
Risk-Based Public Procurement Corruption Prevention Strategy in the Palembang City Government

Muhammad Fadil Hidayat ¹, Yusman Syaukat ², Harianto³

Abstract:

Government procurement is the most vulnerable government activity to corruption, especially in the era of decentralization, which grants local governments the authority to manage their domestic affairs independently. The results of the Financial Audit Agency's (BPK) examination of the Palembang City Government in 2022 revealed indications of price manipulation, specifications favoring specific products and contractors, and goods and services produced not complying with the provisions in the contract. This research aims to formulate an anti-corruption strategy for government procurement based on corruption risk. The methods used in this research include descriptive analysis with a literature review, quantitative analysis using Fuzzy Synthetic Evaluation (FSE), and strategy formulation using the Multicriteria Policy (Multipol) method involving government procurement stakeholders. The research findings indicate that the governance of government procurement in Palembang City is still inadequate, with the highest risks being related to implementer integrity, contract execution control, and procurement planning risks. Relevant anti-corruption strategies include the utilization of e-procurement, enhancing human resources and the Procurement Service Unit's (UKPBJ) competence, improving the quality of planning, and strengthening supervision and stakeholder participation.

Keywords: *Anti-corruption strategy; Corruption risk; Government procurement; Palembang*

¹Institut Pertanian Bogor, Indonesia. fadilhidayat10@gmail.com

²Institut Pertanian Bogor, Indonesia. ysyaukat@gmail.com

³Institut Pertanian Bogor, Indonesia. harianto.ipb@gmail.com

1. Introduction

Government procurement is a fundamental component of good governance because its objective is to acquire goods and services at justifiable prices, in the right quantity and quality, and within the specified timeframe (Arsana, 2016). On the other hand, government procurement is the government activity most susceptible to corruption. The vulnerabilities of government procurement to corruption stem from factors such as the volume and complexity of procurement activities, market ambiguity for specific goods, political discretion, interdependence between political actors, bureaucracy, and business, all of which make government procurement a prime site for corruption (Hawkins, Gravier, & Powley, 2011).

In Indonesia, government procurement is regulated by Presidential Regulation Number 12 of 2021 concerning Government Procurement of Goods/Services (PBJ). In Article 1, PBJ is defined as the procurement of goods/services by Ministries/Agencies/Regional Governments (K/L/PD) financed by the State Budget (APBN) or Regional Budget (APBD), a process that begins with identifying needs and continues until the handover of the work's results. The governance of PBJ is one of the government's key focuses in preventing corruption, as outlined in the National Anti-Corruption Strategy (Stranas PK), regulated by Presidential Regulation Number 54 of 2018.

The government's focus on preventing corruption in government procurement (PBJ) is not without reason. A survey conducted by Transparency International on the Corruption Perceptions Index (CPI) for the year 2022 ranked Indonesia 110th out of 180 countries, with a score of 34 points from the previous year. This score is below the global average of 43, indicating a deteriorating public perception of government performance. The latest data from the Corruption Eradication Commission (KPK) shows that the total number of corruption cases related to PBJ from 2004 to October 2023 reached 309 cases out of a total of 1,436 cases, accounting for 21.5% of all corruption cases (KPK, 2023).

There are various methods and indications of fraud in procurement, including price mark-ups, violations of tender procedures, manipulation of tender documents, changes in product specifications, direct appointment engineering, inadequate evaluation, unaddressed objections, and so forth (Arsyad & Karisma, 2022). According to (Locatelli, Mariani, Sainati, & Greco, 2017), public procurement often fails to meet expectations and goals. General dissatisfaction arises from cost and time overruns, suboptimal performance, substandard work and services, and sometimes project failures, most of which stem from unethical practices common in the procurement process. For instance, delays and cost overruns in projects often result from corrupt practices.

The implementation of regional autonomy is also a contributing factor to the high levels of corruption. The authority to govern their respective regional affairs has shifted corruption from being primarily executed by central government actors to include local government officials and local economic elites. Decentralization within regional autonomy has led to the decentralization of corruption. This presents a challenge for the Palembang City Government, which manages the development of a

metropolitan city like Palembang with relatively high expenditures on goods and services (Suparman, 2020).

According to the assessment of the Government Goods/Services Procurement Governance Index (ITKP) conducted by the Government Goods/Services Procurement Policy Agency (LKPP) for the Palembang City Government in 2022, Palembang City is still categorized as "Sufficient" (LKPP, 2022). This achievement does not align with the targets set by the Ministry of State Apparatus Empowerment and Bureaucratic Reform (KemenpanRB). The governance of government procurement that remains inadequate, along with findings from the Financial Audit Agency (BPK) examination of the Palembang City Government in 2022, which found indications of price manipulation, specifications favoring specific products and contractors, and goods/services provided not meeting contract requirements (BPK, 2023).

The Organization for Economic Co-operation and Development summarized steps to enhance integrity and transparency, structuring stakeholder participation, increasing accessibility, electronic procurement, oversight and control (OECD, 2016). Other global initiatives, including Transparency International and the World Bank, have also advocated for a corruption prevention perspective with corruption risk management (Hansen, 2011).

Risks of fraud refer to the degree of vulnerability faced by an organization/entity in relation to the fulfillment of one of the elements in the fraud triangle, namely motive or intent, opportunity, and rationalization. If these elements result in an event, it will have an impact on the organization's financial loss, performance, and reputation, both directly and indirectly (Nurharyanto, 2016). The risk-based approach is considered the most relevant in corruption research because it allows for the integration of various theoretical perspectives into a comprehensive framework that assists in identifying corrupt practices and proactively designing prevention strategies (Sharma, Sengupta, & Panja, 2019).

Based on the issues mentioned above, this research aims to formulate an effective strategy for risk-based corruption prevention, involving the participation of the key persons in government procurement. To develop an effective strategy for corruption prevention, the research process includes evaluating the effectiveness of corruption prevention strategies and programs that have been implemented by the Palembang City Government, conducting a corruption risk analysis, and formulating corruption prevention strategies in collaboration with the government procurement stakeholders in Palembang City.

This research is expected to provide benefits to the stakeholders of government procurement in Palembang City and other government agencies in formulating effective policies for corruption prevention. Furthermore, this research is expected to serve as input for researchers who want to further investigate government procurement, risk management, and corruption prevention. Additionally, it is anticipated to raise awareness among the general public, including business actors, and encourage active participation in corruption prevention.

2. Theoretical Background

Government Procurement of Goods and Services

In general, public procurement is known as public procurement. The term public procurement refers to the purchase of goods, services, and works by government and state-owned enterprises (Bolton, 2006). According to Eyaa and Oluka (2011), public procurement operates in an environment of increasing scrutiny and accelerated change driven by technology, program review, and political expectations. The public procurement process is a series of activities that begin with a needs assessment. This is followed by contract award, the contract management process, and finally payment (OECD, 2013). The source of financing for PBJP is APBN/APBD; therefore, according to Bovis (2005), in its implementation, PBJP must favor the interests of the people. There are four main sectors that are within the scope of this public procurement, namely the public supply sector, the public works sector, the public facilities sector, consisting of transportation, water, energy, and telecommunications sectors, and finally the public service sector. Procurement includes acquisitions, contracts, purchases, leases, rentals, and purchases (Thai, 2001) to acquire labor, goods, and services from outside sources. It is said to be a policy tool to fulfill secondary objectives (Bolton, 2006). Traditionally, DMJP is viewed as a routine and mundane function involving clerical means (Sharma et al., 2019).

Fraud and corruption in the procurement of goods and services

Fraud is generally defined as an intentional action by an individual or group carried out secretly so that it can cause harm to the organization (ACFE 2017). According to Cressey (1950) in The Fraud Triangle Theory, fraud can occur due to pressure, opportunity, and rationalization. Pressure can arise due to economic needs, pressure from work targets, lifestyle needs, and much more. According to Skousen et al. (2008), opportunities can be caused by weak supervision. Lastly, the rationalization factor is caused by cultural fraud in the organization (Setiawan 2015). However, several studies still argue that these three factors are not enough, so other factors such as individual capabilities emerge (Wolfe & Hermanson, 2004). In Indonesia, fraud is better known as corruption. Corruption is the abuse of power used for personal gain (Kohler & Dimancesco, 2020). There are several definitions of corruption, but basically, corruption is understood as dishonest or unethical behavior by someone in authority to achieve personal gain. The term corruption includes private corruption as well as public corruption and other matters, depending on the jurisdiction involved, that conflict with the laws of another jurisdiction or other generally agreed principles of fair conduct. (Rimšaitė, 2019). One activity that is vulnerable to the risk of corruption is public procurement. Public procurement contributes greatly to the country's economy and is considered an important government business operation. It provides necessary inputs such as goods, civil works, and services to public departments at appropriate costs with optimal levels of quality. It also serves as a policy instrument to meet long-term social and economic development goals (Sharma et al., 2019). According to (Arsyad & Karisma, 2022),

there are various modes and indications of fraud in the use of budgets that often occur, such as mark-ups, violations of tender procedures, manipulation of tender data or documents, changes in product specifications, manipulating direct appointments, inadequate evaluation, objections that were not responded to, and so on. With the existence of various modes of fraud in public procurement, procurement objectives are not achieved. According to (Locatelli et al., 2017) public procurement often fails to meet expectations and objectives. General dissatisfaction arises from cost and time overruns, suboptimal performance, substandard work and services, and sometimes project failure, most of which arise from unethical practices prevalent in the procurement process. For example, delays and cost overruns in projects are often the consequence of corrupt practices.

Fraud risk management

Fraud risk is the degree of vulnerability faced by an organization or entity related to the fulfillment of one of the elements in the fraud triangle, namely motive or intention, opportunity, and rationalization, which, if it becomes an incident, will have an impact on financial losses, good organizational performance, and reputation, directly or indirectly (Nurharyanto, 2016). Due to its detrimental nature, the risk of fraud and corruption needs to be managed with fraud risk management. Fraud Risk Management is a system that is specifically designed to prevent fraud (ACFE 2017). The Committee of Sponsoring Organizations of the Treadway Commission (COSO) in (Kamal, 2019) also agreed that the main focus of fraud risk management is prevention, detection, and investigation. Fraud risk management can determine the risk of fraud and the fraud schemes used. Fraud risk management in Indonesia is regulated in Government Regulation Number 60 of 2008 concerning the Government Internal Control System (SPIP). This regulation explains that an important part of risk management is risk identification. Risk identification methods can include qualitative and quantitative rating activities, discussions at the leadership level, strategic forecasting and planning, as well as consideration of APIP audit and evaluation findings (Kamal, 2019). Organizations can develop a risk identification process using a combination of internal surveys, interviews with various employees, and the help of consultants. Identified risks need to be analyzed to determine their level of occurrence and their impact on achieving organizational goals. The possibility of fraud risk can be measured using a Likert scale (Nurharyanto, 2016). According to Fachrudin and Ardhianty (2015), at the risk identification stage, apart from identifying what the risks are, it must also be clearly identified who owns the risks, who will be responsible for managing the remaining risks, or even risks that require special handling. These risk owners determine how much remaining risk is acceptable and whether additional risk treatment is needed. The risk owner is also responsible for carrying out risk management, maintaining risk control, and reporting risk information.

3. Methodology

The object of this research is the Palembang City Government, chosen due to considerations of inadequate procurement governance and the occurrence of deviations in government procurement. There are three types of analyses in this research, including: (1) descriptive analysis to evaluate the effectiveness of corruption prevention in government procurement implemented by the Palembang City Government; (2) quantitative analysis for risk analysis; and (3) multicriteria policy analysis to formulate corruption prevention strategies in government procurement.

Descriptive Analysis

The descriptive analysis is conducted to provide an overview of the corruption prevention strategies implemented by the Palembang City Government and to assess their effectiveness. The data used in this descriptive analysis include primary data obtained through interviews and secondary data obtained through literature reviews. Interviews are conducted with key personnel responsible for government procurement and corruption prevention, such as the Head of the Procurement Service Unit (UKPBJ) and the Inspector of Palembang City. The literature review in this descriptive analysis includes data from the Government Goods/Services Procurement Governance Index by LKPP, audit results from the Financial Audit Agency (BPK), and other relevant data.

Quantitative Analysis

Quantitative analysis is conducted to understand the profile and characteristics of corruption risks in government procurement. This corruption risk analysis begins with the risk identification stage through interviews with key figures in government procurement in Palembang City. According to (Nurharyanto, 2016), the risk identification process can be carried out using a combination of internal surveys, interviews with various employees, and consultant assistance. These interviews are conducted using a set of questions derived from previous research. From the interviews, 31 types of corruption risk relevant to government procurement in Palembang City were identified. The identified risks are then analyzed involving 26 respondents who are stakeholders in government procurement selected using purposive sampling. Respondents are asked to provide assessments of the Likelihood of Occurrence (LO) and Magnitude of Impact (MI) of these 31 corruption risks on a Likert scale as shown in Table 1, as follows:

Table 1. Risk Analysis Rating Scale

Scale	LO	MI
1	Very Rarely Occurs	Very Low
2	Rarely Occurs	Low
3	Occasionally	Moderate
4	Frequently Occurs	High
5	Very Frequently Occurs	Very High

The data collected from the respondents were analyzed using Fuzzy Synthetic Evaluation (FSE). FSE is employed in risk analysis because, as suggested by (Shan, Chan, Le, Xia, & Hu, 2015), respondents' perceptions of the likelihood and impact of risk factors are typically subjective and relative. FSE can provide a synthetic evaluation of an object that is relative to several criteria (Mu, Cheng, Chohr, & Peng, 2014). This adaptability has led to the adoption of FSE across various fields, including environmental analysis, human resource management, and risk assessment (Nguyen & Macchion, 2023). Furthermore, FSE does not have specific criteria regarding the sample size, as noted by (Zhao, Hwang, & Gao, 2016), making it suitable for risk research that is sensitive to respondent perceptions.

Multicriteria Policy Analysis

The results of the risk analysis then serve as input for formulating the anti-corruption strategy for government procurement in Palembang City. To formulate this strategy, the Multicriteria Policy (Multipol) method is utilized. The goal of Multipol is to assist in decision-making by creating a simple analysis framework that emerges from various available actions or solutions (Wijayanto et al., 2022). Several factors that differentiate Multipol from other multi-criteria methods include: (1) Multipol integrates a participatory approach through stakeholder involvement in multi-criteria assessment, and (2) the evaluation considers the linkages of alternative programs with criteria and the interactions among actions, policies, and scenarios (Fauzi, 2019).

4. Empirical Findings/Result

The Effectiveness of Corruption Prevention Strategies

The Institutional Maturity of Government Procurement

Strengthening the institutional quality of government procurement is part of the Stranas PK outlined in the Joint Decree by the KPK, the Presidential Staff Office (KSP), the Ministry of Home Affairs (Kemendagri), the National Development Planning Agency (Bappenas), and KemenpanRB. The Joint Decree specifies that one of the corruption prevention action plans is to enhance the professionalism and modernization of government procurement. The success criteria for this corruption prevention action plan are achieving a minimum maturity level of the Procurement Service Unit (UKPBJ) at level 3 or having a proactive UKPBJ. The Palembang City UKPBJ has reached level 3 (LKPP, 2023), with achievements as shown in Table 2 below:

Table 2. Description of the maturity of the Palembang City UKPBJ

Domain	Variable & Key Drivers
Process	<p>Procurement Management Variable: the procurement process is already integrated, starting from planning to contract implementation, and electronic procurement service security and continuity are functioning effectively.</p> <p>Supplier Management Variable: a supplier development program to ensure the success of the selection and contract implementation processes</p>

	is already in place.
	Performance Management Variable: performance management using Key Performance Indicators that support procurement process efficiency has been implemented.
	Risk Management Variable: risk management regulations and management code of ethics have been issued.
Institutional	Organizational Variable: the organizational governance of UKPBJ meets customer needs.
	Role and Function Variable: UKPBJ has provided guidance for procurement planning, selection processes, contract execution support, human resource development, institutional matters, and electronic procurement services.
Human Resources	HR Planning Variable: job analysis and workload analysis based on procurement package data have been conducted.
	HR Development Variable: Certification of functional positions for procurement managers has been carried out.
Information System	The information system has been integrated from the planning, preparation, selection, and contract execution stages.

Electronic Procurement System

One of the anti-corruption policies involves electronic procurement. Electronic procurement covers the entire process from planning to contract completion. The Electronic Procurement System (SPSE) includes the General Procurement Plan Information System (SiRUP), E-Tendering and Non-E-Tendering, E-Purchasing and Non-E-Purchasing, as well as E-Contract. Based on the assessment conducted by the LKPP, a weakness of the Palembang City Government lies in the e-purchasing indicator, which has not yet been fully realized (LKPP, 2022).

E-purchasing is the method of purchasing goods/services through an Electronic Catalog or Online Store, encompassing package creation, negotiation and approval, creation of purchase orders or contracts, delivery, acceptance, payment, and supplier performance assessment. The lack of realization of e-purchasing, according to the Head of UKPBJ, is not due to the absence of procurement through e-purchasing, but because suppliers do not update the procurement progress in the system. As a result, transaction data in the system has not reached the completion stage. This should be a matter of concern for management because updating the procurement progress in the system is one of the forms of transparency and accountability in the procurement process.

Human Resources Management

The next strategy for preventing corruption in government procurement is the enhancement of human resources competence. This strategy emphasizes the development of human resources through the certification of Procurement Managers (PPBJ) as per Regulation of the KemenpanRB Number 29 of 2020. PPBJ is responsible for conducting procurement planning, supplier selection, contract management, and procurement management.

According to the assessment of ITKP by LKPP in 2022, the Palembang City Government does not have an adequate number of PPBJs to manage procurement of goods/services. The ideal number of PPBJs for the Palembang City Government, based on workload analysis, is 30 individuals. However, at the present time, the Palembang City Government only has 12 PPBJs. According to an interview with the Head of UKPBJ, this situation is not proportionate to the budget value and the number of procurement packages managed.

Procurement Governance Index

The ITKP of the Palembang City Government is still categorized as "sufficient". This level does not meet the national target, which requires a minimum ITKP rating of "good," according to the Bureaucratic Reform Road Map for 2020 - 2024. A comparison of the ITKP achievement of the Palembang City Government with other regional governments in South Sumatra can be seen in the table 3 below:

Table 3. Comparison of ITKP Values of Local Governments in South Sumatra Region

Indicator	Regional Government				
	Musi Banyuasin	Palembang City	South Sumatera	Prabumulih City	OKI Regency
SiRUP	9,1	5,1	5,0	6,7	0,0
E-Tendering	4,8	4,4	4,8	5,0	4,8
E-Purchasing	0,0	0,0	0,0	0,0	0,0
Non E-Ten/Purch	3,7	3,9	3,9	0,0	4,7
E-Kontrak	3,0	4,2	3,4	4,5	1,6
HR	11,4	10,0	12,7	20,0	0,0
UKPBJ	40,0	35,6	31,1	13,3	35,6
Total	71,9	63,1	60,7	49,5	46,7
Level	Good	Sufficient	Sufficient	Insufficient	Insufficient

Risk Management and Internal Control

An important effort in corruption prevention is the implementation of risk management through Mayor Regulation No. 36 of 2022. This regulation governs the risk management structure and the development of a risk culture. The risk management cycle can be seen in Figure 1 below:

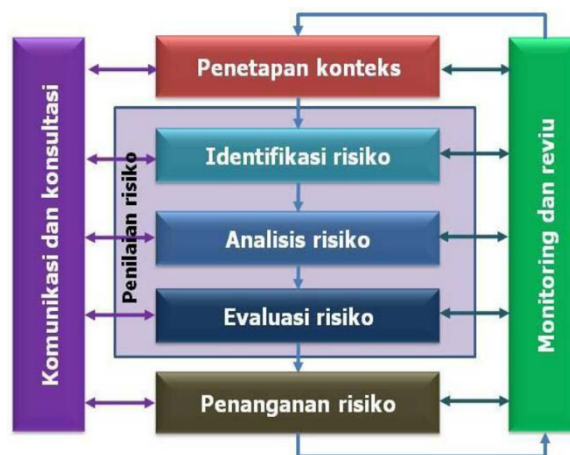


Figure 1. Risk management cycle

The implementation of risk management is accompanied by the optimization of internal controls. This internal control strategy includes enhancing the capabilities of internal auditors (APIP) and the maturity of the internal control system (SPIP) through activities such as technical guidance, performance audits, the development of risk-based oversight guidelines, workshops, and related seminars. The capabilities of APIP and the maturity of the SPIP in the Palembang government have reached level 3 or at the norming and partial implementation stage, based on the assessment by the Supreme Audit Board (BPKP).

Despite all the strategies implemented by the Palembang government, including improving procurement governance, risk management, and internal control, they have not yet proven effective and still have weaknesses. According to the 2022 BPK examination report, there are indications of price manipulation, specifications favoring specific products or vendors, and goods and services produced not complying with the provisions in the contract. These conditions have resulted in overpayments to suppliers of goods and services, causing financial losses for the region (BPK, 2023).

The Corruption Risk Profile

The risk analysis process begins with a literature review of previous research, which serves as input in the joint interviews with the Inspector of Palembang Government and the Head of UKPBJ Palembang. Based on the interviews, 31 corruption risks are identified and categorized into five risk groups, including Human Resources Risk (HR), Organization and Institution Risk (OR), Procurement Planning Risk (RC), Tender Implementation Risk (TD), Contract Implementation Risk (KT), and Contract Completion Risk (PY).

The identified risks are analyzed through a questionnaire administered to 26 respondents, including PPBJs, tender committee, internal auditors, and supplier partners. After data collection, the data is processed using Fuzzy Synthetic Evaluation (FSE). Risk analysis is conducted to determine Risk Criticality (RC). To obtain RC, membership functions must be determined. In this study, the Likelihood

of Occurrence (LO) and Magnitude of Impact (MI) for each risk factor were gathered in a questionnaire survey using a five-point scale. Therefore, in the set of alternatives E, e1 = very low, e2 = low, e3 = moderate, e4 = high, and e5 = very high.

In the evaluation matrix, the membership function indicates the extent of the value "e" for each risk factor. For example, the result of the Likelihood of Occurrence (LO) for risk factor (OR 01), "Lack of capability/competence of procurement executor," shows that 35% of the respondents believe it is very low, 23% low, 35% moderate, 0.4% high, and 0.4% very high. The LO membership function for risk (OR 01) is represented by the equation:

$$(R_e^{LO})_{1 \times 5} = r_{e_1}^{LO}, r_{e_2}^{LO}, r_{e_3}^{LO}, r_{e_4}^{LO}, r_{e_5}^{LO}$$

The equation above also applies to calculate the membership function for Magnitude of Impact (MI). The application of the equation is as follows:

$$\begin{aligned} & \frac{0,35}{\text{very low}} + \frac{0,23}{\text{low}} + \frac{0,35}{\text{moderate}} + \frac{0,04}{\text{high}} + \frac{0,04}{\text{very high}} \\ &= \frac{0,35}{1} + \frac{0,23}{2} + \frac{0,35}{3} + \frac{0,04}{4} + \frac{0,04}{5} \end{aligned}$$

The calculation of LO and MI for each risk can be done using the following equations:

$$\text{LO} = \sum_{j=1}^5 (s_j \times r_j^{LO}) \quad \text{MI} = \sum_{j=1}^5 (s_j \times r_j^{MI})$$

The application of the equation is as follows:

$$\text{LO} = (1 \times 0,35) + (2 \times 0,23) + (3 \times 0,35) + (4 \times 0,04) + (5 \times 0,04) = 2,19$$

After obtaining the values of LO and MI, the calculation of RC can be performed using the following equation:

$$\text{RC} = \sqrt{(\text{LO} \times \text{MI})}$$

The results of data processing with FSE yield RC rankings as shown in Table 4:

Table 4. RC rankings

No	Code	Risk Factor	LO	MI	RC
1.	OR 02	Lack of integrity among procurement executor	2,31	3,46	2,83
2.	PY 27	Failure to meet contract quality/quantity targets	2,31	3,27	2,75
3.	RC 05	Planning not aligned with needs	2,46	3,00	2,72
4.	RC 08	Complexity of packages favoring specific providers	2,35	3,12	2,70
5.	TD 19	Inadequate e-procurement support	2,31	3,15	2,70
6.	OR 01	Insufficient capability/competence of procurement executor	2,19	3,15	2,63
7.	RC 06	Planning adjusted to favor specific parties	2,27	3,04	2,63
8.	OR 04	Weak ethical code regulations	2,38	2,85	2,61
9.	OR 03	A connection between procurement committee and providers	2,27	2,96	2,59
10.	RC 07	Misuse of procurement agents, consultants, etc.	2,15	3,04	2,56
11.	PY 28	Favorable contract extensions to contractors	2,19	2,92	2,53
12.	TD 13	Involvement of fictitious companies in tenders	2,15	2,96	2,53
13.	RC 10	Cost estimates based on the desires of specific parties	2,27	2,81	2,52
14.	PY 30	Inadequate inspection of work results	2,19	2,85	2,50
15.	TD 12	Weak dispute resolution mechanisms	2,08	2,81	2,41
16.	RC 09	Cost estimates not prepared based on valid data	1,96	2,96	2,41
17.	TD 14	Bribes among participants to prevent objections/appeals	2,12	2,73	2,40

18.	KT	20	Forged contract signatures	1,92	2,96	2,39
19.	TD	18	Opportunities for receiving gratuities/bribes	1,85	2,92	2,32
20.	KT	25	Subcontracting of main work	2,00	2,69	2,32
21.	KT	21	Contract signing without performance guarantees	1,85	2,88	2,31
22.	KT	23	Pressure in emergency procurement or emergency contracts	1,92	2,77	2,31
23.	KT	22	Misuse of contract change provisions	1,92	2,73	2,29
24.	RC	11	Leakage of cost estimate details to providers	1,88	2,73	2,27
25.	KT	24	Contracts transferred/sold to other providers	1,92	2,65	2,26
26.	PY	26	Fictitious dispute resolution boards to liquidate funds	1,77	2,88	2,26
27.	PY	29	Contract addendums to avoid penalties	1,88	2,69	2,25
28.	TD	15	Inadequate bid evaluations	1,92	2,62	2,24
29.	PY	31	Misuse of maintenance periods	1,77	2,77	2,21
30.	TD	16	Manipulation during bid evaluations	1,73	2,42	2,05
31.	TD	17	Regulations made for specific interests	1,65	2,42	2,00

Formulation of Corruption Prevention Strategy for Procurement

The main objective of this research is to formulate a corruption prevention strategy for Procurement in the Palembang City Government. To create a strategy that aligns with the Procurement risk profile, a Multipol analysis is conducted. The Multipol analysis yields two types of evaluations: (1)"Action to Policy" based evaluation, which determines the appropriate programs for each policy, thus generating a hierarchy of the impacts of programs (actions) on policies; (2)"Policies to Scenario" based evaluation, which determines which policies are suitable for specific scenarios, resulting in a hierarchy of policies and their impacts on each scenario (Fauzi, 2019).

In Multipol analysis, criteria need to be established for assessing the three Multipol components. These criteria reflect measurable aspects based on assessments from stakeholders. The criteria that have been jointly agreed upon with stakeholders are that policies or activities must fulfill the following elements: (1) Enhancement of procurement system utilization; (2) Improvement of human resource capabilities; (3) Advancement of institutional maturity; (4) Enhancement of implementation oversight.

Another component in Multipol analysis is scenarios. Scenarios are structured developments that can be undertaken in the future with achievable objectives. The scenarios for preventing corruption in Procurement within the Palembang City Government consist of: (1) Short-Term Scenario, (2) Medium-Term Scenario, and (3) Long-Term Scenario. The description for each scenario can be found in Table 5, as follows:

Table 5. Scenario components

No	Scenario	Description
1	Short-Term Scenario	This scenario can be implemented directly, with a low level of effectiveness, at the operational level of policies.
2	Medium-Term Scenario	This scenario can be implemented in the next 1-3 years, with a moderate level of effectiveness due to its tactical level.
3	Long-Term Scenario	This scenario can be implemented in more than 3 years, with a high level of effectiveness because it is at the strategic level.

After establishing the criteria and scenarios, the next step is to formulate policies. Policies are the necessary strategies to support the scenarios and are expressed as

adjectives. Based on the results of discussions and interviews with Procurement stakeholders in Palembang City, the policies that can be implemented are presented in Table 6, including:

Table 6. Policy components

No.	Policy	Symbol	Description
1.	Enhancement of Planning Quality	Planning	Involving the UKPBJ as the Regional Government Budget Team to ensure that the procurement package planning is on target.
2.	Improvement in E-Procurement	E-Proc	Enhancing the utilization of e-catalogs, e-purchasing, and e-tendering, as well as improving the supporting infrastructure for e-procurement.
3.	Enhancement of HR Professionalism	SDM	Enhancing the professionalism of procurement personnel through training and certification of functional procurement officers in accordance with the organization's needs.
4.	Enhancement of the Maturity of UKPBJ	UKPBJ	Improving institutional maturity in accordance with the LKPP standards, specifically the UKPBJ, which can provide added value to procurement governance in a sustainable manner.
5.	Improvement in Contract Control.	PPK	Enhancing the control of contract execution, which includes technical field supervision, contract modifications, technical justifications, and other related aspects.
6.	Strengthening the Role of APIP	APIP	Enhancing the role of APIP, which includes evaluation, review, audit, assistance, and other assurance or consulting activities related to procurement.
7.	Increasing Stakeholder Participation.	Stkholders	Enhancing stakeholder participation to actively oversee and report allegations of misconduct, establishing both internal and external complaint mechanisms, and following up on their resolution.

To implement these policies, a list of actions is required. Actions are the means to achieve the goal of policy implementation and are either nouns or verbs. Based on discussions and interviews with Procurement stakeholders in Palembang Government, the actions that can be carried out are presented in the following Table 7:

Table 7. Action components

No.	Symbol	Description
1.	TAPD	Involving the UKPBJ in the Regional Government Budget Team (TAPD).
2.	HPS	Conducting a review of the Self-Estimated Price (HPS) by the APIP.
3.	Sarpras	Improving the infrastructure and facilities for e-procurement.
4.	Integrasi	Integrating the SPSE with other systems such as SIPD, SPAN, and others.
5.	PPBJ	Expediting the PPBJ certification process, in coordination with LKPP.
6.	Diklat	Conducting technical training to enhance the competency of personnel.
7.	Mentoring	transfer of knowledge among the procurement staff.
8.	SKP	Implementing planning and performance agreements for PPBJ.

No.	Symbol	Description
9.	Reward	Providing rewards to the UKPBJ based on achievements.
10.	Kemitraan	Building partnerships between the government and businesses entities.
11.	SA/EP	Implementing stakeholders analysis and engagement policy.
12.	VMS	Optimizing vendor performance with a Vendor Management System.
13.	RiskUpdate	Continuously updating the risk register.
14.	Audit	Conducting a probity audit on procurement according to the risk level.
15.	Asistensi	Enhancing the role of APIP in supporting the procurement process.
16.	Bimtek	Conducting technical guidance for improving the quality of SPIP.
17.	WBS	Developing a Whistleblowing System for reporting corruption.

After obtaining the components of Multipol, which include criteria, scenarios, policies, and activities, the next step is scoring and weighting. Multipol uses a 1-6 scale for criteria weighting, where higher values indicate higher importance for the criteria. For evaluating scenarios and policies against criteria, a weighting range of 0-100 is used, while for activity weighting against criteria, a scale of 0-20 is employed (Godet & Durance, 2011). The larger the value assigned, the stronger the relationship between the activity and the criteria. Based on data processing using the Multipol application, the analysis results based on the interconnections between activities and policies are presented in Table 9 and Closeness Map, which illustrates the proximity and relevance between activities and policies in Figure 2, as follows:

Table 9. Results of the evaluation of actions against policies

Actions	Policies							Avg	Std. Dev	Pos
	Plan	Eproc	SDM	UK PBJ	PPK	APIP	Stkh			
TAPD	17,7	15,4	12,1	15,9	13,9	15,1	15,2	15,1	1,60	16
HPS	7,00	8,90	4,60	6,10	12,1	13,2	12,8	9,20	3,20	1
Sarpras	15,7	16,5	12,4	14,2	10,1	9,60	10,2	12,6	2,60	13
Integrasi	16,4	16,5	9,90	14,0	14,4	15,4	15,6	14,6	2,10	14
PPBJ	14,7	12,9	18,3	16,2	14,3	13,9	13,8	14,9	1,70	15
Diklat	12,6	12,2	15,6	13,6	11,2	10,4	10,5	12,3	1,70	10
Mentor	10,8	11,1	15,4	12,3	8,40	6,80	7,20	10,3	2,80	3
SKP	11,4	7,60	16,1	13,5	9,10	8,70	8,60	10,7	2,90	5
Reward	10,7	6,50	15,4	12,8	7,20	6,60	6,60	9,40	3,30	2
Kemitra	15,3	13,6	11,2	13,8	7,70	7,60	8,20	11,1	3,00	7
SA/EP	12,4	6,30	11,3	12,8	11,9	13,7	13,1	11,6	2,30	8
VMS	13,1	13,0	8,40	11,4	12,9	13,9	13,9	12,4	1,80	11
RiskUpd	11,9	7,90	9,60	11,7	14,1	16,2	15,5	12,4	2,80	12
Audit	10,1	9,10	7,90	9,60	14,3	15,9	15,3	11,7	3,10	9
Asistensi	6,90	6,40	9,90	8,30	13,6	14,4	13,7	10,5	3,20	4
Bimtek	7,60	6,30	11,6	9,40	13,7	14,4	13,6	10,9	3,00	6
WBS	15,8	14,9	13,1	15,0	16,9	18,0	17,7	15,9	1,60	17

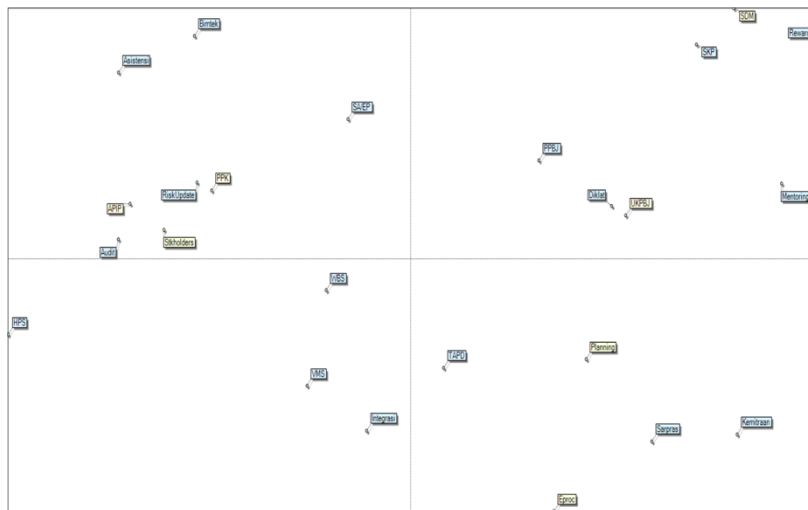


Figure 2. action/policy closeness map

After reviewing the description of the evaluation results of actions against policies, the next step is the presentation of the Multipol analysis results related to policy evaluation against scenarios in Table 10 and Figure 3, as follows:

Table 10. Results of the evaluation of policies against scenarios

Policies	Scenarios			Avg	Std. Dev	Pos
	Short	Mid	Long			
Planning	26,5	22,0	30,0	26,2	3,3	5
Eproc	40,8	19,0	16,2	25,3	11	4
SDM	11,2	38,0	33,8	27,7	11,7	7
UKPBJ	19,0	28,0	33,0	26,7	5,8	6
PPK	22,5	21,0	24,0	22,5	1,2	3
APIP	21,2	18,0	25,8	21,7	3,2	1
Stakeholders	23,0	18,0	25,0	22,0	2,9	2

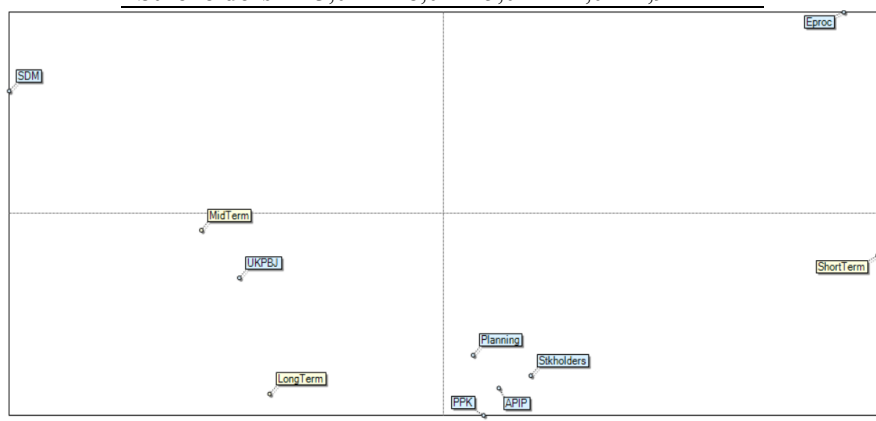


Figure 3. Policies/Scenarios Closeness Map

According to (Fauzi, 2019), the highest average values and the lowest standard deviations indicate that activities related to these policies exhibit the best performance. The combination of these two values is reflected in the position of

actions within the hierarchy, where the higher the position, the better the performance of the actions. In Table 9, the three actions with the highest scores are: (1) WBS; (2) TAPD; and (3) PPBJ. These three actions are considered the top priorities for implementation. Based on Table 10, it can be seen that the policies with the highest position values are: (1) SDM; (2) UKPBJ; and (3) Planning.

Based on the analysis of Multipol that has been conducted, the relationships between scenarios, policies, and actions are organized in the form of a strategy roadmap. This strategy roadmap illustrates which policies are suitable to be implemented in each scenario and what actions can be taken to achieve the objectives of implementing those policies. The roadmap for the anti-corruption strategy in government procurement in Palembang City can be seen in Figure 4 below:

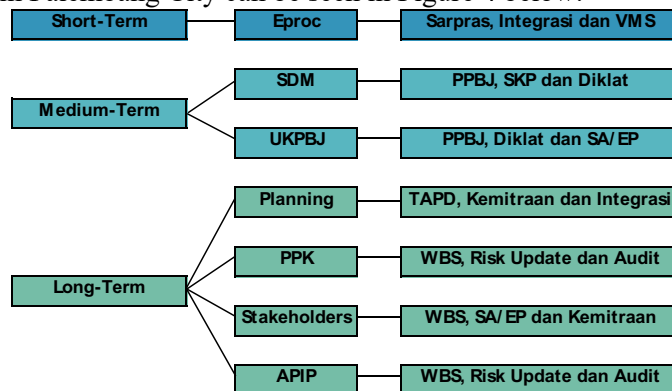


Figure 4. The roadmap for the anti-corruption strategy

As previously explained, each scenario has different time frames and levels of effectiveness. The policies and actions in the short-term scenario can be implemented immediately but with low effectiveness as they are at the operational level. In the medium-term scenario, it takes at least one to three years to be implemented with moderate effectiveness. For the long-term scenario, it is estimated to take more than 3 years to be implemented. This is due to the fact that the policies in this scenario are strategically positioned and greatly impacted by various factors including higher authority policies and shifts in organizational culture.

5. Discussion

Short-Term Scenario

For the implementation of the short-term scenario, policies that can be applied include enhancing the utilization of e-procurement (E-Proc). This policy encompasses the utilization of e-tendering, non e-tendering, e-purchasing, non e-purchasing, and e-contracting, along with the improvement of supporting infrastructure (Sarpras). Another activity involves integrating the SPSE system with various other government management systems such as SIPD owned by the Ministry of Home Affairs, SPAN owned by the Ministry of Finance, and others (Integrasi). Additionally, there is a need for optimizing the use of the Vendor Management System (VMS). According to government procurement stakeholders in Palembang,

the VMS has been used to assess the performance of suppliers, but it has had no consequences for suppliers with poor performance. Consequently, these suppliers can still participate in the tendering process on SPSE. VMS should serve as a filter for suppliers with poor performance to ensure they face appropriate sanctions as per applicable regulations.

Medium-Term Scenario

In the medium-term scenario, policies that can be implemented include policies aimed at enhancing the professionalism of human resources (SDM) and the maturity of Procurement Service Unit (UKPBJ). There are some commonalities in the implementation of these policies, such as actions related to the certification of procurement professionals (PPBJ) and the provision of substantive technical training (Diklat) for procurement implementers. For the PPBJ certification activities, the Palembang City Government must conduct a workload analysis to align the needs of PPBJ with the budget under management. Subsequently, the government of Palembang should engage in intensive coordination with LKPP to expedite the PPBJ certification process.

In addition to PPBJ certification, the implementation of substantive technical training (Diklat) can also be carried out to enhance the competence of procurement personnel. Both PPBJ certification and technical training are crucial efforts in preventing corruption. According to (Ardiyanti & Supriadi, 2018), when employee competence improves, their likelihood of engaging in fraudulent activities decreases. This is based on the notion that individuals who are highly competent have a better understanding of fraud from all aspects, enabling them to take preventive measures and detect irregularities early.

Another activity that can be implemented to execute the policy of enhancing the professionalism of human resources is the application of Key Performance Indicators (KPIs), known within the scope of government in Indonesia as "Sasaran Kinerja Pegawai (SKP)." SKP serves as performance indicators that must be achieved by procurement implementers. According to the Head of UKPBJ, SKP already exists for procurement personnel in Palembang. However, the performance targets specified in these SKPs still refer to the overall performance of civil servants and do not yet specifically pertain to the tasks and functions of PPBJ. To improve the quality of SKP, it is necessary to design SKP that has been adjusted to the duties and functions of PPBJ.

In this medium-term scenario, there is also the activity of Stakeholders Analysis and Engagement Policy (SA/EP), which can be carried out to execute the policy of enhancing the maturity of UKPBJ. The SA/EP activity involves fostering relationships between institutions and can be conducted by UKPBJ as the technical procurement unit in Palembang. These inter-institutional relationships need to be analyzed in terms of their scope and their usefulness in achieving organizational goals. These relationships between institutions can involve cooperation with the Financial and Development Supervisory Agency (BPKP) for internal control strengthening, with the Prosecutor's Office (Kejaksaan RI) or the Police (Kepolisian RI) for legal assistance, or with the Corruption Eradication Commission (KPK) for

the prevention of procurement corruption. In addition to its relevance to the "UKPBJ" policy, the SA/EP activity is also relevant to the "Stakeholders" policy in the long-term scenario.

Long-Term Scenario

The last scenario is a long-term scenario, where one of the policies that can be implemented is the improvement of planning quality. In this study, this policy is symbolized by "Planning." This policy can be executed by involving UKPBJ in the Regional Government Budget Team (TAPD). Currently, UKPBJ is not involved in the planning and budgeting process, resulting in inappropriate work package planning. The consolidation and fragmentation of procurement packages are critical points vulnerable to the interests of specific parties, which is in line with the risk analysis results, where the risk of inadequate planning and the complexity of work package structuring benefiting specific parties have relatively high risk criticality scores. By involving UKPBJ in planning and budgeting, it is expected that the quality of work planning will improve. However, for UKPBJ in Palembang to participate in TAPD, it is highly dependent on the policies of the Mayor of Palembang in formulating TAPD and the policies of LKPP as the national supervisory body for UKPBJ. Advocacy efforts through continuous communication with the Mayor of Palembang and the authorities of LKPP are needed.

An alternative actions that can be implemented to execute the Planning policy is the development of partnership relationships between the Palembang City Government and businesses. This partnership can be established through umbrella contracts, electronic catalogs, and various other forms of collaboration. This action can streamline the bureaucratic process in procurement and reduce the risk of corruption. The actions symbolized by "kemitraan" are relevant to two policies in the long-term scenario, namely the "Planning" policy and the "Stakeholders" policy.

In the long-term scenario, there is one dominant action, which is the development of a whistleblowing system (WBS). WBS is the action with the best position value according to the Multipol analysis and is relevant to the Improvement in Contract Control (PPK) policy, Strengthening the Role of APIP (APIP) policy, and Increasing Stakeholder Participation (stakeholders) policy. The development of the WBS activity is aligned with the risk having the highest Risk Criticality, which is the risk of procurement executors lacking integrity. Integrity breaches within procurement implementers are challenging to detect and mitigate without disclosures from both internal and external sources. According to Transparency International (2016), as cited in (Annisaa & Nurlaeli, 2022), the role of whistleblowers is crucial in exposing complex acts of corruption and other hidden misconduct that may not be apparent on the surface. The practical development of the WBS can be carried out with technical guidance, guideline preparation, and socialization with the assistance of relevant institutions such as BPKP, KPK, and others. The challenges faced in the development of WBS include changing the organizational culture, where every individual must have awareness and sensitivity to indications of misconduct and be willing to become whistleblowers, making the implementation of this action a time-consuming process.

Another policy in the long-term scenario is PPK Policy and APIP Policy. Both of these policies share similarities in their implementation, which include the activities of WBS, as described above, risk updates, and audits. The activity of updating the risk register is actually regulated in Mayor Regulation No. 36 of 2022 on Risk Management. However, this regulation only covers risk management in general, and for anti-corruption measures to be more effective, specific management of fraud risks should be implemented. The Committee of Sponsoring Organizations of the Treadway Commission (COSO), as mentioned by (Kamal, 2019), also agrees that the primary focus of fraud risk management is prevention, detection, and investigation.

For the audit activities within the PPK and APIP policies, probity audits can be conducted. Based on interviews with UKPBJ Palembang, Probity Audits are considered highly effective in providing confidence to procurement implementers because the supervision is carried out concurrently during the procurement process. The implementation of probity audits largely depends on the resources available to the Inspectorate of Palembang, so adjustments may be necessary, with audits focused on procurement projects with high-risk potential.

6. Conclusions

Government procurement is vulnerable to corruption, and Palembang City's existing anti-corruption strategies show weaknesses due to process deviations. Critical corruption risks in Palembang City's procurement are related to implementer integrity, contract control, and inadequate planning. The research suggests that these risks can be addressed through strategies divided into three scenarios: (1) In the short term, enhance e-procurement utilization through infrastructure, system integration, and Vendor Management System optimization; (2) In the medium term, enhance human resources professionalism and UKPBJ maturity through PPBJ certification, technical training, employee performance target application and strengthening institutional partnerships; (3) In the long term, improve procurement planning quality, implement better contract control, enhance internal control, and actively engage stakeholders. This can be realized by integrating UKPBJ into the regional government budget team, forging government-business partnerships, risk management, conducting thorough probity audits, and establishing a robust whistleblowing system.

References:

- Annisaa, Z., & Nurlaeli, S. (2022). Determinants of Whistleblowing Intentions: The Role of Education in Building Personal Integrity. *Asia Pacific Fraud Journal*, 7(1), 103–114.
- Ardiyanti, A., & Supriadi, Y. N. (2018). Efektivitas pengendalian internal, dan kompetensi sumber daya manusia, terhadap implementasi good governance serta impikasinya pada pencegahan fraud dalam pengelolaan keuangan desa di kabupaten tangerang. *Jurnal Akuntansi Manajerial (Managerial Accounting Journal)*, 3(1), 1–20.
- Arsana, I. P. J. (2016). *Manajemen pengadaan barang dan jasa pemerintah*. Deepublish.

- Arsyad, J. H., & Karisma, D. (2022). *Sentralisasi Birokrasi Pengadaan Barang dan Jasa Pemerintah*. Sinar Grafika.
- BPK. (2023). *Laporan Hasil Pemeriksaan (LHP) Pemerintah Kota Palembang Tahun Anggaran 2022*.
- Fauzi, A. (2019). *Teknik analisis keberlanjutan*. Gramedia Pustaka Utama.
- Godet, M., & Durance, P. (2011). *Strategic foresight for corporate and regional development*. Unesco Publishing Paris.
- Hansen, H. K. (2011). Managing corruption risks. *Review of International Political Economy*, 18(2), 251–275.
- Hawkins, T. G., Gravier, M. J., & Powley, E. H. (2011). Public versus private sector procurement ethics and strategy: What each sector can learn from the other. *Journal of Business Ethics*, 103, 567–586.
- Kamal, M. (2019). Peta Resiko Fraud Pengadaan Barang dan Jasa Pemerintah. *Jurnal Transformasi Administrasi*, 9(2), 139–163.
- KPK. (2023). TPK Berdasarkan Jenis Perkara. <https://www.kpk.go.id/statistik/penindakan/tpk-berdasarkan-jenis-perkara>
- LKPP. (2022). Penilaian Final Indeks Tata Kelola Pengadaan (ITKP) Kementerian, Lembaga, dan Pemerintah Daerah Tahun 2022. https://siukpbj.lkpp.go.id/uploads/posts/2022_11_22_Hasil%20Final%20ITKP%20KLPD%20Tahun%202022.pdf
- LKPP. (2023). Tingkat Kematangan UKPBJ. <https://siukpbj.lkpp.go.id/>
- Locatelli, G., Mariani, G., Sainati, T., & Greco, M. (2017). Corruption in public projects and megaprojects: There is an elephant in the room! *International Journal of Project Management*, 35(3), 252–268.
- Mu, S., Cheng, H., Chohr, M., & Peng, W. (2014). Assessing risk management capability of contractors in subway projects in mainland China. *International Journal of Project Management*, 32(3), 452–460.
- Nguyen, H. D., & Macchion, L. (2023). A comprehensive risk assessment model based on a fuzzy synthetic evaluation approach for green building projects: the case of Vietnam. *Engineering, Construction and Architectural Management*, 30(7), 2837–2861.
- Nurharyanto. (2016). Pendekatan Teori Permainan Melakukan, Konsep Assesmen Risiko Fraud Untuk Pencegahan dan Pendeteksian Fraud Pada Sektor Publik. *Karya Tulis Ilmiah, Majalah Kampus Pengawasan: Media Komunikasi Diklat Auditor*, Edisi Januari.
- Shan, M., Chan, A. P. C., Le, Y., Xia, B., & Hu, Y. (2015). Measuring corruption in public construction projects in China. *Journal of Professional Issues in Engineering Education and Practice*, 141(4), 5015001.
- Sharma, S. K., Sengupta, A., & Panja, S. C. (2019). Mapping corruption risks in public procurement: Uncovering improvement opportunities and strengthening controls. *Public Performance & Management Review*, 42(4), 947–975.
- Suparman, N. (2020). Bureaucratic Corruptive Behavior: Causes And Motivation of State Civil Aparatures in Indonesia. *International Journal of Psychosocial Rehabilitation*, 24(2), 5290–5303.
- V OECD. (2016). Preventing Corruption in Public Procurement. OECD.
- Zhao, X., Hwang, B.-G., & Gao, Y. (2016). A fuzzy synthetic evaluation approach for risk assessment: a case of Singapore's green projects. *Journal of Cleaner Production*, 115, 203–213.