Budget Surplus Determinants in Indonesian Regional Government Budgets from a Budgetary Slack Behaviour Point of View

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ABSTRACT

This study contemplates the impact of budgetary slack behaviour on surplus in regional government budgets (Anggaran Pendapatan dan Belanja Daerah or APBDs) in provincial governments throughout Indonesia. Using data for the APBD of all Indonesian provincial governments from 2008 to 2012, the results show that budgeting behaviours motivated by self-interest, myopic behaviour, and dependence on transfers from central government all impact on budget surplus. On the other hand, deposit utilization for reasons of self-interest has an insignificant impact on budget surplus. These behaviours are modified by self-interest motivations related to avoiding uncertainty and the inability to predict future budgets, and these factors lead provincial governments to continue to use incremental budgeting methods. This study contributes to the literature of budgeting by investigating slack behaviour using secondary data to objectively investigate the topic and to complement findings from primary data used in previous studies. This contribution will enable easier detection of slack behaviour using existing data.

JEL Classification: M41, M48

Keywords: Budget surplus, budgetary slack, regional government budget, local government, incremental budgeting

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INTRODUCTION

Since reforms in 1998, the central government of Indonesia has continued to actively issue policy packages with the goal of reform in government finance. Law No. 17 of 2003 states that the central/local government shall prepare financial statements, and that these statements shall then be audited by the Audit Board of the Republic of Indonesia (Badan Pemeriksa Keuangan) and be given an opinion as an assurance of government financial oversight (William *et al.*, 2011).

Local government financial reports are used as objects in many studies. For instance, local own-source revenue as a local dependency indicator (Rahayu, 2005), the effectiveness of regional expenditure, especially capital expenditure, in tackling poverty levels (Sumenge, 2013), and budget surplus (slack) as an indicator of budget realization effectiveness (Hadi, 2013).

SILPA, or budgetary slack, refers to budget surplus from the preceding year which may be included or carried over as one of the receivable components allocated in the succeeding year's budget. It can thus be allocated to finance the next budget year's activities. The Directorate General of Fiscal Balance (2013a) states that the trend of budgetary slack value throughout Indonesia increased yearly from 2009 to 2012, with an average increase of 32% per annum. It also suggests that budgetary slack has both a positive and a negative impact (DJPK, 2013a).

A positive impact of budgetary slack is the reciprocity of current accounts or interest incomes from deposit services (DJPK, 2013a). However, it creates an unfortunate impact on regional growth, since delays in expenditure will also result in delays in delivery of the benefits of government expenditure on local people. In the performance-based budget process, the results and impacts of the budget are key success factors. When the budget fund is deposited in a financial institution, the impact on the community from interest income is not significant compared to the disbursement of the funds for the welfare of that community in accordance with the government's planned programme. Negative impacts also include the emergence of opportunistic behaviour in budget preparation (Sularso *et al.*, 2014). This agrees with Smith's (2012) and Large's (1997) studies which state that the availability of deposit funds/savings may trigger agents to use them in order to reduce workload. The result of such behaviour is the non-optimal performance of these agents.

According to the report from the DJPK (2013a), the cause of the rise in significantly increased budgetary slack lies in two factors. The first is an increase in realized revenues in certain regions with local revenue sources. The second is the presence of undisbursed expenditure in some areas located in non-producing regions.

Conclusions can be drawn from the above descriptions regarding the presence of variance in government expenditure and revenue. Bradshaw (2007) asserts that the easiest indication for detecting budgetary slack will be the emergence of variance of realized spending and income from their respective plans. The DJPK (2013a) study indicates that there is a budgetary slack in Indonesian local government resulting in budget surpluses in regional revenue and expenditure budgets (APBDs).

Budgetary slack has relevance to the presence of agency conflict. Such conflict arises when a principal designates another person as an agent to perform services for the principal's interest (Jensen, 1976). In reality, conflict cannot be avoided if agents have their own interests which contrast with those of principals.

Eisenhardt (1989) mentions several causes of agency conflict: self-interest, risk aversion, and asymmetric information. Bradshaw (2007) states that budgetary slack is most likely to occur when budget performance is made to serve as a performance indicator for the reaching of budgetary targets.

Another cause includes the desire to overcome uncertainty (Hilton *et al.*, 2000). This behaviour is carried out to avoid potential risks that may arise from resource allocation, and also to obtain budget flexibility.

Sularso *et al.* (2014) assert that budgetary slack is encouraged by any agent's opportunity to exploit slack resources to achieve their own desires by all, and even illegal, means, by way of both concealing information and abuse of authority.

Bradshaw (2007) asserts that simple variance of expenditure and revenue realization are not indications of budgetary slack, and that risk-averse behaviour against procurement of non-current assets may be used as an indicator of budgetary slack. Agents creating budgetary slack will be more likely to realize procurement of current assets and avoid non-current asset exploitation due to myopic behaviour. Myopic behaviour refers to agent behaviour motivated by current profit expectations. The consequences will include budget policies which avoid capital expenditure and infrastructure, the long-term benefits of which will be left out of the organization's priorities.

Another budgetary slack indicator is the utilization of deposit funds for personal benefit (Smith, 2012). Ideally, deposit funds are allocated optimally, as achieved by the United States government through its Budget Stabilization

Fund. However, Smith (2012) asserts that deposit funds tend to be used to reduce workload by either lowering revenue targets or avoiding risk by way of overestimating spending targets. Self-interested behaviour of this type also occurs in Indonesian local government, where these funds are used for agents' own interests, that is to reduce workload in achieving revenue targets (Sularso *et al.*, 2014; Mardiasmo, 2002).

Another factor is the dependency on the central government's transfer funds, which can also be an indicator of budgetary slack (Munandar, 2001). Dependency behaviour results when an agent is reluctant to risk unaffordable expenditure and so waits until the transfer amount expected is known before commencing budgeting. Dependency on transfer funds may reduce budgetary slack, as all funds will be fully utilized for budget expenditure.

This study investigates factors or determinants of surpluses in APBDs from behavioural viewpoints by using secondary data. It is expected that this study may contribute to the body of knowledge regarding the use of secondary data as an indication of the occurrence of budgetary slack. The use of secondary data has several advantages over primary data, including, among others, accessibility, the ability to provide data comparison, usefulness in identifying problems, the ability to expand the studied samples, and greater reliability compared to perceptions, since secondary data are factual and based on actual transactions occurring in an institution. Primary data based on perceptions rely on feelings, opinions and memories and are therefore highly subjective. The use of secondary data can offer a more objective measurement and hence help both to reduce subjectivity and to complement the findings of previous research.

Other contributions to the body of knowledge are the investigation of the behavioural motives for budgetary slack in the public sector. This issue is important since an understanding of behaviour will help management to design accounting systems which can minimize dysfunctional behaviour (Hudayati, 2002). This study also includes economic indicators, namely inflation, poverty level and the unemployment rate, as control variables to investigate their impact on budgetary slack.

THEORETICAL REVIEW

Behavioural accounting theory

Behavioural accounting theory posits that behaviour has a key influence on accounting systems and management performance. Accounting behaviour is considered as influencing the accounting process, including the economic events which result from it (Ardiansyah, 2009). Hudayati (2002) asserts that behavioural accounting looks at behavioural influences on accounting system design and their reverse relationship.

Viewed from the perspective of agency theory, behavioural accounting is based on the presence of asymmetric information between agent and principal (Shield, 1993). Eisenhardt (1989) asserts that agency theory can be explained by three basic assumptions about human nature: that all humans place their own interests ahead of those of others (self-interest), that humans have limits in perceiving their futures (bounded rationality) and that human beings tend to avoid risks (they are risk averse).

This research investigates these assumptions about human nature reflected in the behaviours of local government agents that cause budgetary slack. Several studies have used budget as an observational tool in investigating agency conflict (Raharjo, 2007). This choice reflects the close relationship between principals and agents in the process of preparing budgets. The budgeting process can also provide an overview of the, sometimes contradictory, motives of principals and agents in achieving their interests and objectives.

Budgetary process theory

Budgetary process theory, which asserts that budgets are incremental, was put forward by Wildavsky (1964). This incremental concept views budgeting as a gradual process: that is that, in the context of this study, government agents use budget items from the previous year and then gradually raise (increment) the amount for the following year's budget. The budget plan will then be cut by a certain percentage by the principal (represented by a council).

Budget theory is currently evolving in line with the budgeting dynamics of today (LeLoup, 2002). Bozeman (1982) asserts that the concept of incremental budgeting is no longer consistent with national developments. Several studies have attempted to come up with new budgeting concepts, including Kamlet (1987), who examines bargaining determinants. Meyers (1995) was also concerned about post-incrementalism strategies of agents and behavioural changes.

In the early 1980s, the incremental concept began to be problematic in explaining some budgeting phenomena. One issue in this developing difficulty was the process of bargaining between agent and principal which occurred as a

result of changes in the federal budget system in the United States. Another factor that makes the incremental concept irrelevant in the United States is that since the end of the 1970s the economy of the United States has been less stable than previously.

This research aims to determine the pattern of the budgeting process applied in Indonesia local government. Several behaviours can indicate whether the budgeting process is applying an incremental or a bargaining method. The incremental method tends to produce budgetary slack as it is rooted in the self-interested behaviour of agents in protecting themselves from uncertainty and from their inability to predict entirely accurate budgets for the future.

Budgetary Slack in APBD

According to Government Regulation No. 24 of 2005, the term 'budget' refers to the guidelines for actions to be implemented issued by the government, including revenue, expenditure, transfers and financing plans, as measured in rupiahs (Rp) and subject to a systematic classification arrangement for a single period. According to this regulation, the budgeting process in APBDs shall be based on the proposal submitted by the government to the Regional Representative Body (DPRD) for hearings and discussion until a final result is reached.

The budget surplus arises due to greater actual revenue than planned, that is, the realized failure of the budget to reach its target, including greater receivables than expenditures. It represents the final position of government budget realization after the completion of revenue, expenditure and financing processes.

According to Isnadi (2010), budgetary slack behaviour, especially in local government budgets, is driven by three motivations: self-interest, ratcheting and other parties' self-interest. Self-interest in the budget leads to budget plans being higher than normal. This occurs because the agent has an opportunistic motive for the budget they have planned, such as the desire to make extra income or to create work flexibility.

Self-interest may also occur in other parties (Latifah, 2010) such as associates and principals, in this case the Regional Representative Body (DPRD). This is because the DPRD may provide budgeting evaluations and may recommend budget inputs in which associates may have their own project interests contained in the budget plan.

Self-interest can be motivated by ratcheting; that is, when an agent opts to maintain a sustainable budget allocation which is lower than the plan put forward, and this can be seen as unethical (Merchant and White, 2017). The agent will mark up the budget plan expecting that when the plan value is downgraded by the principal, its value will not be less than the budget plan they have actually prepared (Leone, 2002). A first hypothesis can thus be formulated as follows:

Hypothesis 1: Self-interest behaviour in the budget has a positive impact on budget surplus

Bradshaw (2007) asserts that risk-averse behaviour in relation to procurement of non-current assets may be used as an indicator of budgetary slack. As a result of myopic behaviour, agents creating budgetary slack will be more likely to realize procurement of current assets and avoid expenditure on non-current assets. Myopic behaviour refers to the agent being motivated by current profit expectations (Rausch and Wall, 2015). The consequences will include budget policies in which the long-term benefits of capital expenditure and infrastructure are not prioritized (Mizik, 2010).

As detailed in Bradshaw's (2007) study, myopic behaviour in asset procurement budgeting will reduce realization of non-current assets, because the cost of non-current asset procurement is much greater than of current asset procurement. As a result, the targeted realization of expenditure cannot be reached, thus raising the budget surplus. A second hypothesis can thus be formulated as follows:

Hypothesis 2: Myopic behaviour in asset procurement budgeting positively affects budget surplus

Smith (2012) asserts that the presence of deposit funds may lead to self-interest motivations. In APBDs, deposit funds arise from the presence of budgetary slack from the previous budget year. It may be used as funding to cover a budget deficit in the succeeding year, for funding the implementation of continued direct expense activities such as personnel expenditure, for goods and services expenditure and capital expenditure, and for financing other liabilities up to the end of the current budget year.

Smith (2012) states that deposit funds tends to be used to either reduce workload or to avoid risks. Agents will utilize them by determining revenue targets within their capabilities so that they do not need to work hard to reach targets, or by determining spending targets for expenditure plans which utilize deposit funds and thus do not need

careful planning (Grizzle, Stewart and Phillips, 2015). Local governments in Indonesia also use the funds created by budgetary slack behaviours for personal gain (Sularso *et al.*, 2014). The presence of the personal gain motivation indicates that local government in Indonesia does not use the savings made for public purposes. The motivation of personal interest in deposits is disclosed by Mardiasmo (2002) as being to reduce workload so that the agent does not necessarily have to work hard to reach the budget target. Another motivation according to Panhwar (2014) is to put in place a bigger spending plan although such spending is unnecessary because of the available savings funds. Another motivation according to Isnadi (2010) is to reduce the risks that may arise and to use the funds for personal gain.

The consequences arising from the use of deposit funds for personal benefit include the agent determining a revenue target below their capabilities or a spending target over the expenditure plan, for all the preceding reasons. As a consequence, when the realization of the revenue exceeds the target and realization of expenditure fall below the target, a budget surplus will be created by the end of the budget period. A third hypothesis can thus be formulated as follows:

Hypothesis 3: Self-interest behaviour in the use of deposit funds has a positive impact on budget surplus

Dependency behaviour is also a factor in budgetary slack (Wang, 2017), in that agents are reluctant to take the risk of unforeseen expenditure and so wait for the transfer from government before starting their budgeting (Munandar, 2001). The agent's motivations are to avoid risks arising from the budget plan (Park, 2017) and to prevent themselves from being burdened by budget plans with revenue targets the financing of which may lead to them performing poorly.

The agent will first wait for the transfer amount to be announced by the central government before establishing a budget plan. Munandar (2001) asserts that risk-averse motivation arises from uncertainty and inability to predict the succeeding year's budget. This is supported by Bastian's study (2008) which asserts that in 2008, 11 out of 33 provincial governments delayed in approving their APBD through anticipating the amount of central government transfer funds to local government.

Dependency on transfer funds will result in all budgeted funds coming from government. This is supported by Affandy's (2007) work which asserts that some local government expenditure in Indonesia is met by central government transfers, while the remainder is funded by local own-source revenue. A fully disbursed transfer fund will result in the reduction of budgetary slack as no deposit funds will be coming from transfer funds. A fourth hypothesis, thus, can be formulated as follows:

Hypothesis 4: Dependency on transfer funds has a negative impact on budget surplus

RESEARCH METHOD

This study examines the behavioural relationship of budgetary slack with the incidence of budget surplus. It attempts to contribute to the use of secondary data as an indicator of the occurrence of the budgetary slack. This is because previous studies on budgetary slack have mainly used primary data and as a result it is difficult to draw general conclusions from them. The variables used in this research are shown in Figure 1.
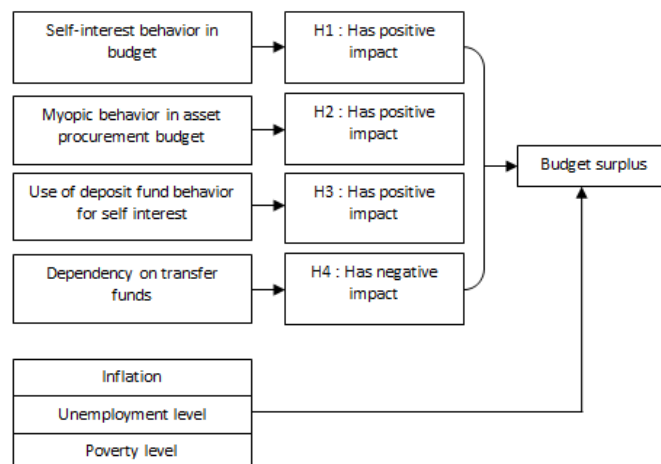

Figure 1 Theoretical framework

The research model is a multiple regression model using panel data from all 33 provinces in Indonesia from 2008 to 2012. This timeframe is chosen as 2013 and 2014 data are largely unavailable, especially the economic and statistical indicators used here. During the study period, economic conditions were quite dynamic because of the economic crises of 2008 and 2011. This dynamic condition may have brought about different behaviours in local government agents in responding to the prevailing situations through budgeting, such behaviours being the focus of this study. The study was also carried out during one political regime, thus there were few changes in and conflicts of regulations.

The regression model is as follows, while the operationalization can be seen in Table 1.

$$LNSLP_{it} = a_0 + a_1 BLJ_{it} + a_2 AST_{it} + a_3 DSP_{it} + a_4 KTG_{it} + a_5 INF_{it} + a_6 PNG_{it} + a_7 KMS_{it}$$

where
LNSLP	= Natural logarithm of budget surplus
BLJ	= Self-interest behaviour in expenditure budget
AST	= Myopic behaviour in asset procurement budget
DSP	= Self-interest behaviour in the use of deposit funds
KTG	= Dependency on transfer funds
INF	= Inflation
PNG	= Unemployment level
KMS	= Poverty level
a_0	= Intercept
$a_1, a_2, a_3,$ etc.	= Independent variable regression coefficient
i	= n-th province data
t	= n-th year data

This research investigates behavioural factors as determinants of budgetary slack using secondary data. Prior research has rarely used this type of data, with the majority using experimental methods (Chow, Cooper and Haddad, 1991; Stevens, 2002; Davidson, 2018) or survey methods (see Van der Stede, 2000; Douglas and Wier, 2000; Rausch and Wall, 2015). In this study, several measurements were developed using secondary data from the literature for the variables under study, with the purpose being that these operational definitions can serve as early warnings (rather than sole evidence) of budgetary slack formation. The indications provided by the secondary data can then be complemented or followed up by other data to determine the factors contributing to the slack.

The measurements developed in this study are as follows: First, to measure self-interest behaviour in budgeting, the ratio of government performance achievement to realized expenditure is used. A higher ratio represents the behaviour of proposing a larger amount of budgeted expenditure than needed to achieve certain targeted performance (Young, 1985; Riharjo and Isnadi, 2009; Latifah, 2010). Performance achievement higher than realized expenditure means that performance could be achieved with a lower amount of budgeted expenditure.

Second, myopic behaviour in asset procurement budgets is measured using the ratio of current assets to non-current assets. This behaviour reflects the preference to procure current rather than non-current assets (Bradshaw, 2007) with the intention of obtaining short-term gains. The third variable is self-interest behaviour in the use of deposit funds; this is measured by the ratio of budgetary slack in the previous year to deficit planning in the current year. This behaviour is reflected by choosing to use the deposit fund either to optimize the planned budget or to create slack resources for personal gain (Sularso *et al.*, 2014). The last independent variable behaviour is dependency on transfer funds, measured by the ratio of general allocated fund (Dana Alokasi Umum or DAU) to total regional revenue. The higher the ratio, the greater the dependency on the transfer from central government.

The control variables used in this study are also secondary data and are drawn from the macroeconomic perspectives of inflation, unemployment and poverty level. These are factors which have been found in previous research to be considered by local government in determining budgets (Chapman, 1982; Bogomolova *et al.*, 2017). Inflation, unemployment and poverty level are predicted to have negative associations with budgetary slack. A high level of inflation will increase prices and hence increase expenditure and budget absorption, leading to a decrease in budgetary slack. Similar predictions are also applicable for unemployment and poverty, as high level of these factors will encourage the government to spend substantial amounts, including in the form of cash assistance funds, to help reduce unemployment and poverty levels. The higher level of expenditure required to mitigate these conditions will reduce the amount of budgetary slack (Chapman, 1982).

Table 1 Operationalization of variables

No	Variable	Operationalization	Source
1.	Budget surplus	Budgetary slack value in LRA (budget realization report)	BPK LHP (audit results report)
2.	Self-interest behaviour in the expenditure budget	Ratio of government performance achievement to realized expenditure budget	BPK LHP and LAKIP (performance audit report)
3.	Myopic behaviour in asset procurement budget	Ratio of current assets to non-current assets	BPK LHP
4.	Self-interest behaviour in the use of deposit funds	Ratio of budgetary slack year t-1 to deficit plan in year t	BPK LHP
5.	Dependency on transfer funds	Ratio of DAU to total regional revenue	BPK LHP
6.	Inflation	Inflation value in Bappenas report (2013)	Bappenas
7.	Unemployment level	Unemployment level in Bappenas report (2013)	Bappenas
8.	Poverty level	Poverty level in Bappenas report (2013)	Bappenas

The use of panel data provides advantages as well as disadvantages. The weakness of panel data is that data distribution tends to be abnormal, especially in the social sciences. According to Gujarati (2003), such abnormality can be ignored as long as the number of observations exceeds 30. On the other hand, the advantages of panel data include that the regression model can be used to more deeply analyse social and economic effects than in other data models. Another advantage is a greater degree of independence due to greater amounts of observation data when combined with time series and cross-sections. The greater degree of independence can cause the coefficient variant to be narrower, so that coefficient value becomes more stable.

A statistical test is performed to identify the model's significance as a whole as well as in parts, and to decide the significance of the independent variables. To determine whether the regression model uses common effects, fixed effects or random effects, the redundant fixed effect, Hausman, and Lagrange multiplier tests were used in this research. The statistical test performed after the regression model checked for best linear unbiased estimator (BLUE) parameters. The BLUE parameters were obtained following the model tests using multicollinearity and heteroscedasticity tests. No autocorrelation test was performed because it only occurs in correlations between time series.

RESULTS & DISCUSSION

Descriptive statistics

Budgetary slack decreased in 2009 and then bounced back until 2012, with an average increase of 52%. The value far exceeds the deviation in the provinces of Aceh, West Java, DKI Jakarta and East Kalimantan provinces. The budgetary slack value of Aceh exceeding the standard deviation 2008 to 2009 was related to the assignment of Aceh and Nias Rehabilitation and Reconstruction Agency (BRR Aceh-Nias) which ended in 2009. BRR Aceh-Nias received rehabilitation funds from the state budget through the BRR and its APBD received a special allocation for reconstruction from central government. Since this phenomenon only occurred in one year (2008–2009), the Aceh budgetary slack is still included in the data and is treated similarly to other data instead of as an outlier.

The self-interest behaviour ratio in the budget is 1.14 on average. This indicates that most provincial governments have a greater level of performance outcomes than realized budget. Of 165 observations, only one shows that realization of expenditure did not reach the budget plan, by the provincial government of Lampung in 2011. The average behavioural myopic ratio in asset procurement budgets is 0.09. This indicates that the trend of procurement of non-current assets is greater than current asset procurement. The trend of myopic behaviour ratio increased annually from 2009 through 2012.

In the use of deposit fund behaviour, the average ratio is 1.03. This indicates that most of the provincial governments planned their budget deficits as equivalent to budgetary slack from the previous budget year. The trend in this ratio from 2008 to 2012 has increased. The average ratio of dependency on transfer funds from 2008 to 2012 was 0.36, and this indicates that most of the provincial governments were dependent on central government's transfer fund as 36% of their total revenue budgets.

Table 2 Descriptive statistics

Year	Statistics	SILPA (in Rp trillion)	The ratio of self-interest to asset procure-ment budget	The ratio of myopic behaviour	The ratio of self-interest behaviour in the use of deposit funds	The ratio of dependency on transfer funds	Inflation	Unemploy-ment	Poverty level
2008	Mean	0.57	1.21	0.11	1.16	0.36	12.19	7.38	16.15
	Std. Dev	0.93	0.13	0.08	0.78	0.21	2.39	2.75	7.47
	Minimum	0.01	0.77	0.01	0.21	0.00	7.88	3.31	4.29
	Maximum	4.45	1.42	0.36	5.08	0.72	18.74	15.18	35.12
2009	Mean	0.42	1.11	0.07	0.77	0.35	3.44	7.23	15.07
	Std. Dev	0.76	0.15	0.05	3.37	0.21	1.42	2.64	7.54
	Minimum	0.00	0.83	0.01	-16.47	0.00	1.66	3.13	3.62
	Maximum	3.76	1.55	0.19	7.74	0.71	7.51	14.97	35.71
2010	Mean	0.59	1.12	0.07	1.02	0.33	7.19	6.55	14.36
	Std. Dev	0.96	0.11	0.05	0.63	0.21	1.66	2.55	7.30
	Minimum	0.01	0.86	0.01	-1.44	0.00	3.87	3.06	3.48
	Maximum	4.91	1.31	0.23	2.38	0.69	10.62	13.68	34.88
2011	Mean	0.75	1.10	0.09	1.19	0.31	3.89	5.71	13.16
	Std. Dev	1.26	0.12	0.05	0.62	0.19	1.14	2.66	6.38
	Minimum	0.00	0.79	0.01	-1.02	0.01	0.70	2.32	3.75
	Maximum	6.47	1.29	0.22	2.69	0.67	6.63	13.06	31.92
2012	Mean	0.88	1.14	0.09	1.02	0.29	4.48	5.34	12.23
	Std. Dev	1.75	0.11	0.06	1.09	0.18	1.30	2.23	5.74
	Minimum	0.01	0.86	0.01	-2.85	0.00	0.22	2.04	3.70
	Maximum	9.46	1.33	0.23	4.60	0.62	6.65	10.13	27.04
Total	Mean	0.69	1.14	0.09	1.03	0.33	6.24	6.44	14.19
	Std. Dev	1.22	0.13	0.07	1.63	0.20	3.64	2.67	7.79
	Minimum	0.00	0.77	0.01	-16.47	0.00	0.22	2.04	3.48
	Maximum	9.46	1.55	0.36	7.74	0.72	18.74	15.18	37.53

Correlation test

Table 2 shows that not all of the independent variables have a significant correlation to budgetary slack. Significant correlations occur only to BLJ, AST, KTG, PNG and MSK variables. Significant positive correlations occur in BLJ, AST, and PNG variables. Positive correlation indicates that the greater the value of these variables, the higher the increase in the budgetary slack value. Significant negative correlations are found in KTG and MSK. Negative correlation indicates that if the value of the three variables increased, the budgetary slack value would decrease.

Table 3 Pearson correlation test

	SLP	BLJ	AST	DSP	KTG	INF	PNG	MSK
SLP	1.0000							
BLJ	0.3608***	1.0000						
AST	0.1900***	0.2433***	1.0000					
DSP	0.0794	-0.0366	0.0709	1.0000				
KTG	-0.5292***	-0.2331***	-0.2324***	-0.0677	1.0000			
INF	-0.0453	0.2528***	0.1367*	0.0206	0.2025***	1.0000		
PNG	0.3867***	0.2261***	0.0662	0.0222	-0.4016***	0.0646	1.0000	
MSK	-0.2479***	-0.3096***	-0.2158***	-0.0704	0.2240***	0.1501*	-0.1447*	1.0000

* Significant correlation at alpha = 10%
** Significant correlation at alpha = 5%
*** Significant correlation at alpha = 1%

Model test

Based on the Hausman test and Chow test using STATA software for panel data, the research model shows that fixed effects is the appropriate model. Furthermore, based on the value of the variance inflated factor (VIF), a multicollinearity problem in the self-interest behaviour ratio variable in the budget is known to have a value of 19.22 from a threshold value of 10. This problem is solved by performing centring, i.e., moving the median to obtain more stable data.

In the heteroscedasticity test, the model is shown to have issues because after the Wald test, the value of prob>chi2 is less than alpha (0.05). Such a heteroscedasticity issue results in bias when drawing conclusions from the model. The heteroscedasticity issue is eliminated by weighting data with a robust standard error.

Table 4 Regression results

$$LNSLP_{it} = a_0 + a_1BLJ_{it} + a_2AST_{it} + a_3DSP_{it} + a_4KTG_{it} + a_5INF_{it} + a_6PNG_{it} + a_7MSK_{it} + e_{it}$$

	Exp. sign	Coeff.	z	P>[z]
BLJ	+	1.079	2.80	0.080*
AST	+	6.856	5.36	0.003***
DSP	+	-0.019	-1.26	0.251
KTG	-	-3.245	-7.50	0.000***
INF	+	0.027	1.96	0.164
PNG	-	0.014	0.56	0.353
MSK	-	-0.035	-3.74	0.030**
CONST	+	26.95	95.06	0.000
WALD chi2	62.31			
Prob>chi2	0.0000		Obs.	165
R-sq	0.4742		Group	33

*significant at alpha 10%
*significant at alpha 5%
*significant at alpha 1%
SLP: SILPA value; BLJ: Self-interest behaviour in the budget; AST: myopic behaviour in asset procurement budget; DSP: self-interest behaviour in the use of deposit funds; KTG: dependency behaviour on transfer funds; INF: inflation; PNG: unemployment level; MSK: poverty level

From Table 4 it can be seen that the coefficient of determination (R-sq) in the model is 0.4742. The R-sq value explains that the regression line can represent 47.42% of the variation of the dependent variable, while the remainder is explained by other factors not included in the model. From the chi-square distribution, it can be concluded that the model is significant as indicated by prob>chi2 value of 0.0000. Significant variables are the self-interest behaviour variable in the budget, myopic behaviour variable in the asset procurement budget and the variable of dependency on transfer funds. The other main variable, self-interest behaviour in the use of deposit funds, is not significant at alpha 10%. Two of the control variables present in the model, inflation and unemployment level, are not significant. However, the poverty level variable significantly affects the budgetary slack.

Discussion

Self-interest behaviour in budgets
The regression result shows that, consistent with behavioural accounting theory, self-interest behaviour in the budget has a positive impact on budget surplus. Self-interest behaviour in budgets represents the agent marking up budget plans more than their ability to disburse the funds budgeted. This behaviour is driven by the motivation to reduce risk so that agents can be more flexible and steadier in performing their work (Young, 1985).

The second motive is ratcheting, where an agent makes efforts to ensure that when the budget proposal is cut, the final budget will remain sufficient to fund all agent activity plans for the budget year concerned. The third motive is opportunistic, as a result of which agents will make use of budgets for their own interests. These three motives will result in agents marking up the cost of budget items so that by the end of the budget year the budget will not be completely realized. Another consequence is procurement projects whose values are greater than reasonable or the procurement of goods or services which are not needed (Pahnwar, 2014).

Myopic behaviour in asset procurement budgets
The regression result shows that myopic behaviour in asset procurement budgets has a positive impact on budget surplus. Myopic behaviour occurs when an agent uses a short-term policy to improve performance, but in the long term harms the organization or, in the public sector case, the public interest.

Meliala (2014) asserts that many government policies have not been long-term oriented. Many policies are found not to take into account industrial competitiveness, future employment, sustainable economic growth or small-scale economic growth (such as in rural areas). The reasons governments conduct myopic behaviour are uncertainties and difficulties in predicting future budgets, the complex and prolonged planning and budgeting process and impact on popularity.

Niskanen (1968) assumes that governments tends to maximize the budget for their interests as a proxy of power. This is known as the 'political greed' model. Such greed is accompanied by short-term or myopic perspectives so that the government budget will provide benefits when they come to power.

One example of myopic behaviour in asset procurement budgets is disclosed by the Inspectorate of the Ministry of Education and Culture (2014), which disputed the large number of social expenditure assignments originally allocated to facility and infrastructure expenditures, which in the implementation were assigned to cash social assistance expenditure. This is unfortunate, as facilities and infrastructure will provide benefits in the long run. The shift of social expenditure into cash social assistance resulted in the realization of non-current asset expenditures being unattainable, resulting in further budget surplus.

Self-interest behaviour in the use of deposit funds

The regression result shows that self-interest behaviour in the use of deposit funds has a positive impact on budget surplus. The insignificant of this impact may be a result of the fact that the agent has failed to consider budget surplus as slack resources. Asmara's work (2010) asserts that budgetary slack of the previous year did not affect the allocation of a ceiling, or the type of expenditure, in the Aceh province. Danayati's (2014) study also asserts that local governments are considered not to pay attention to the presence of budgetary slack funds and thus they do not affect their budget plans.

The results of this research indicate that governments use the incremental method in budget preparation, and this is consistent with budget process theory in which the previous year's budget items are used with gradually raised values. If the budget plan is unbalanced due to the presence of bthe udgetary slack, the provincial government often budgets their financing expenditure to balance this aspect. To achieve a balanced budget, a provincial government will budget local government capital participation, revolving funds or lending that will not be realized until the end of the budget year concerned.

Jones (1992) argues that the use of incremental budgeting in an organization occurs because it is easy to implement or because the agent concerned is facing uncertainty or inability to predict future budget. Jones (1992) also asserts that the use of incremental budgeting has roots in the agent's desire to avoid potential conflicts or occupational risks when they are operating in an uncertain environment or are not able to predict future budget.

Dependency on transfer funds

The regression result shows that dependency on transfer funds has a negative impact on budget surplus. The presence of this factor is supported by Adi's study (2008) which asserts that such behaviour occurs in the local government of cities and districts in Java Island.

Bastian (2008) mentions that in 2008, 11 out of 33 provincial governments experienced delays in legalizing their APBD. These delays were caused by provincial governments waiting for the amount of central government transfers to be announced in June, thus delaying budget processes.

CONCLUSIONS & RECOMMENDATIONS

This study has found that budgetary slack behaviour has various motives. The most frequently found are self-interest motivations and the motivation to avoid risk of uncertainty or the inability to predict future budgets. Self-interest motivation does not only come from agents within the local governments, but also from third parties such as partners and the national/regional parliament. The existence of the motivation to avoid risk of uncertainty and the inability to predict future budgets indicates that budgets are compiled using the incremental method. The likely reason for using incremental budgeting is that it is easy and can avoid future conflicts (Jones, 1992). Skousen (2009) states that budgetary slack behaviour will worsen when management uses the incremental method of budgeting. This is because management already knows and uses the ideal ceiling that would most likely be approved when planning the ceiling for the next year's budget. This behaviour will provide a budget gap for management to use to optimize the perception of its performance. The gap will also be utilized by management to create reserve funds for use when there is an undesirable risk or when expenses increase. Incremental methods will provide opportunities for management agents to use the budget for their personal interests (Harvard Business Review, 2006).

Operationalization of variables in this study can serve as an early indicator of budgetary slack. Such an indicator is expected to be a preliminary warning of potential budgetary slack in provincial government budgeting. Ways of preventing such behaviour will include:

1.   Consistently optimizing participatory planning and budgeting activities before drafting the budget plan. At present, such activities are merely formalities and do not form part of the substance of planning and budgeting (Kadafi, 2012).

2.   Optimizing the functions and roles of the Regional Inspectorate in Internal Supervisory Units by giving them flexibility in reviewing the government budget. The Regional Inspectorate has been authorized to review local government budget plans subject to Ministerial Regulation of Finance no. 194/PMK.02/2013. However, limitations in human resources and independence-related flexibility will remain an obstacle for it to function optimally.

3.   Optimizing external supervision from the Audit Board of the Republic of Indonesia (BPK) and law enforcement agencies such as the Corruption Eradication Commission in overseeing other parties, such as associates and the DPRD, which have self-interests in the government budget.

4.   Application of performance appraisal initiated by the government on policies with long-term effects. In addition, central government should provide incentives or assistance to local governments to encourage their performance, especially in ways which encourage economic health, empower the quality of human resources and infrastructure requiring multi-year processes and provide long-term impacts on the improvement of local potentials.

5.   Sanctioning provincial governments which overrun in formulating and approving regional government budget. In addition, central government should provide incentives for provincial governments to improve their regional economy standards. Incentives can be given for an increase in economic indicators in relation to predetermined thresholds.

Limitations

This study contributes to the use of secondary data to measure the occurrence of budgetary slack behaviour so that the results of research can be generalized. In accordance with Bradshaw's (2007) research, secondary data should be used to investigate and reveal behavioural indications for budgetary slack. However, to obtain complete information about behaviour, further observation is needed.

To acquire more information about behaviour requires triangulation of methods and data sources, such as observation and interview methods and other primary data sources. Self-interest behaviour in the budget has a variety of motivations, so further observation is needed to determine what particular motivations lead to such behaviour.

A similar issue also applies in the analysis of myopic behaviour in asset acquisition budgets, and in dependency on transfer funds. A deeper observation is necessary to identify the causes of such phenomena. For example, myopic behaviour in this study is indicated by the ratio between current assets and non-current assets and thus the behaviour is only observed through the composition of assets; however, myopic behaviour can also occur in the policies and quality improvements of local government spending. Myopic behaviour will cause a government to increase the quantity of apparatus and personal facilities rather than to provide budget for improving the quality of regional apparatus.

Another limitation of the use of secondary data lies in its accessibility for researchers. Although secondary data can be accessed by government institutions, researchers need substantial effort through formal procedures to access such data, as it is spread across several institutions, such as in this case the Audit Board of the Republic of Indonesia (BPK), the Central Bureau of Statistics (BPS) and the Ministry of Administrative and Bureaucracy Reform (KemenpanRB). It is suggested that future studies should anticipate the effort needed in collecting the data by providing ample time to contact the related institutions beforehand or by using informal channels or networks to speed up the process.

Lastly, this study takes only a sample of provincial governments in Indonesia, whereas there are also city governments and districts which could also be considered. Research is likely to provide a more complete picture regarding the budgetary slack if city and district governments are also included in the model, and the conclusions drawn about the budgetary slack might differ depending on the type of government investigated.

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