THE EFFECT OF MATURITY OF PROCUREMENT UNIT AGAINST CORRUPTION CASES IN INDONESIAN GOVERNMENT

Imelda Suardi[1]

[1] Faculty of Business and Communication, Swiss German University, Indonesia
    Email: imelda.suardi@lecturer.sgu.ac.id

Article Info:	Abstract:
  	The maturity of the procurement unit has evolved substantially over the past decade. As part of procurement governance, the maturity of a procurement unit is a critical determinant in developing an efficient and corruption-free government procurement system. The paper examines the effect of the maturity of procurement units against corruption cases across Indonesian ministries, institutions, and provincial governments. The research uses the procurement governance index and procurement corruption cases data and analyses the variables using binary logistic regression of SPSS. The paper provides empirical results that higher level maturity of procurement units does not reduces the opportunity for corruption. It gives insights to the Indonesian government for the improvement of procurement units and the existence of procurement corruption during the years 2021-2023.

Introduction

Corruption in public procurement is a persistent challenge that undermines the efficiency and integrity of governmental operations. Transparency International (2014) underscores that procurement processes are particularly vulnerable to corruption due to their complexity and the substantial financial interests involved. The organization emphasizes the need for transparent and accountable procurement practices as fundamental to combating corruption. In recent

years, there has been a significant shift towards enhancing the maturity of procurement units. The World Bank (2017) reports that many countries have adopted electronic procurement (e-procurement) systems to increase transparency and reduce opportunities for corrupt practices. These systems facilitate open access to procurement information, enabling better oversight and accountability. Furthermore, the Organisation for Economic Co-operation and Development (OECD) (2019) highlights the importance of professionalizing the procurement workforce. The OECD's guidelines advocate for specialized training and certification programs to equip procurement officials with the necessary skills and ethical standards to perform their duties effectively. This professionalization is seen as a crucial step in developing mature procurement units capable of resisting corrupt influences.

The United Nations Office on Drugs and Crime (UNODC) (2020) also points to the significance of international cooperation and shared best practices in strengthening procurement systems. The UNODC's publications emphasize that collaborative efforts among nations can lead to the adoption of more robust anti-corruption measures, thereby enhancing the overall maturity of procurement units. More recently, a study by the European Commission (2022) notes that continuous monitoring and evaluation of procurement processes are vital in detecting and preventing corruption. The Commission suggest the establishment of independent oversight bodies contribute significantly to the maturity of procurement units. The integration of technology, professionalization of the procurement workforce, and international collaboration have emerged as key strategies in mitigating corruption. As these measures continue to develop, it is essential to maintain a focus on transparency, accountability, and continuous improvement to further enhance the integrity of procurement systems.

Public procurement is an important area of concern for governments as it involves large expenditures of funds. Public procurement is prone to fraud and corruption because it involves large sums of money, information asymmetry, and the bureaucratic nature of decision-making (Jimenez et al., 2022). Corruption in public procurement has financial, environmental, social, innovation and trust impacts on the government (Kang et al., 2023). The situation is a serious and widespread problem in many countries, including Indonesia. According to reports such as United Nations Convention Against Corruption (UNCAC, 2013) and Transparency International, most corruption cases in Indonesia are related to public procurement. The losses due to this corruption amount to billions of dollars every year, and Indonesia ranks high in the level of corruption in Southeast Asia (UNODC, 2020). According to Corruption Eradication Commission (KPK) data, public procurement is one of the most common types of corruption in Indonesia, with bribery being a frequent practice to secure government procurement projects (Sabani, 2019). Indonesia has suffered significant financial losses due to corruption in the procurement process (Paranata, 2022). Procurement spending accounts for a significant portion of the government budget (Sikka, 2015). Reports by the KPK and other organizations show that corruption cases involving procuring goods and services are common and rank high in the types of corruption reported. Bribery is also often involved in securing government procurement projects (KPK, 2021).

Public procurement is an important factor of good governance and plays a role in corruption prevention (Owusu, 2019). Good procurement practices should be based on openness, competition, effective decisions and integrity (Alfada, 2019). Indonesia has committed to implementing the principles of UNCAC and G20. Presidential regulations of 2021 regulate public procurement to create scalable and controllable goods and services. Addressing

governance in public procurement is crucial to effectively combat corruption in Indonesia (Lucey et al., 2023). Principles such as transparency, accountability, participation, integrity and accessibility should be applied in public procurement (Adjei-Bamfo, 2019).

However, there are challenges in public procurement reform in Indonesia. Despite significant efforts to improve procurement governance, corruption remains prevalent due to bureaucratic inefficiencies and lack of transparency (Yusuf, 2021). Many studies examining corruption cases especially in Indonesia's public procurement shows different results. Despite increased transparency, curbing corruption remains a significant issue due to a lack of effective oversight and ineffective accountability mechanisms (Susanto, 2021; Setiawan, 2024).

In Indonesia, National Public Procurement Agency (LKPP) is the only institution tasked with implementing policy development and formulation of government procurement of goods and services, especially the Index of Procurement Governance. Good procurement governance index consists of indicators measuring procurement governance at the operational level, both in terms of Human Resources and institutions, as well as in systems procurement. Moreover, procurement work unit (UKPBJ) as a procurement centre of excellence, is a government work unit with strategic characteristics. It is collaborative, performance-oriented, proactive, and capable of making sustainable improvements. One way to ensure continuous improvement is to apply a maturity level model, a measuring tool for improvements made, and a guide for UKPBJ in subsequent improvement efforts.

The maturity of a procurement unit is an indicator of success in developing an efficient and corruption-free government procurement system for goods and services and one of the agendas in the national action plan for preventing and eradicating corruption in accordance with the Presidential Instruction. Therefore, the maturity of the procurement unit is a critical determinant in safeguarding public resources against corruption. Over the past decade from 2014 to 2024, numerous studies and reports have highlighted the evolution of procurement practices, focusing on the implementation of robust systems, transparency mechanisms, and the professionalization of procurement personnel. The studies aimed to provide a comprehensive overview of the maturity of procurement units, examining the frameworks and strategies that have been developed to mitigate corruption risks.

In Indonesia, the maturity level of procurement unit has been measured since 2021 as part of the procurement governance index, beside the utilization of the procurement system and the qualifications and competence of human resources that carry out the procurement of goods and services. The maturity unit level is expected to improve and reach proactive level. However, there is limited empirical studies examining the direct impact of the maturity of procurement unit against corruption especially in Indonesia. There are needs for in-depth analysis to better understand and address this situation. There is also a need to understand the maturity of procurement units and the existence of procurement corruption across government units and regions within Indonesia. In light of the foregoing, The research question for this study is first, how is the implementation of maturity of procurement in Indonesian government from 2021-2023. Second, how is the existence of procurement corruption from 2021-2023. Third, does maturity level of procurement units affect in reducing corruption. Therefore, the research objective is first to analyse the maturity of procurement unit. Second, is to evaluate the procurement corruption. Third is to examine the effect of maturity of procurement unit in reducing corruption in Indonesian government. This research has several contribution. First,

the use of maturity unit to analyse the achievement and effectiveness across ministries, institution and government provincial. Second, the use of corruption data to inform the existence of corruption particularly in procurement cases. Third to provide insight and suggestion to government of what should be maintained and improved in terms of the role of procurement units to reduce corruption.

Literature Review

Procurement Unit and Corruption

Procurement practices has been reformed in developing countries. Research of Silva (2023) investigated the role of accountability mechanisms in enhancing procurement integrity. More research is needed on the effectiveness of these mechanisms in the Indonesian context. In related with corruption, Kumar (2021) analysed various procurement reforms in developing countries and their impact on corruption. Research of Zhao (2023) evaluated the effectiveness of recent procurement policy reforms in reducing corruption while Martinez (2021) provided a long-term analysis of procurement practices and their impact on corruption. In this case, there should be specific challenges in combating corruption that are facing in Indonesia context. Besides, the role of public participation and transparency in procurement processes in curbing corruption need to be fully analysed.

There are long-term studies tracking the impact of procurement unit maturity on corruption levels over time. Research of Tan (2020) investigated regional differences in procurement maturity and corruption, providing insights from multiple countries. There are key barriers to achieve procurement maturity and various models to assess procurement maturity and their effectiveness in combating corruption (Yadav, 2023). Therefore, there should be more studies assessing changes in procurement maturity and corruption over time from Indonesia specifically in regional area. Specific barriers in procurement implementation as well as the effectiveness of government policy can further be explored.

Meanwhile, according to (LKPP, 2021) the definition of maturity of procurement unit in Indonesia is an indicator of success in developing an efficient and corruption-free government procurement system for goods and services. The maturity of procurement unit is one of the agendas in the national action plan for preventing and eradicating corruption. The measurement of maturity unit towards a centre of excellence for procurement of goods and services is carried out in stages through 5 (five) levels of unit maturity which are initiation, essence, proactive, strategic and superior levels. The target of each unit is to reach maturity level 3, namely proactive, to be called a unit with a centre of procurement excellence. Proactive is a unit which carries out the procurement of goods and services function with an orientation towards meeting customer needs through collaboration, strengthening the planning function with customers internally and externally.

Maturity Model

The maturity level measurement model is defined as a measurement instrument used to implement institutional management that describes unit's capabilities. It consists of 4 domains and 9 variables. First is Process Domain, which includes variables of Procurement Management, Provider Management, Performance Management, and Risk Management. Second is Institutional Domain, which includes variables of Organization and Duties and Function. Third is Human Resources Domain, which has Planning and Development variables.

And fourth, Information Systems Domain with variables of Information Systems (LKPP, 2019).

In term of process domain of procurement process, research of Wang (2022) examined how simplifying procurement processes can reduce opportunities for corruption while Evans (2022) focused on how transparency initiatives in procurement processes can reduce corruption. Research of Ahmed (2023) examined how increased public participation and transparency in procurement processes can mitigate corruption. These studies implied that more transparency in procurement process effect in decreasing corruption. Meanwhile, there are challenges faced in reforming public procurement processes in Indonesia. Reforms have been ineffective in reducing corruption due to systemic issues such as lack of accountability and resistance to change (Putri, 2020). Although transparency has increased, its impact on reducing corruption is limited by ineffective implementation and oversight (Wijaya, 2024).

In terms of institution or organization domain, the previous studies of Zhao (2023) evaluated the effectiveness of recent procurement policy reforms in reducing corruption. Research of Garcia (2021) examined the effectiveness of independent oversight bodies in monitoring procurement processes. These studies implied that more effective the policy and the institution will be more significant in reducing procurement corruption. However, existing policies are often inconsistently applied, making them ineffective in reducing corruption (Putri, 2020). Institutional weaknesses in public procurement in Indonesia is also exist. Weak internal control systems and bureaucratic inefficiencies are the main reasons for the high levels of corruption (Kurniawan, 2023).

Moreover, in terms of human resources domain, the professionalization and capabilities of procurement officials correlate with corruption level. Study of Smith (2021) emphasized the importance of training and professional certification in reducing procurement-related corruption. The positive and continuous training programs impact on reducing procurement corruption (Choi, 2021). Other studies also examine the relationship between human resource competency in procurement and corruption in Indonesia. Despite increased competency through training and certification, corruption persists due to weak enforcement of ethical standards and lack of accountability as well as monitoring system (Santoso, 2021; Rahmawati, 2022). In addition, without comprehensive reforms in HR policies and practices, efforts to combat corruption in procurement remain largely ineffective (Dewi, 2020).

Besides, in terms of information systems domain, Jones (2022) highlighted the role of e-procurement in enhancing transparency and reducing corruption in developing countries. It provided empirical evidence from various case studies, including Indonesia. There was also discussion how technological innovations can enhance procurement transparency and reduce corruption (Gupta, 2022). Many previous studies including Brown (2021) assessed the effectiveness of e-procurement systems in increasing transparency and accountability. The implementation of e-procurement in Indonesia and its impact on corruption are also evaluated. However, while e-procurement helps reduce some forms of corruption, numerous loopholes remain exploitable due to insufficient oversight, accountability (Sari, 2020) and regulatory framework (Nugroho, 2021).

Hypothesis Development

According to what is applied in the Indonesian government, the maturity of the procurement unit is reflected by the procurement process, institution, human resources, and information systems. As discussed by most previous research, better procurement processes, institutions, human resources, and information systems affect decreasing corruption. In other words, a higher level of maturity of procurement units determined by those domain is expected to reduce corruption cases in the Indonesian government.

However, the Indonesian government is focusing on the challenges of improving the maturity unit and combating procurement corruption. Government institutions may face limitations associated with the implementation of e-procurement, less effective procurement processes and institutions and capabilities of human resources that will increase the probability of procurement corruption. Therefore, the impact of the professionalization of procurement staff, the implementation of the procurement system, and the effectiveness of the organization and the procurement process in reducing corruption should be examined. This research hypothesizes that the maturity of the procurement unit affects the decrease in procurement corruption.

Research Methodology

Population and Sample

The population of this research is all ministries, institutions and provincial governments that conduct public procurement in Indonesia. There are 114 or total 432 sample data from year 2021-2023.

Operational Variables

The independent variable of this research is maturity value of procurement unit. The unit Maturity Level Indicator is calculated from the number of variables that have reached the level Proactive level maturity compared to the total number of variables (9 variables) and multiplied by the indicator weight. For example, If unit A has complied 4 variables at the Proactive level out of overall 9 variables, then in that year the Value Unit A's Maturity Level is = (4 : 9) x 40 = 17.78. The table below is the value Calculation for each unit maturity achievements for year 2021-2024.

Table 1: Unit of Maturity Level Criteria and Values

Achievement	Maturity Value
9/9	40,00
8/9	35,56
7/9	31,11
6/9	26,67
5/9	22,22
4/9	17,78
3/9	13,33
2/9	8,89
1/0	4,44
0/0	0,00

Source: LKPP, 2021.

Meanwhile, the dependent variable of this research is cases of procurement corruption. The value of corruption in ministries, institution and government provincial is given by 0 if there is no procurement corruption case and 1 if there is corruption case in any level of investigation.

Data Collection and Analysis

This research used secondary data. For maturity value of procurement unit of ministries, institution and government provincial, the data are obtained from the index of procurement governance year 2021-2023 reported by National Public Procurement Agency (LKPP). For corruption cases, the data are obtained from report of investigation, prosecution and inkracht cases of government procurement corruption released by Corruption Eradication Commission (KPK). The data is processed and analysed with SPSS software.

Result and Analysis

Descriptive Analysis

The total sample is 342 for 3 years or 114 sample per year. It consists of 34 ministries, 46 institutions and 34 provincial governments. Government institution provides the largest sample or 40,6%.

Table below is the descriptive statistics showing that maturity unit has average value of 21,33. The standard deviation value for maturity variables that lower than the average value shows that the maturity data is less varied.

Table 2 : Descriptive Statistic

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Maturity	342	0,00	40,00	21,3272	17,04485
Corruption	342	0	1	0,14	0,348

Table 3 below is the frequency table of maturity value. Overall, the maturity value of 0,00 is the highest followed by the maturity value of 40,00. It means, although most of the unit has the lowest maturity value, the maturity value of 40,00 and 35,56 has high frequency.

Table 3 : Maturity Unit

Maturity Value	Frequency	Percent
40,00	89	26%
35,56	19	5,6%
31,11	8	2,3%
26,67	7	2%
22,22	4	1,2%
17,78	9	2,6%
13,33	7	2%
8,89	10	2,9%
4,44	13	3,8%
0,00	96	28,1%

Table 4 dan 5 below shows further analysis. Compared to 2021 and 2022, year of 2023 has lowest amount of 0,00 maturity value and highest amount of 40,00 maturity value. In other

words, the maturity value of 0,00 is highest in 2021 and lowest in 2023 that displayed in Table 4.

Table 4 : Maturity Unit by Year

Year	Maturity Unit										Total
	,00	4,44	8,89	13,33	17,78	22,22	26,67	31,11	35,56	40,00	
2021	48	7	6	4	4	3	6	6	12	18	114
2022	33	0	0	0	0	0	0	0	0	27	114
2023	15	6	4	3	5	1	1	2	33	44	114
Total	96	13	10	7	9	4	7	8	45	89	342

Table 5 shows maturity unit by organization. The ministries and institution have highest amount in 0.00 maturity unit while next is 40.00 dan 35.56. Meanwhile, provincial government has highest amount in 40.00 of maturity unit.

Table 5 : Maturity Unit by Organization

Organization	Maturity Unit										Total
	.00	4.44	8.89	13.33	17.78	22.22	26.67	31.11	35.56	40.00	
Ministries	29	3	5	3	3	1	2	0	15	21	101
Institution	67	8	4	2	5	2	2	1	17	12	139
Provincial	0	2	1	2	1	1	3	7	13	56	102
Total	96	13	10	7	9	4	7	8	45	89	342

In terms of corruption, cases of procurement corruption from year 2021-2023 shows that 86% has no corruption cases and 14% has procurement corruption cases. Furthermore, compared to the other years, 2022 has lowest number of case while 2023 has highest number of procurement corruption as shown on table 6. Moreover, table 7 shows that government institution has the lowest case of procurement corruption while government provincial has the highest amount of corruption case.

Table 6 : Procurement Corruption Case by Year

Year	Corruption		Total
	No	Yes	
2021	97	17	114
2022	101	13	114
2023	96	18	114
Total	294	48	342

Table 7 : Procurement Corruption Case by Organization

Organization	Corruption		Total
	No	Yes	
Ministries	89	12	101
Institution	133	6	139
Provincial	72	30	102
Total	294	48	342

Regression Analysis

The research uses SPSS software to analyse the data. It examines with regression binary logistic as for dependent data corruption 0 and 1. The result in table 8 below shows that the increase of maturity unit for 1 level will increase the opportunity of the existence of procurement corruption cases for 0,034 times. Besides, the result of r-square is 0,033. It proves that maturity unit of procurement variable only influence procurement corruption by 3,3% while the other 96,7% is determined by other variables.

Table 8 : Regression Result

	B	S.E.	Wald	df	Sig.	Exp(B)
MAT	0,034	0,010	10,519	1	0,001	1,035
Constant	-2,655	0,334	63,278	1	0,000	0,070

Discussion

The descriptive analysis shows that the maturity value of the procurement unit is relatively low. The maturity value of 0.00 has the highest frequency during 2021-2023. This means that most ministries, institutions, and provincial governments have yet to achieve any domain of procurement process, organization, human resources, and information system. This situation mainly occur in 2021 and possibly due to incomplete or comprehensive assessments in all ministries, institutions and provincial governments. In 2023, there was much increase when the maturity value of 40.00 reached the highest amount. It means the procurement units have improved their management of procurement, supplier, performance, risk, organization, HR plan and development, and e-procurement. Moreover, ministries and institutions contribute most to the lowest maturity value of 0.00, while provincial governments have the highest maturity value of 40.00. Location in the capital city and central government do not guarantee that ministries and institution procurement units have high maturity values. Meanwhile, provincial governments have proven to have better procurement management, HR qualification, and system implementation. In terms of corruption, most units have low cases of procurement corruption during 2021-2023. However, there is a tendency to increase cases in 2023. It means there are more procurement cases either in the level of investigation, prosecution, or inkracht, especially in the provincial government.

The regression analysis shows that maturity of procurement unit affects the existence of corruption significantly. The hypothesis that the maturity of the procurement unit affects the decrease in procurement corruption is not proven. Although there is increase in maturity level of procurement unit, there is also increase in procurement corruption cases. Specifically, higher level of maturity unit leads to the increase of corruption in the provincial government. Better procurement process and organization, the implementation of information system as well as

human resources capacities could not significantly reduce the corruption. The results of this research agree with previous studies, which state that high levels of corruption are caused by several things, namely not being transparent and inefficient (Yusuf, 2021), being unaccountable (Susanto, 2021), ineffective policies (Setiawan, 2024'; Putri, 2020; Dewi, 2020) lack of oversight (Wijaya, 2024; Sari, 2020), weak of internal control (Kurniawan, 2023), weak enforcement of ethical standards (Santoso, 2021; Rahmawati, 2022) and insufficient framework (Nugroho, 2021). Moreover, the corruption is remain high because of the continuance presence of informal network and collusion (Wijaya, 2024) as well as the persistence of collusion and system manipulation (Santoso, 2021).

Conclusion

The research answers the objective about the implementation of maturity of procurement unit and the existence of procurement corruption in Indonesian ministries, institution and provincial governments. The results prove that higher level of maturity of procurement unit does not effect to the decrease of corruption. There are other factors besides maturity unit that will decrease the procurement corruption significantly. As the low maturity level in ministries and institutions, the government needs extra effort to monitor their level of management procurement, supplier, performance, risk, job and function of organization, HR plan and development and e-procurement. In 2023, an increase at the highest level of maturity units was seen. This proves that progress has been made, so the government must continue to maintain units that have achieved good result. Moreover, the government should monitor, detect and prevent procurement corruption especially in provincial governments. In order to that, overall, the government need to strengthen the implementation of procurement governance throughout ministries, institution and provincial governments.

This research has several limitations and suggestions for future studies. First, additional sample collection is limited to the provincial government and extends to regional governments. Indonesia has around 500 districts and cities; additional samples will enrich the research results. Second, future research can obtain more detailed value of procurement unit maturity levels, such as key driver values, variables, and domains, to better map and describe maturity levels across ministries, institutions, and provincial governments. Third, additional analysis, such as interviews, will confirm and obtain further information regarding implementing the procurement unit's maturity to reduce corruption.

Acknowledgement

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