Government Internal Control System and Local Government Administration Performance: Evidence from Indonesian Local Governments

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Summary: This study investigates the effect of local government internal control systems on local government administration performance. We use secondary data from the Ministry of Internal Affairs, Financial and Development Supervisory Agency, Indonesian Statistics Bureau, and respective local government financial statements and websites. We generate a set of panel data from 508 local governments during 2017-2019 with 1524 observations analysed with panel data regression. We evidence that several local governments still have low and medium administration performance in 2017-2019 that has not met the expectation of the Ministry of Internal Affairs as stated in the strategic plan in 2015. Our analysis provides empirical evidence that control environment, risk assessment, and information and communication positively affect local government administration performance. Our result provides implications to the Financial and Development Supervisory Agency to continuously optimise internal control system development programs in Indonesian local governments and the Ministry of Internal Affairs to have higher enforcement of local government administration performance achievement.

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Local governments in Indonesia plays a great role in the administration of public affairs (Sutopo, Wulandari, Adiati, & Saputra, 2017), mainly thanks to the implementation of regional autonomy. Government performance is an issue that has always been in the public spotlight in Indonesia. The central government, represented by the Ministry of Internal Affairs, hold the authority to assess the Local Government Administration Performance (LGAP) every year. The assessment determines the achievement of local government affairs implementation measured by inputs, processes, outputs, outcomes, benefits, and impacts to produce reliable values. The problem is that the achievement of performance by local governments in Indonesia still cannot meet the expectation set by the Ministry of Internal Affairs. Until 2018, there are still local governments that have not achieved 'high' performance[1]. This achievement is certainly not in line with the target of the Ministry of Internal Affairs[2] , which expects all local governments to achieve at least a "high" performance level. Based on this issue, empirical research that comprehensively examines the performance of local government administration is very important, especially in terms of its determinants, to provide policy recommendations to achieve best practices.

One of the crucial factors in the context of local government performance is internal control (Benedek, Szenténé, & Beres, 2014; Urbanik, 2016). In Indonesian context, referring to PP/60/2008[3], the government internal control system is developed with the COSO (2013) concept to realise transparent and accountable financial management. Internal control plays a crucial role in realising organisational goals (Gyüre, 2012) that may include good performance achievement. However, this topic is considered to be less explored in the public sector literature, especially in empirical research. Several previous studies examining the role of internal control in public sector still contain limitations as the majority of previous studies still focus on the private sector (Dabbagoglu, 2012; Hillison, Pacini, & Sinason, 1999). Many studies also have limited number of research observations (Liu & Lin, 2012; Sutopo, Wulandari, et al., 2017; Utama, Evana, & Gamayuni, 2019). Therefore, the existing studies in the literature are not comprehensive.

This research presents a practical contribution by providing recommendations for developing effective internal control practices in local governments to realise good public accountability. In addition, this study contributes to the development of the literature by presenting a comprehensive analysis of internal control practices and their implications for local government administration performance.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Agency Theory

Jensen & Meckling (1976) state that the agency relationship is a relationship between the principal and the agent in which the agent acts on behalf of and for the principal's benefit with specific rewards. In agency theory, agents tend to maximise their interests but still try to fulfil the contract (Mantysaari, 2009). In this case, accountability is a manifestation of the agent's obligation to account for his actions. *Halim & Abdullah* (2006) reveal that agency theory also applies in the local government where the government acts as a public agent. If it is associated with efforts to realise local government accountability, one of them is good governance performance.

Local Government Administration Performance

Performance is one of the essential aspects of accountability for what has been done to other parties, which gives the authority. The government is obliged to provide public services with state resources, so the implementation must be carried out accountable (Sari, Ghozali, & Achmad, 2017). In the local government in Indonesia, the Ministry of Internal Affairs annually conducts a performance assessment on local government with the Local Government Administration Performance Evaluation (LGAPE) in order to evaluate the administration performance of government affairs, measured from inputs, processes, outputs, results, benefits, and impacts.

The development of the Local Government Administration Performance Evaluation (LGAPE) Index covers the comprehensive assessment on local government administrative affairs from policy making stage to implementation stage and being a foundation and primary reference of public services (Sari et al., 2017). The assessment contains a comprehensive indicators of government affairs as presented in *Figure 1*. Each indicator will be assessed and the final assessment score ranges from 1 to 4 (1 = low; 2 = medium; 3 = high; 4 = very high). Further, the Ministry of Internal Affairs issues Ministry of Internal Affairs Regulation Number 73 of 2009 concerning Strategic Plan of Ministry of Internal Affairs 2015-2019. The regulation sets a target that all Indonesian local governments can achieve at least high administration performance (level 3) in 2017.

Government Internal Control System

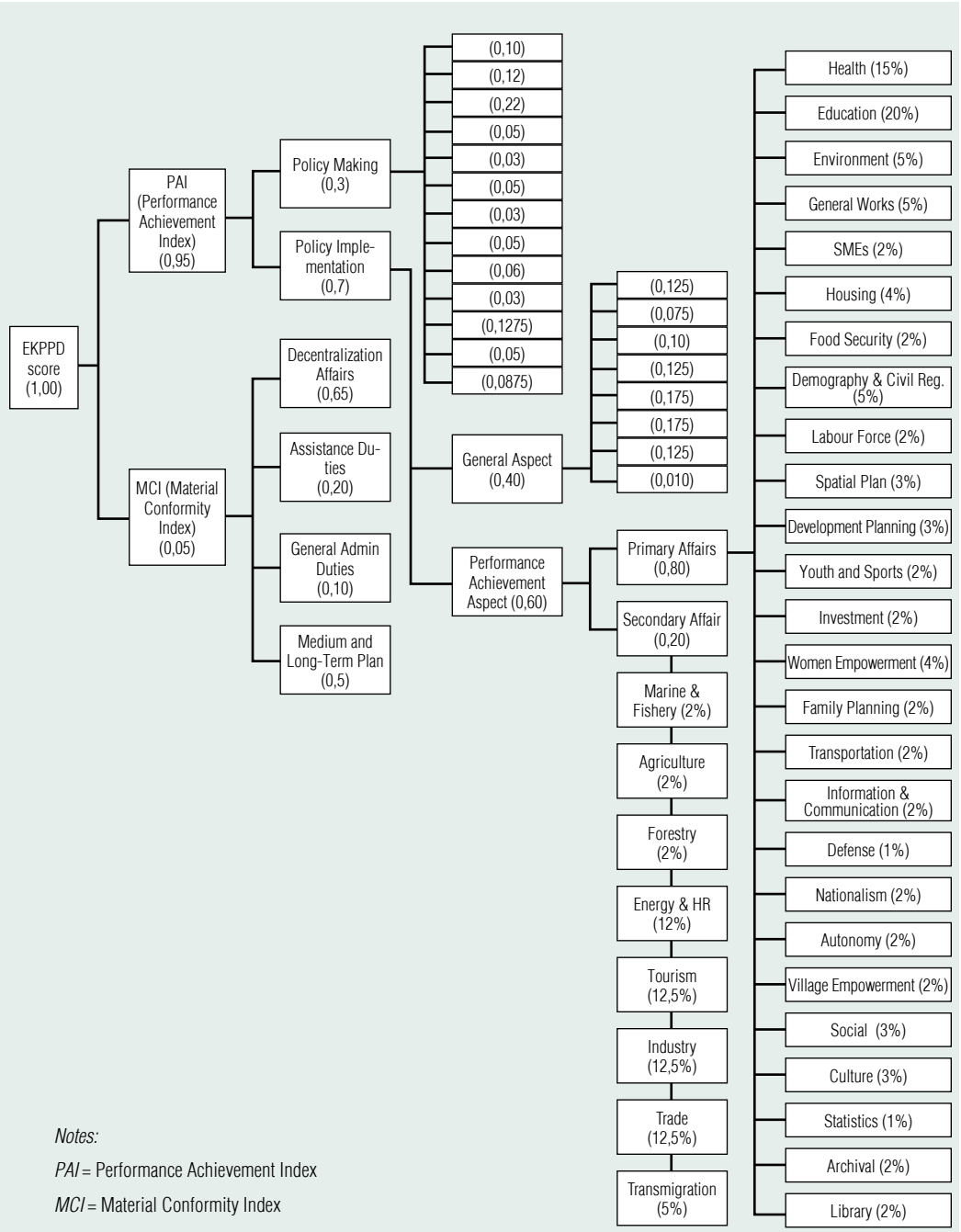
According to *COSO* (2013) concept, internal control is a process carried out by the organisation to ensure the realisation of operational effectiveness and efficiency, reliability of financial reporting, and compliance with applicable laws and regulations. The Indonesian government has implemented several important changes in public governance since the reformation in 1998. One of which is the establishment of government internal control system (SPIP) as regulated in PP/60/20085 that is applied in government institution from central to local government level.

Government internal control system is a manifestation of the government's commitment to promoting public accountability in which the development is adopting the COSO concept. The adoption of COSO framework in developing the internal control system is in line with international settings in which the framework has been adopted by many countries and its general validity has been accepted by scholars (Benedek, et al., 2014). COSO framework aims to provide reasonable assurance that the organisation of activities in a government agency can have effective and efficient goals realisation, reliable financial management and reporting, assets safety, and proper compliance with laws and regulations. With effective and efficient internal control system, the realisation of accountable and transparent state financial management can be achieved. In contrast, internal control deficiency results in poor management (Rácz & Tóth, 2021). Considering its importance, the development of internal control must be taken seriously and even deserved to be one of the priority in governance reform (Urbanik, 2016). Meanwhile, the elements of government internal control system (SPIP) include control environment, risk assessment, control activities, information and communication, and monitoring, following COSO concept.

Every year, the implementation of government internal control system is

Figure 1

PERFORMANCE COMPOSITE INDEX WEIGHT ASSESSMENT



Source: Local Government Administration Performance Evaluation (LGAPE) Manual Instructions[4]

evaluated by the Financial and Development Supervisory Agency (BPKP) and the Supreme Audit Board (BPK). The BPKP annually conducts assessment on government internal control system maturity to measure how well it has been implemented and developed in a government institution. This assessment will determine the maturity of internal control system. Meanwhile, the BPK also annually performs audit on government internal control system as a part of government institution's financial statement audit. The BPK will mention a list of findings related to government internal control system weaknesses along with the recommendations to improve it. Therefore, with these evaluation and audit activities, the implementation of government internal control system in government institutions in Indonesia can improve continuously to realize good governance and accountability.

Control environment and local government administration performance

The control environment affects the behaviour of employees in an organisation (COSO, 2013), which has implications for individual behaviour such as values, ethics, integrity, personnel policies, and organisational structure (Rubino, Vitolla, & Garzoni, 2017). With the existence of a conducive control environment, local government programs and activities will be able to be carried out by their plans and budgets so that implementation performance and accountability will be maintained, with the primary key being audit or inspection (Jones, 2008). With a proper control environment, local government administration can achieve high performance. Based on the description above, the hypothesis is stated as follows:

H_1: Control environment positively affects local government administration performance

Risk assessment and local government administration performance

The existence of risks opens up opportunities for deviant actions, especially in local government financial management, and is followed by increased risks that may not be aware of (Shanmugam et al., 2012). Thus, risk assessment is necessary (Dabbagoglu, 2012) through identification, evaluation, and risk management (Jones, 2008). *Rendon & Rendon* (2016) revealed that risks related to fraud could threaten organisational accountability, especially if fraud is exposed to the public, thereby damaging the organisation's reputation. Therefore, the existence of a proper risk assessment in every local government activity is essential, no matter whether the risk is significant or not. Risk assessment is also crucial in public governance (Wardhani, Rossieta, & Martani, 2017). *Báger* (2011) even recommends that risk mapping should be applied to a wider section in public sector. Therefore, risk assessment can be expected to result in high performance of local government administration following the *COSO concept* (2013). Based on the description above, the hypothesis is stated as follows:

H_2: Risk assessment positively affects local government administration performance

Control activities and local government administration performance

Control activities are needed to ensure that implementing activities have been carried out properly, namely through physical control,

performance reviews, and segregation of duties (Rendon & Rendon, 2016). Control activities are essential in improving performance (Al-Thuneibat, Al-Rehaily, & Basodan, 2015). Control activities are also needed to ensure procedures and policies (Mandzila & Zéghal, 2016). In essence, control activities include various activities that underlie comparisons between what is being done with ideal conditions so that optimal results are expected to be obtained. Thus, resource management will be optimal so that it is likely that the high performance of local government administration can be achieved (Koutoupis, 2012). Our hypothesis is formulated as follows:

H_3: Control activities positively affect local government administration performance

Information and communication and local government administration performance

Information and communication are crucial for implementing organisational activities (Al-Thuneibat et al., 2015), especially in decision-making (Naser, Al Shobaki, & Ammar, 2017). With proper information and communication, access to resources by unauthorised persons can be overcome (Lestari et al., 2019). Better information and communication result in good planning and thus subsequently bring optimal results so that the performance of local government administration is expected to be high. In addition, information and communication can also be manifested in the form of regulation as a legal framework to be followed. When a specific regulation is communicated and practised properly, the expected performance can be reached. In contrast, when a fundamental regulation is not communicated properly and the legal framework is too soft, it can result in performance and management issues (Melly, 2011). Thus, our hypothesis is stated as follows:

H_4: Information and communication positively affects local government administration performance

Monitoring and local government administration performance

Monitoring facilitates the organisation in assessing the quality of internal control continuously over time, and thus organisational goals can be achieved (Rendon & Rendon, 2016). *Petrakaki, Hayes, & Introna* (2009) investigate the implications of monitoring through e-government technology and found a positive impact on public service accountability. Monitoring allows the achievement of performance targets with consistent progress (Lestari et al., 2019). Therefore, optimal monitoring will improve performance and accountability (Kiabel, 2012). Based on the reference in the literature summarised above, the hypothesis is stated as follows:

H_5: Monitoring positively affects local government administration performance

RESEARCH METHOD

Population, samples, and research data

The population in this study is all local governments in Indonesia during 2017-2019. In this period, we examine the performance achievement of local governments following the fact that the Ministry of Internal Affairs targeted all local governments to have at

least "high" performance started from 2017. This study examines the entire population to produce a comprehensive research coverage to obtain findings with a high level of generalisation. This study uses secondary data obtained from authorised government agencies such as the Ministry of Internal Affairs, the BPK, the BPKP, the Indonesia Statistics Bureau (BPS), and the respective local government website. This study finally generates panel data with 1524 observations from 508 district/city local governments in Indonesia during the 2017-2019 fiscal year.

Research variables

We examine local government administration performance as a dependent variable as measured by the assessment score of local government administration performance evaluation published by the Ministry of Internal Affairs. As for the independent variable, the government internal control system is represented by control environment, risk assessment, control activities, information and communication, and monitoring. The score is obtained from the official assessment from BPKP report on the local government's internal control system. Each variable is assessed based on the indicators regulated in the Financial and Development Supervisory Agency Head Regulation Number 4 of 2016.[6] In addition, this study also employs several control variables to accommodate the factors outside independent variables. The summary of research variables along with the measurement is presented in Table 1 as follows.

Data Analysis

The initial analysis of our study is conducted with descriptive statistics to present a summary of our research data with univariate analysis that consist of frequency distribution, mean, minimum, maximum, and standard deviation value. We also check for variable correlation using Pearson correlation test. As for the main analysis for hypothesis testing purpose, we use panel data regression analysis. The general model of our regression is stated as follows:

$$LGAP_{i,t} = \alpha + \beta_1 CO\_ENV_{i,t} + \beta_2 RISK_{i,t} + \beta_3 CO\_ACTIV_{i,t} + \beta_4 INFO_{i,t} + \beta_5 MONI_{i,t} + \beta_6 LN\_LGASSET_{i,t} + \beta_7 LN\_LGREV_{i,t} + \beta_8 LN\_LGEXPEND_{i,t} + \beta_9 LGPOP_{i,t} + \beta_{10} LGCOM_{i,t} + \beta_{11} LGGEO_{i,t} + \beta_{12} LGTYPE_{i,t} + e$$

Information:
α : Constant
$\beta_1 \ldots \beta_{12}$: Regression coefficient
$LGAP_{i,t}$: Local government administration performance
$CO\_ENV_{i,t}$: Control environment
$RISK_{i,t}$: Risk assessment
$CO\_ACTIV_{i,t}$: Control activities
$INFO_{i,t}$: Information and communication
$MONI_{i,t}$: Monitoring
$LN\_LGASSET_{i,t}$: Local government assets
$LN\_LGREV_{i,t}$: Local government revenue
$LN\_LGEXPEND_{i,t}$: Local government expenditure
$LGPOP_{i,t}$: Local government population
$LGCOM_{i,t}$: Local government complexity
$LGGEO_{i,t}$: Local government geography
$LGTYPE_{i,t}$: Local government type
e : Error standard

RESULT AND DISCUSSION

Descriptive statistics

We begin our analysis with descriptive statistics to obtain general summaries of our research data. During 2017-2019, the average local government administration performance

Table 1

OPERATIONAL DEFINITION OF RESEARCH VARIABLES

Variable	Notation	Measurement	References
Dependent			
Local government administration performance	$LGAP_{i,t}$	The assessment score of local government administration performance level published by the Ministry of Internal Affairs	Sutopo, et al. (2017), Utama, et al. (2019)
Independent			
Control environment	$CO\_ENV_{i,t}$	Financial and Development Supervisory Agency assessment score, consists of the following indicators: a. Integrity and ethics b. Commitment to competence c. Conducive leadership d. Organisation structure e. Delegation of authority and responsibility f. Human resource policy g. Effectiveness of internal oversight role h. Professional working relationship *The maximum score of control environment is 1.5*	COSO (2013), Financial and Development Supervisory Agency (2016)
Risk assessment	$RISK_{i,t}$	Financial and Development Supervisory Agency assessment score, consists of the following indicators: a. Risk identification b. Risk analysis *The maximum score of risk assessment is 1*	COSO (2013), Financial and Development Supervisory Agency (2016)
Control activities	$CO\_ACTIV_{i,t}$	Financial and Development Supervisory Agency assessment score, consists of the following indicators: a. Performance review b. Human resource development c. Information system implementation d. Physical control over assets e. Review of control indicators f. Separation of duties g. Authorisation h. Recording i. Access policy j. Accountability mechanism k. Documentation The maximum score of control activities is 1.25 *A kontrolltevékenységek maximális pontszáma 1,25*	COSO (2013), Financial and Development Supervisory Agency (2016)

Variable	Notation	Measurement	References
Information and communication	$INFO_{i,t}$	Financial and Development Supervisory Agency assessment score, consists of the following indicators: a. Information b. Communication effectiveness *The maximum score of information and communication is 0.5*	COSO (2013), Financial and Development Supervisory Agency (2016)
Monitoring	$MONI_{i,t}$	Financial and Development Supervisory Agency assessment score, consists of the following indicators: a. Continuous monitoring b. Separated evaluation *The maximum score of monitoring is 0.75*	COSO (2013), Financial and Development Supervisory Agency (2016)
Control			
Local government assets	$LGASSET_{i,t}$	Natural logarithm of local government assets	Sutaryo & Sinaga (2018), Utama et al. (2019)
Local government revenue	$LGREV_{i,t}$	Natural logarithm of local government revenue	Sutaryo & Sinaga (2018), Utama et al. (2019)
Local government expenditure	$LGEXPEND_{i,t}$	Natural logarithm of local government expenditure	Sutaryo & Sinaga (2018), Utama et al. (2019)
Local government population	$LGPOP_{i,t}$	Natural logarithm of total population	Rakhman (2019)
Local government complexity	$LGCOM_{i,t}$	Total number of local governments working units	Adiputra, et al. (2018)
Local government geography	$LGGEO_{i,t}$	Dummy: 0 = local governments located outside of Java; 1 = local governments located in Java.	Arifin, et al. (2015), Rakhman, (2019)
Local government type	$LGTYPE_{i,t}$	Dummy: 0 = district local government; 1 = city local government; 2 = province local government	Arifin, et al. (2015), Rakhman (2019)

Source: own editing

Table 2

DESCRIPTIVE STATISTICS

PANEL A: CONTINUOUS VARIABLES					
Variable	**Obs**	**Mean**	**Std.Dev.**	**Min**	**Max**
$LGAP_{i,t}$	1524	3.449	0.555	1.000	4.000
$CO\_ENV_{i,t}$	1524	0.609	0.218	0.050	1.275
$RISK_{i,t}$	1524	0.191	0.211	0.000	0.800
$CO\_ACTIV_{i,t}$	1524	0.537	0.176	0.000	1.114
$INFO_{i,t}$	1524	0.169	0.097	0.000	0.500
$MONI_{i,t}$	1524	0.235	0.147	0.000	0.675
$LGPOP_{i,t}$	1524	12.618	0.997	9.523	15.266
$LGCOM_{i,t}$	1524	51.012	21.329	23.000	209.000
$LGASSET_{i,t}$	1524	28.537	0.613	27.096	31.387
$LGREV_{i,t}$	1524	27.927	0.499	24.484	29.801
$LGEXPEND_{i,t}$	1524	27.847	0.508	26.779	29.883

PANEL B: DUMMY VARIABLES					
Variable	**Obs**	**Dummy 0**		**Dummy 1**	
		Frequency	**Percentage**	**Frequency**	**Percentage**
$LGGEO_{i,t}$	1524	1158	76.0%	366	24.0%
$LGTYPE_{i,t}$	1524	1245	81.7%	279	18.3%

Source: own editing

is at 3.449, classified into 'very high' performance. The maximum achievement is at level 4, organised into 'very high' performance, and the lowest one is at level 1, classified into 'low' performance. *(See Table 2)*

Our examination of our independent variables follows the internal control system assessment guidelines stated in BPKP Head Regulation Number 4 of 20167 to determine how well local governments have implemented the variables. Based the guidelines, the maximum score of internal control system components are as follows: control environment = 1.5; risk assessment =1; control activities = 1.25; information and communication = 0.5; and monitoring= 0.75. The total score of these variables will determine the maturity of the local government's internal control system.

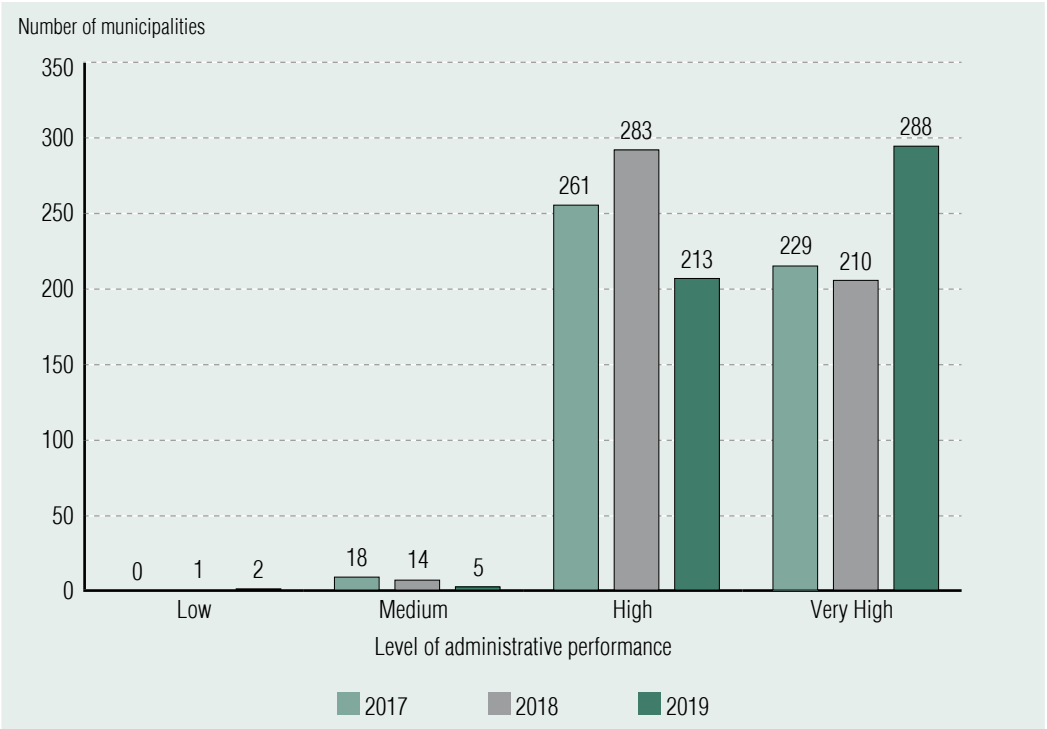
The control environment has an average value of 0.609. Thus, on average, local governments can meet 40.6% of control environment assessment criteria. The maximum value is 1.275, indicating that the highest control environment achievement reaches 85%, and a minimum value of 0.05 indicating that the

worst assessment score only covers 3.33% of assessment criteria. Risk assessment shows a mean value of 0.191 in which only covers 19.1% of the scoring indicators with the highest score of 0.8 that fulfils 80% of risk assessment indicators. As for control activities, the average is at 0.537, achieving 42.96% of the assessment criteria with the highest score of 1.114 (89.12% comply with the assessment criteria). Information and communication have a mean value of 0.169 that comply with 33.8% of all indicators, while the highest achievement reaches 0.5, which has fully met all assessment indicators. Finally, the monitoring exhibits an average value of 0.235 (covers 31.3% of assessment indicators) with a maximum value of 0.675 (covers 90% of assessment indicators). The lowest score for risk assessment, control activities, information and communication, and monitoring is 0, meaning that the implementation has not met the assessment criteria.

We conduct deeper descriptive statistics analysis by examining the trend of local government administration performance achievement during the observation period and geographically. As illustrated in *Figure 2*, our analysis reveals that most local governments in Indonesia can achieve high and even very high administration performance from 2017-2019. In terms of performance achievement, there is more increase than decrease during

Figure 2

LOCAL GOVERNMENT ADMINISTRATION PERFORMANCE ACHIEVEMENT IN INDONESIA IN 2017-2019



Source: own editing based on Ministry of Internal Affairs of the Republic of Indonesia data

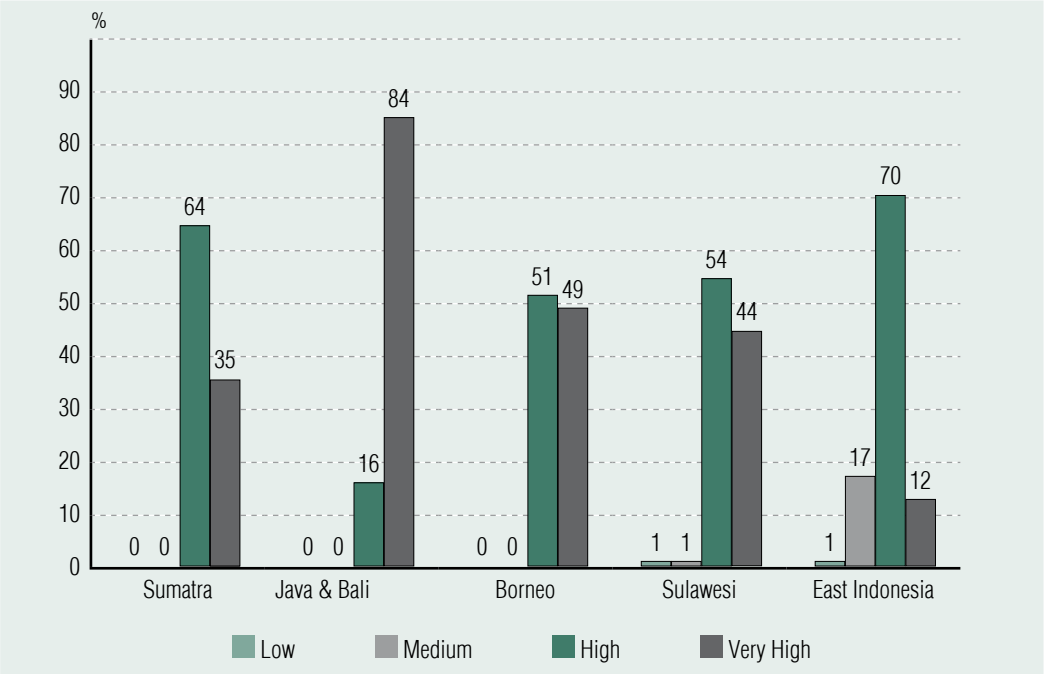
the observation period. The number of local governments with high and very high performances in overall increases; 490 local governments in 2017 (261 high; 229 very high), 493 local governments in 2018 (283 high; 210 very high), and 501 local governments in 2019 (213 high; 288 very high).

As for local governments with medium administration performance achievement, the amount of experience decreases as high and very high-performance achievements. There are 18 local governments with medium administration performance during 2017, 14 local governments in 2018, and 5 local governments in 2019. Unfortunately, local governments with low administration performance: 1 local government in 2018 and 2 local governments in 2019. This achievement should be improved to meet the target of the Ministry of Internal Affairs that expect all local governments should be able to, at least, achieve a high administration performance level.

Further analysis based on the geographic area is presented in *Figure 3*. The result shows that local governments in Java and Bali have the highest administration performance achievement during the observation period. All local governments in Java and Bali have the highest achievement in which all can achieve high and very high administration performance. The percentage of local governments with very high performance even reach 84%, the highest among other geographic areas with a significant gap.

Figure 3

LOCAL GOVERNMENT ADMINISTRATION PERFORMANCE ACHIEVEMENT IN INDONESIA BY GEOGRAPHIC AREA



Source: own editing based on Ministry of Internal Affairs of the Republic of Indonesia data

Local governments in Borneo have the second-highest achievement, 51% of local governments achieve high performance, and 49% achieve very high performance. In Sumatra Island, all local governments also achieve high and very high administration performance; 64% high and 35% very high. Local governments in Sulawesi Island are next, with 54% of them achieve high performance and 44% at very high despite there are still 1% of local governments there with low and medium performances. The achievement of local governments in East Indonesia, unfortunately, still needs significant improvement. There are still 1% of local governments there with low performance and 17% with medium performance. 70% of local governments in Indonesia can reach high administration performance, and there are only 12% that achieve very high administration performance. We also conduct a correlation test among our research variables. The result is shown in *Table 3*.

Panel Data Regression Analysis

Panel data regression analysis is conducted for all local governments and then subsampled into district and city local government observations. The best estimation of our model is the random effect for all observations. Overall, there are only two independent variables with a significant positive effect on local government administration performance: risk assessment, information, and

Table 3

VARIABLE CORRELATIONS

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) $LGAP_{i,t}$	1.000											
(2) $CO\_ENV_{i,t}$	0.247	1.000										
(3) $RISK_{i,t}$	0.246	0.538	1.000									
(4) $CO\_ACTIV_{i,t}$	0.245	0.877	0.488	1.000								
(5) $INFO_{i,t}$	0.260	0.767	0.517	0.727	1.000							
(6) $MONI_{i,t}$	0.207	0.727	0.563	0.691	0.731	1.000						
(7) $LGASSET_{i,t}$	0.307	0.157	0.194	0.146	0.141	0.136	1.000					
(8) $LGREV_{i,t}$	0.334	0.119	0.150	0.105	0.139	0.117	0.792	1.000				
(9) $LGEXPEND_{i,t}$	0.375	0.079	0.161	0.063	0.121	0.090	0.805	0.954	1.000			
(10) $LGPOP_{i,t}$	0.415	0.188	0.152	0.208	0.185	0.118	0.620	0.820	0.809	1.000		
(11) $LGCOM_{i,t}$	0.033	0.062	0.022	0.068	0.078	0.077	0.136	0.206	0.194	0.228	1.000	
(12) $LGGEO_{i,t}$	0.395	0.134	0.144	0.159	0.175	0.107	0.407	0.569	0.568	0.603	0.183	1.000

Source: own editing

communication. Based on the results, we evidence that control environment in overall exhibit insignificant impact on local government administration performance, but the effect is positive and significant in city local government examination. Control activities exhibit the same little result, but the effect is negative in city local government examination. Meanwhile, monitoring has no significant impact in determining local government administration performance. The result of panel data regression is presented in *Table 4*:

The control environment demonstrates no significant effect overall. In line with this result, control activities also have no significant impact on local government administration performance. The results are insignificant because the control environment and activities may have not been implemented optimally. Control environment and actions may have been fulfilled administratively, but the implementation is not optimised to deliver a substantial impact on local government administration performance. The interesting result appears in the city local government examination. Control environment has a positive effect while control activities exhibit negative effects. Conducive control activities increase the effectiveness of the internal control system as a whole (Yurniwati & Rizaldi, 2015). It further increases the possibility of better performance thanks to better integrity and ethics, commitment to competence, facilitative leadership, organisational structure, and professional working relationship (Rubino et al., 2017). However, excessive control activities result in too tight supervision that may create inefficiency, both in cost and procedures (Crouch, 2012). Control activities should be adequate (COSO, 2013) and should not be excessive. Excessive control activities may become a barrier that impedes the local government administration process due to having no flexibility, and thus the performance gets lower.

The finding on risk assessment implies that higher risk assessment ability improves local government administration performance. Our result is consistent with the hypothesis we propose. Risk assessment is performed to ensure that organisation does not suffer any issue through identification, evaluation, and risk management (Jones, 2008). Indeed, risk management is crucial (Dabbagoglu, 2012) and becomes a vital part of achieving good governance in the public sector (Wardhani et al., 2017). According to Shanmugam et al. (2012) any potential risks in an organisation should be managed appropriately. Thus, organisational activities can be implemented as well as possible. Based on this result, risk assessment is also essential in the local government context to maintain public accountability, specifically by achieving good administration performance as mandated by the law.

We also discover that information and communication is a strong determinant of local government administration performance with a high coefficient. This result implies that information and communication within and among local government agencies becomes an important part of local governance (Lee & Lio, 2016), especially with the help of information technology (Odendaal, 2003). In the Indonesian government, information technology is also applied with e-government (Nulhusna, Sandhyaduhita, Hidayanto, & Phusavat, 2017) which helps implement government programs. Information and communication support the government programs from the planning, implementation, and evaluation so that local government administration can be performed accordingly to achieve a higher level of performance.

In general, monitoring is essential in internal control systems, especially with the support

Table 4

HYPOTHESIS TESTING WITH PANEL DATA REGRESSION

Dependent	(1)	(2)	(3)
$LGAP_{i,t}$	All LGs	District LGs	City LGs
$CO\_ENV_{i,t}$	0.0534 (0.164)	0.0132 (0.184)	0.635* (0.376)
$RISK_{i,t}$	0.191** (0.092)	0.176* (0.105)	0.285 (0.200)
$CO\_ACTIV_{i,t}$	–0.205 (0.182)	–0.137 (0.206)	–0.905** (0.389)
$INFO_{i,t}$	0.493* (0.274)	0.508* (0.307)	0.242 (0.605)
$MONI_{i,t}$	0.112 (0.174)	0.0602 (0.197)	0.201 (0.369)
$LN\_LGASSET_{i,t}$	–0.0420 (0.044)	–0.0357 (0.054)	0.0617 (0.081)
$LN\_LGREV_{i,t}$	–0.328*** (0.086)	–0.292*** (0.090)	–0.724** (0.353)
$LN\_LGEXPEND_{i,t}$	0.443*** (0.077)	0.431*** (0.081)	0.751** (0.316)
$LN\_LGPOP_{i,t}$	0.133*** (0.028)	0.148*** (0.031)	0.005 (0.073)
$LGCOM_{i,t}$	–0.001*** (0.000)	–0.001** (0.000)	–0.001 (0.001)
$LGGEO_{i,t}$	0.241*** (0.048)	0.199*** (0.061)	0.302*** 0.069
$LGTYPE_{i,t}$	0.217*** (0.046)		
Constant	–0.262 (1.247)	–1.327 (1.486)	1.042 (2.706)
Observations	1524	1245	279
Number of LGs	508	415	93
R-squared	0.279	0.239	0.241
Chi-Squared	356.166	237.421	60.986
Prob > Chi2	0.000	0.000	0.000

Note: ***, ** and * indicate that the coefficient is significant at 1%, 5% and 10%, respectively.

Source: own editing

of technology in improving the efficiency of internal control processes and thus help assure compliance (Masli, Peters, Richardson, & Manuel Sanchez, 2010). However, we find no significant effect of monitoring on local government administration performance. The result is consistent in all local government, district local government, and city local government examinations. This insignificant result comes up because government officials are considerably weak in monitoring performance (Jaffar & Abdul-Shukor, 2016). Thus, monitoring may be a less significant factor in the internal control system in determining local government administration performance in Indonesia. Nevertheless, monitoring is still an essential part of the internal control system that government needs to continuously improve for internal control effectiveness (Jurnali & Siti-Nabiha, 2015).

Meanwhile, our examination of control variables shows that local government revenue exhibits a negative effect, whereas local government expenditure positively affects local government administration performance. Too much focus on generating revenue is not suitable for the local government as the local government has an obligation as public servants to provide public service, etc. On the other hand, higher expenditure may support government programs' realisation to improve the administration performance. Local government complexity also exhibits a negative effect in which too many working units require many administrative processes and human resources to be affected. Moreover, the local government population shows a positive effect as there is a tendency that more developed local governments have a larger population, especially in big cities such as Tangerang, Bekasi, Bogor, Bandung, Yogyakarta, Semarang, Surabaya, etc.

CONCLUSIONS

Our study reveals that the achievement of local government administration performance by Indonesian local governments during 2017-2019 has not met the expectation of the Ministry of Internal Affairs as stated in the strategic plan in 2015. There are still several local governments with medium and low administration performance. We provide empirical evidence that local government internal control system contributes to determining local government administration performance in which control environment, risk assessment, and information and communication positively affect local government administration performance.

Based on our findings, we encourage the BPKP to implement continuous efforts in local government internal control system maturity improvement by maximising the training and development programs. Therefore, the local government's internal control system can be implemented optimally to benefit local government administration performance to realise good accountability. Our research also presents deeper insights regarding internal control system and administration performance in local government for other countries that adopts COSO concept in developing internal control system in local government in international context both in Asia, Europe, America, Australia, and Africa. ■

Notes

[1] Minister of Internal Affairs Decree Number 118-8840 of 2018 concerning the Determination of National Performance Ranking and Status of Local Government Administration

[2] Minister of Internal Affairs Regulation Number 54 of 2015 concerning the Strategic Plan of the Ministry of Internal Affairs 2015-2019

[3] Government Regulation Number 60 of 2008 concerning the Government Internal Control System

[4] Ministry of Internal Affairs Regulation Number 73 of 2009 concerning LGAPE Manual Instructions

[5] Government Regulation Number 60 of 2008 concerning Government Internal Control System

[6] Financial and Development Supervisory Agency Head Regulation Number 4 of 2016 concerning the Guidelines for Government Internal Control System Assessment and Strategy Improvement

[7] Financial and Development Supervisory Agency Head Regulation Number 4 of 2016 concerning the Guidelines for Government Internal Control System Assessment and Strategy Improvement

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