indicators and weights constructs.
- h) Presentation of the results, the composite index should be able to give a simple yet accurate to the reader. To that end, the result of quality of spending index calculation is presented in the map.

4. Result and Discussion

4.1. Identification of Indicators and Model Quality Spending

Based on the FGD and expert opinion identified 41 indicators to 5 constructs the quality of local government spending (Appendix-1) and construction of structural equation model (Figure 2). Measurement model for all constructs in the form of a reflective measurement models. Constructs PRIORITY reflected by indicators that illustrate the suitability of the centre-provincial priority, the priority between documents conformity with the plan of the budget document, from the planning to the implementation stage. Priority indicators also reflect consistency in the area achievement minimum service standards. Constructs ALLOCATION mirrored by the eight indicators. Eighth these indicators can be divided into two groups, the first allocation of expenditure based on the classification of types of expenditure, namely personnel, expenditures of goods and services, capital expenditures and subsidies, grants and social assistance. Second, the allocation of expenditures by function is the function of education, health, employment and housing and economic functions. Actually there are nine classifications of local government expenditure by function, and the function allocation for the four budget absorbs more than 70%.

Constructs TIME reflected through five indicators. The first indicator concerns the timeliness of the adoption of legislation of local budgets (APBD). Timely enactment of the budget is very important because it reflects the timeliness of planning budget (backward) and implementation of the budget (forward). Regulation of the budget for next year, the slowest predetermined December 31 fiscal year. If there is a delay, it will be highly disruptive implementation of revenue and expenditure in the following year. So the timeliness of APBD be a crucial indicator. Other indicators concerning the timeliness of financial reporting and the evaluation of the regional administration reports. The financial statements submitted to the financial examination agency (BPK) not later than had been three months into the fiscal year. Based on this report, the BPK issued opinions that show

about the quality of local financial management system of administration. The evaluation report became the basis of the regional administration of the government to evaluate the regional government in the implementation of governance last year. This report concerns the aspect of governance is broader than the financial administration system, so that timely submission of this report reflects the reliability of local governance. Another indicator is the existence of regulations timeliness of public service standards (PSP) and standard operation and procedure (SOP). SPS regarding the timeliness of services associated directly with the public (out), while the SOP relating to punctuality into the organization.

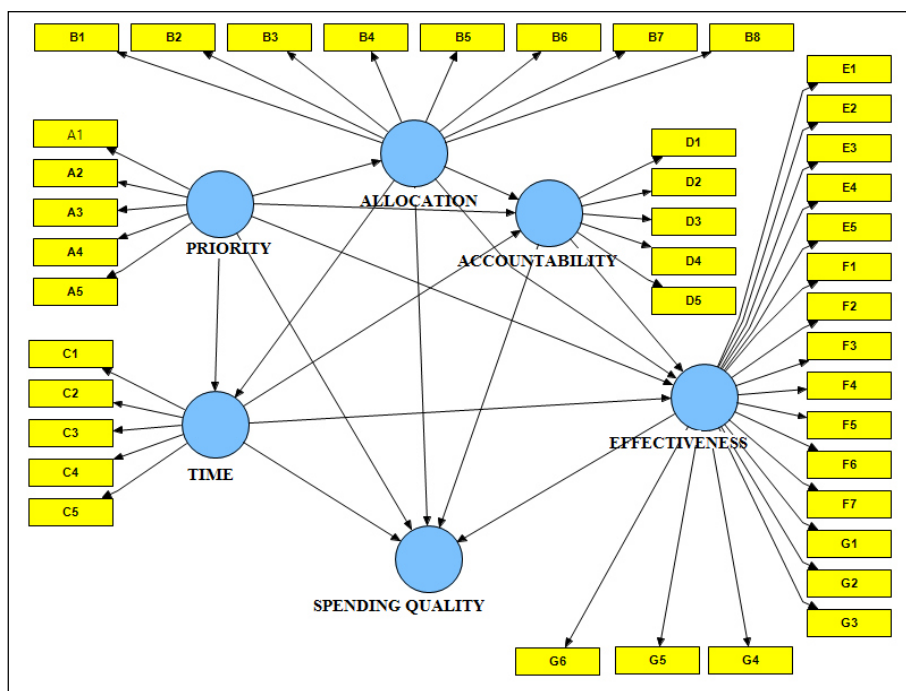


Figure 2. Conceptual Structural Equation Model of Local Government Spending Quality

Constructs ACCOUNTABILITY reflected by the five indicators. The existence of budgeting information media show information disclosure. Disclosure of this information provides an opportunity for citizens to know what their tax money is spent, what the spending priorities, how the allocation for education, health and infrastructure development. Budget information can also open the access of citizens to find out how the role of their representatives who sit in the legislature in the budget deliberations. Do they fight for the aspirations of the public or their own interest. Briefly, availability of media information into the main prerequisite of transparency and accountability. The next indicator concerns the BPK's opinion on the financial statements of local government. Currently, Opinion BPK has been a tool of legitimacy to the success of local government financial management. Even the central government gives rewards for regions receiving an unqualified opinion (WTP). Previously, procurement of goods and services of local governments done manually so tightly corruption. The existence of a system of electronic expenditure (e-procurement) is considered as the best way to prevent corruption and improve the efficiency of government spending.

Constructs EFFECTIVENESS reflected most indicators. It is intended to capture the concept of measuring the effectiveness regarding output indicators, results or outcomes and impact. Output indicators is represented by five indicators of the performance of the work units in the fields of education, health, public works, environmental and development planning. The outcome indicators are represented by six indicators such as electricity service coverage, illiteracy, elementary school enrolment, immunization coverage, sanitations and drinking water services. The impact indicator is represented by seven indicators such as poverty, unemployment, income inequality, economic growth, income per capita, human development index and the index of the environment. Output indicator, the result is assumed to be directly reflected in the financial year (t), an indicator of the results can be felt year after (t + 1), and indicators of impact two years later (t + 2).

The analysis using SEM-PLS models found 14 indicators were not reliable (loadings <0.4), namely A4 (-0.0521), B2 (-0.2969), B4 (0.0105), B5 (-0.1132), B6 (0.0329), B7 (-0.2186), B8 (0.0000), C4 (0.3927), D5 (0.3369), F2 (-0.3293), F3 (0.0177), F4 (-0.0956), F5 (0.3178) and F7 (-0.4477). Against these indicators, following the advice Hair et al. (2011) were eliminated from the model. This elimination will increase the value Composite Reliability (CR). After elimination of unreliable indicator, the calculation parameters with PLS-SEM

repeated that actually produce indicators with loadings > 0.4 and CR > 0.7. According to Hair et al (2011), this indicator in the selection process, consider the theoretical existence of indicators remain a guideline.

After many model parameters calculation process, the most optimum model is obtained with 16 indicators that reflect five constructs in the final model quality of spending (Figure 3). These indicators consist of three indicators PRIORITY constructs (A1, A3, A5), representing 96% of the variance constructs (CR = 0.960). Two indicators ALLOCATION (B1, B3) reflects the 77.3% variation of the construct, three indicators TIME (C1, C2 and C5) reflects 79.8% of the variance constructs, two indicators ACCOUNTABILITY (D1 and D2) reflects 78.8% of the variance construct and six indicators EFFECTIVENESS (E2, E3, F1, F6, G1 and G2) reflects 87% variation in the construct. Values CR-CONSTRUCTS construct meets the requirements of reliability (CR > 0.70). PRIORITY indicator may reflect a 96% variation CONSTRUCTS. Overall, the fifth such constructs can substantially QUALITY explained 92.6% of the variance ($R^2 = 0.926$). Convergent construct validity, as indicated value AVE also meets the requirements (> 0.50). The complete results of the analysis of the parameters included in Appendix-2.

PRIORITY constructs have three reflective indicators were strongly and significantly correlated each suitability development priorities (A1) (loading 0.937; t-stat. 30.12); Synchronization priority in the work plan work units (A3) (0.937; 49.72) and Implementation of the priorities in the implementation budget document (A5) (0.955; 63.87). These results confirm that the priority spending areas can be seen from the local government's ability to maintain consistency spending priorities appropriate national and regional priorities. The next priority should be spelled out in the action plan working units (SKPD) and implemented in the budget implementation document (DPA-SKPD). These indicators become important nodes in the planning of local government spending priorities.

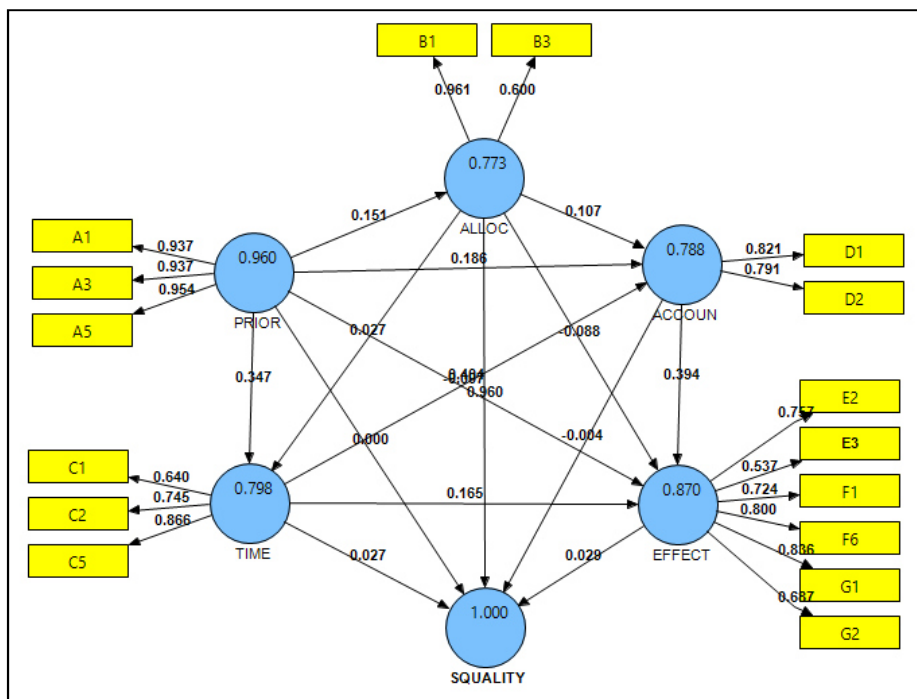


Figure 3. Diagram Line Spending Quality Model (Value Loadings: values on the arrow to the box, Path Coefficient: the values on the arrow to the circle, and Construct Reliability: the values in the circle)

The constructs ALLOCATION reflected by two indicators are strongly correlated and significant. First, the proportion of spending on personnel allocation (B1) by loading 0.961 and t-stat. 66.87. Second, the proportion of capital expenditure indicator (B3) with loading and t-stat. 0.601 and 4.96. Both indicators are also very important because it covers more than 70% realization of the local government budget allocations.

TIME construct reflected the strong correlation and real by three indicators. The first indicator, Timely enactment of regulations Budgets (APBD) (C1) with value loading and t-stat: 0.640 and 4.89. Local government spending can only be implemented after the budget specified in local regulations. Local regulations budget also contains about targets revenue both from local revenue (PAD), the fund balance as the general allocation fund (DAU), a special allocation fund (DAK) and Tax Revenue and Non-Tax, as well as miscellaneous income legal. Hence the timeliness of the budget-setting regulations is crucial in influencing the quality of expenditure. The second indicator, timely preparation and submission of the examination of financial statements to the Supreme Audit Agency (BPK) (C2). The third indicator is the existence of Operation Standards and Procedures (SOPs)

(C5). SOPs are written instructions about what to do, when, where, by whom, how do I do, what is needed and serve as guidelines for any officer or employee in carrying out its duties and functions. Therefore, the existence of SOPs are closely related to the timeliness of service delivery to the public.

ACCOUNTABILITY constructs can be reflected through the indicators availability of information media budgeting (D1) and indicators of BPK opinion on the financial statements of local governments (D2). D1 indicator has a strong correlation and real as defined by the value of the loading and t-stat. respectively 0.821 and 10.87. Similarly, the indicator D2 by loading 0.791 and real significance (t-stat. 11.54). It becomes empirical evidence that instruments of media and external auditors have an important role in improving the quality of expenditure.

There are six indicators of the effectiveness of performance indicators that reflect sustainable development. Health performance indicators (loading 0.757; t-stat. 12.61) and the performance of public works (0.537; 5.45) illustrates the perceived performance indicators in the short term after the shopping is done. Indicators of coverage of electricity (0.836; 21.27) and illiteracy (0.687; 6.31) is an indicator of the results, the model parameters to prove the effect of spending occurred a year (t + 1) after the spending has done. The indicators HDI (0.800; 17.10) and poverty (0.724; 7.56) perceived influence significantly after two years (t + 2).

4.2. Model Formulation of Spending Quality Index

The result of the calculation of model parameters on PLS-SEM used as a basis for preparing the calculation quality of spending. Loading indicator becomes weighting of indicators of the model, while the value of weight constructs made of composite reliability. The process of aggregation weight indicator is obtained by multiplying the weight indicators and weights constructs. Aggregation results shown in Table-1.

Table 1. Aggregation Weight Indicators Calculation of Quality Spending Index

No	Indicators	Weight			
		Indicators	Construct	Total	Normalized
1	Suitability development priorities (A1)	0.937	0.960	0.900	0.084
2	Synchronization priority in the work plan Work Units (A3)	0.937	0.960	0.900	0.084
3	Implementation of the priorities in the implementation budget document (A5)	0.955	0.960	0.916	0.085
4	The proportion of spending on personnel allocation (B1)	0.961	0.773	0.743	0.069
5	The proportion of capital expenditure (B3)	0.601	0.773	0.464	0.043
6	Timely enactment of regulations Budgets (C1)	0.640	0.798	0.511	0.047
7	Timely submission of Financial Statements (C2)	0.745	0.798	0.595	0.055
8	The existence of the Standard Operation Procedure (SOP) (C5)	0.866	0.798	0.691	0.064
9	The availability of information media budgeting (D1)	0.821	0.788	0.647	0.060
10	Opinion Audit Agency (BPK) (D2)	0.791	0.788	0.624	0.058
11	Performance of health affairs (E2)	0.757	0.871	0.659	0.061
12	Performance of public works affairs (E3)	0.537	0.871	0.467	0.043
13	Poverty rate (F1)	0.724	0.871	0.630	0.059
14	Human Development Index (HDI) (F6)	0.800	0.871	0.696	0.065
15	Coverage of electricity (G1)	0.836	0.871	0.727	0.068
16	Number of Illiterate (G2)	0.687	0.871	0.598	0.056
	Total			10.769	1.000

Results of aggregation (Table 1) relevant to the theoretical framework. PRIORITY a major prerequisite of quality spending (Juanda et al., 2014), while Effectiveness is a measure of success in performance-based budgeting system (Shah, 2007). This is in line with the result of the aggregation, which shows the accumulated weights PRIORITY 0.252 (0.084 + 0.084 + 0.085) and the accumulated weight gain EFFECTIVENESS 0.351 (0.061 + 0.043 + 0.059 + 0.065 + 0.068 + 0.056). Based on the results of this aggregation, encapsulated formulations quality of spending index calculation as follows:

$$\text{SPENDING QUALITY INDEX} = (0.084A1 + 0.084A3 + 0.085A5) + (0.069B1 + 0.043B2) + (0.047C1 + 0.055C2 + 0.064C3) + (0.060D1 + 0.058D2) + (0.061E2 + 0.043E3 + 0.059F1 + 0.065F6 + 0.068G1 + 0.056G2) \dots\dots\dots (1)$$

Construct expressed in the equation:

$$\text{SPENDING QUALITY INDEX} = 0.252 \text{ PRIORITY} + 0.112 \text{ ALLOCATION} + 0.167 \text{ TIME} + 0.118 \text{ ACCOUNTABILITY} + 0.351 \text{ EFFECTIVENESS} \dots\dots\dots(2)$$

The results of government spending quality index calculation provinces in Indonesia period 2009-2012, presented in the form of spending quality map (Figure 4). Most of the provinces in Indonesia, in 2009 had spending quality between high and medium categories. There are 15 provinces (45%) in the high category, 13 provinces (39%) medium category, while the very high category there are four provinces (12%) and only one province (3%) were categorized as low-quality spending. Conditions of spending quality in 2010 better than ever. None of the provinces with the low spending quality, even more than half of the province (28 provinces) into the category of high and very high. However, a change in the province with a very high quality spending. Three provinces were previously categorized as degraded, only South Sulawesi who remain in the category of spending is very high quality. Delays absorption of spending, consistency and effectiveness of spending priorities into the cause of decreased quality of spending in 2011. There are 14 provinces (42%) to the category of moderate to low spending quality. Conditions of spending quality in 2012 are still not better than before. Even the number of provinces that fall into the category of medium and low, rising to 21 provinces (64%). In general, the challenges of managing the planning and expenditure for the year 2012 is still in the aspects of timeliness, occurred in 26 provinces (79%), lack of effectiveness in spending in achieving performance targets in 19 provinces (58%) and the highest priority in spending in 12 provinces (36%). In addition, there is the tendency of a decrease in spending accountability in 5 provinces (15%).

Looking at the distribution of quality spending by the island, then the quality of spending high to very high widely available in Java, the tendency of deterioration in the quality index of spending occurred in Sumatra, Kalimantan and Sulawesi islands of Bali, Nusa Tenggara and Maluku have an index fluctuated between moderate and low. The provinces in Papua Island tend to have a consistent spending quality index medium and low. Concluded in general, Eastern Indonesia has the quality of spending is lower than Indonesia Region West.

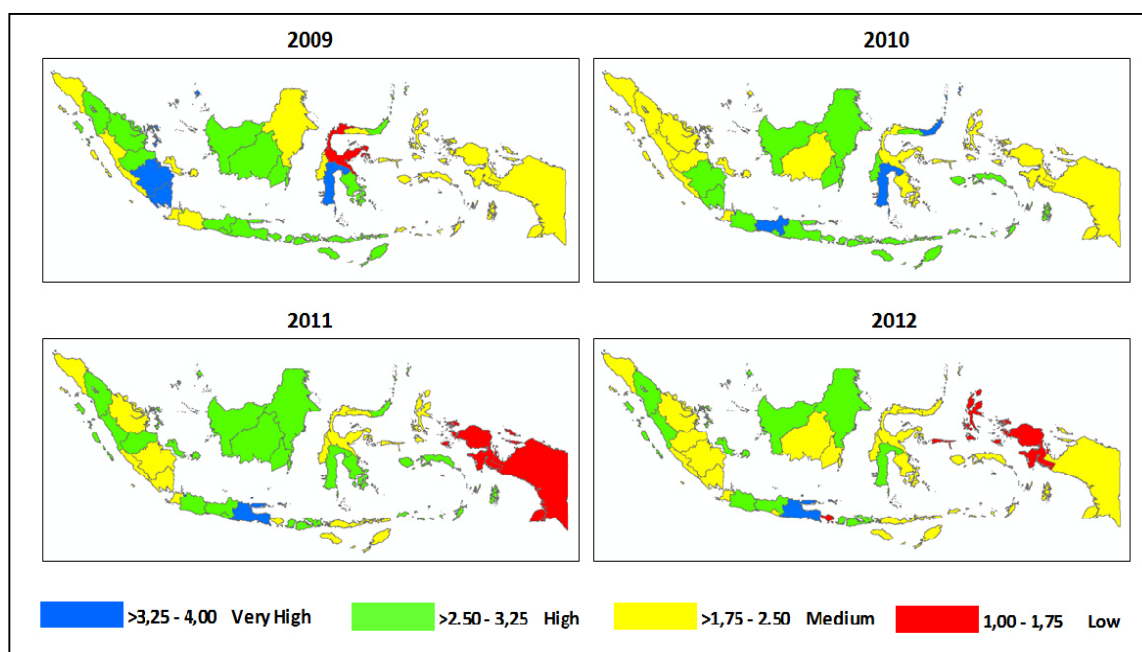


Figure 4. Map of Provincial Spending Quality Index in Indonesia Year 2009-2012

5. Conclusion and Recommendations

There are 5 constructs that forms local government spending quality (QUALITY) namely priorities of spending (PRIORITY), allocation of spending (ALLOCATION), timeliness of spending (TIME), transparency and accountability of spending (ACCOUNTABILITY), and the effectiveness of spending (EFFECTIVENESS) and 16 indicators reflective of spending quality. Indicators of sustainable development is reflected by the construct EFFECTIVENESS areas related to basic services (especially education and health), infrastructure, human development and poverty eradication. EFFECTIVENESS found indicators that affected quality of spending in the current year (t), the year after (t + 1) and two years after the spending has done (t + 2). Indicators index constituent quality of spending reflects the holistic dimension of planning and budgeting system of regional development, from the planning, implementation and evaluation of performance. Completely indicator of the quality of spending, making the quality index of regional expenditures could potentially be as one of the important indicators in the management of regional development in achieving the goals of sustainable development.

Analysis of spending quality models with PLS-SEM constructs resulted in a score or Latent Variable Score (LVS) for constructs of spending quality. LVS can be used to guide the formulation of policies for improving the quality of expenditure. Provinces that have moderate to low LVS require priority handling and focus on that aspect. Example, analysis a score of LVS for priority, shows provinces with priority scores LVS problem with low to moderate. The main problem is the prioritization of spending priorities, oversee the priorities of the national and regional level and priority to maintain consistency during the implementation of the budget. Improved regulation drafting, discussion and determination budget formulations at the legislature.

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Appendix

Appendix-1. Constructs and Local Government Spending Quality Indicators

Constructs, Description	Indicators				
	Term	Description	Data types, Value	Code	Data Sources
PRIORITY (something that takes precedence or priority in local government spending)	Suitability development priorities	Conformity assessment of national and regional development priorities are implemented by local work unit	Interval (0-4)	A1	1*
	Implementation of Minimum Service Standards (MSS)	Assessment of the amount of business that has been applied in accordance with the MSS	Ordinal (1,2, 3,4)	A2	1*
	Synchronization priority in the work plan Work Units	An assessment of the number of program plans of local governments are accommodated in the work plan the work unit area divided by the number of program work plans local work unit assigned to the medium-term development plan	Interval (0-4)	A3	1*
	Synchronization priority in the work plan and budget of the regional work units	An assessment of the number of program work plans local work unit are accommodated in the work plan and budget work unit area divided by the number of programs the local work unit work unit area	Interval (0-4)	A4	1*
	Implementation of the priorities in the implementation budget document	An assessment of the number of program work plans local work unit are accommodated in the budget implementation document work unit area divided by the total program budget implementation document working units.	Interval (0-4)	A5	1*
ALLOCATION (Part of local government spending are provided for a purpose)	The proportion of spending on personnel allocation	Total spending of personnel divided by the total expenditure budget amendment.	Interval (0-100%)	B1	2*
	The proportion of the allocation of spending on goods and services	Total expenditures for goods and services divided by total expenditure budget amendment.	Interval (0-100%)	B2	2*
	The proportion of capital expenditure	Total capital expenditures divided by total expenditure budget amendment.	Interval (0-100%)	B3	2*
	The proportion of the allocation of subsidies, grants and social aid	Total expenditure subsidies, grants and social aid to total expenditure budget amendment.	Interval (0-100%)	B4	2*
	Expenditure allocation function of education	Total expenditure function of education divided by the total expenditure in the budget changes the function of education.	Interval (0-100%)	B5	2*
	Expenditure allocation function of health	Total health expenditure to total expenditure function health functions in a budget amendment.	Interval (0-100%)	B6	2*
	Expenditure allocation function of public works and housing	Total expenditure functions of public works expenditures divided by total common job functions in a budget amendment.	Interval (0-100%)	B7	2*
	Spending allocations functions of economic	Total expenditures divided by total expenditure economic functions of	Interval (0-100%)	B8	2*

Constructs, Description	Indicators				
	Term	Description	Data types, Value	Code	Data Sources
TIME (Timeliness in the preparation, adoption and implementation of the budget)		economic functions in the budget amendment.			
	Timely enactment of regulations Budgets	Score assessment of the timeliness of the determination of the budget in accordance with the local regulations	Ordinal 1=not exactly 4=exactly	C1	1*
	Timely submission of Financial Statements	Score assessment of the timeliness of financial statements in accordance with	Ordinal 1=not exactly 4=exactly	C2	1*
	Timeliness of local government management report (LPPD)	Score assessment of the timeliness of LPPD accordance with the provisions	Ordinal 1=not exactly 4=exactly	C3	1*
	The existence of legislation on Public Service Standards	Score assessment of the Regulation on Public Service Standards in accordance with the provisions	Ordinal 1=not exactly 4=exactly	C4	1*
	The existence of the Standard Operation Procedure (SOP)	Score assessment carried out by the SOP where the work unit for each affairs.	Interval (0-4)	C5	1*
ACCOUNTABILITY (Aspect of transparency and accountability of local government budgets)	The availability of information media budgeting	An assessment of the number and type of media used to disseminate information budgeting.	Interval (0-4)	D1	1*
	Opinion Audit Agency (BPK)	Assessment of the results of the opinion the financial statements of local government by BPK	Ordinal (1,2,3,4) 1=Unnatural (TW) 2 =Ungives Opinion (TMP) 3 =Reasonable to Exception (WDP) 4=Fair without Exception (WTP)	D2	3*
	The ratio of follow-up the findings of the BPK	The results of the follow-up assessment of the findings of the BPK by local governments	Ordinal (1,2,3,4)	D3	1*
	Availability of the system of electronic procurement	The results of an assessment of the availability of the system of electronic procurement (e-proc.) of local government	Ordinal 1=Nothing 4=Exist	D4	1*
	The existence of a community satisfaction survey	Results of research on the presence or absence of a community satisfaction survey conducted by the local government.	Ordinal 1=Nothing 4=Exist	D5	1*
EFFECTIVENESS (Usefulness of local government expenditures in achieving certain performance targets)	Performance education affairs	The assessment results against key performance indicators (KPI) in education	Interval (0-4)	E1	4*
	Performance of health affairs	The assessment results against KPI in health	Interval (0-4)	E2	4*
	Performance of public works affairs	The assessment results against KPI of public works	Interval (0-4)	E3	4*
	Performance environmental affairs	The assessment results against KPI of the environmental affairs	Interval (0-4)	E4	4*
	Performance development planning affairs	The assessment results against KPI of development planning affairs	Interval (0-4)	E5	4*
	Poverty rate	Head Count Index (HCI-P0) is the percentage of the population under the poverty line (PL).	Interval (0-4)	F1	4*
	Unemployment rate	percentage of the number of unemployed to the labor force.	Interval (0-4)	F2	4*
	Gini index	the size distribution of income is calculated based on income class	Interval (0-4)	F3	4*

Constructs, Description	Indicators				
	Term	Description	Data types, Value	Code	Data Sources
	Economic growth	The rate of change GDP at constant prices	Interval (0-4)	F4	4*
	The GDP per capita	Total GDP at current prices divided by the population	Interval (0-4)	F5	4*
	Human Development Index (HDI)	The composite index of human development achievements based on a number of basic components of quality of life, which includes a long and healthy life; knowledge, and a decent life.	Interval (0-4)	F6	4*
	Environmental Quality Index (IKLH)	Composite index that describes the quality of the environment that includes three component consisting of Air Pollution Index, Air Pollution Index and Index of Forest Cover	Interval (0-4)	F7	5*
	Coverage of electricity	The proportion of households that have electricity PLN	Interval (0-4)	G1	4*
	Number of Illiterate	proportion of people of a certain age who can not read or write Latin letters or other letters to the residents of a certain age.	Interval (0-4)	G2	4*
	Enrollment at primary school	The proportion of children aged 7-12 years who attend school at primary school level.	Interval (0-4)	G3	4*
	Immunization coverage	Comparison between the number of children aged 1-2 years who has been fully immunized with the number of children 1-2 years	Interval (0-4)	G4	4*
	Sanitation coverage	The proportion of households who have basic sanitation facilities: bathroom, washing areas, toilet	Interval (0-4)	G5	4*
	Drinking water coverage	The proportion of households that have a water source with the distance to the shelter droppings / faces > = 10 m	Interval (0-4)	G6	4*

Note of Data Sources :

1* The Director General of Regional Autonomy, Ministry of Internal Affairs: Local Government Management Evaluation Report (LPPD) Year 2009-2012;

2* DJPK, the Ministry of Finance: Regional Financial Data Years 2009-2012;

3* The Supreme Audit Agency (BPK) of the Republic of Indonesia: Regional Financial Audit Reports Year 2009-2012

4* The Central Bureau of Statistics (BPS) of the Republic of Indonesia Year 2010-2013

5 * Ministry of Environment (MOE): IKLH Report 2009-2012 (<http://www.menlh.go.id/>)

Appendix-2 Parameter Analysis Results SEM-PLS of Local Government Spending Quality

No	Indicators	Loading	T-Stat.	Construct	CR	AVE
1	Suitability development priorities (A1)	0.937	30.12	PRIORITY	0.9601	0.889
2	Synchronization priority in the work plan Work Units (A3)	0.937	49.72			
3	Implementation of the priorities in the implementation budget document (A5)	0.955	63.87			
4	The proportion of spending on personnel allocation (B1)	0.961	66.87	ALLOCATION	0.7732	0.642
5	The proportion of capital expenditure (B3)	0.601	4.96			
6	Timely enactment of regulations Budgets (C1)	0.640	4.89	TIME	0.7979	0.572
7	Timely submission of Financial Statements (C2)	0.745	10.29			
8	The existence of the Standard Operation Procedure (SOP) (C5)	0.866	36.66	ACCOUNTABILITY	0.7879	0.65
9	The availability of information media budgeting (D1)	0.821	10.87			
10	Opinion Audit Agency (BPK) (D2)	0.791	11.54			
11	Performance of health affairs (E2)	0.757	12.61	EFFECTIVENESS	0.8705	0.533
12	Performance of public works affairs (E3)	0.537	5.45			
13	Poverty rate (F1)	0.724	7.56			
14	Human Development Index (HDI) (F6)	0.800	17.10			
15	Coverage of electricity (G1)	0.836	21.27			
16	Number of Illiterate (G2)	0.687	6.31			