

## Determinants of Government Procurement Fraud Prevention with Organizational Commitment and Ethical Culture as Moderating Variables

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### ABSTRACT

This study aims to analyze the various factors that influence the prevention of procurement fraud, including the implementation of the Anti-Bribery Management System (ABMS), Government Internal Control System (SPIP), and the role of the Internal Compliance Unit (UKI), with organizational commitment and ethical culture as moderators. It employs a quantitative causal approach, with data collected through surveys and analyzed using Partial Least Square-Structural Equation Modelling (PLS-SEM). The results demonstrate that the implementation of ABMS, SPIP, and UKI positively impacts the prevention of procurement fraud. Organizational commitment and ethical culture strengthen the influence of SPIP implementation, while ethical culture weakens the role of UKI in preventing fraud. ABMS, SPIP, and UKI are crucial in fraud prevention, but their effectiveness is enhanced by a strong commitment to ethics. While organizational commitment strengthens SPIP's preventive effects, a strong ethical culture may reduce the reliance on UKI in fraud prevention. These findings underscore the importance of comprehensive anti-fraud measures such as the implementation of ABMS, SPIP, and the establishment of UKI in preventing procurement fraud.

**Keywords:** Anti-Bribery Management System; Ethical Culture; Government Internal Control System; Internal Compliance Unit; Organizational Commitment

## INTRODUCTION

The 2022 Annual Report of the Corruption Eradication Commission (KPK) highlights that fraud cases in government goods/services procurement occupy the top position. The high number of fraud cases in procurement underscores the importance of preventive measures to reduce state losses and promote national development. The Ministry of Public Works and Housing (PUPR) as the ministry with the largest expenditure budget in the Draft State Budget (RAPBN) for fiscal year 2024 certainly has a high urgency in efforts to prevent procurement fraud ([CNBC Indonesia, 2023](#)). This is inseparable from the duties and functions of the Ministry of PUPR in carrying out infrastructure development in Indonesia.

There are many allegations of irregularities in procurement at the Ministry of PUPR, including bribery and violations related to the Namrole-Leksula project auction by Regional Construction Procurement Selection Implementation Offices (BP2JK) Maluku ([Times Maluku, 2023](#)) and irregularities in the auction of the Danau Lindu access road reconstruction worth IDR 89 billion by BP2JK Sulawesi Tenggara ([Zulfitra, 2023](#)). Investigations have been conducted to uncover practices of misappropriation, bribery, and manipulation in the procurement process for these projects. This situation emphasizes the need for control systems in procurement to reduce fraud and increase transparency and accountability.

ISO 37001:2016 - Anti-Bribery Management Systems (ABMS) - Requirements with Guidance for Use, adapted into SNI ISO 37001:2016 on the ABMS, is a standard that helps organizations in their efforts to combat bribery practices and promote the adoption of an ethical business culture ([Badan Standardisasi Nasional \[BSN\], 2016](#)). The ABMS provides a structured approach for organizations to combat bribery. It offers guidelines for preventing, identifying, and handling bribery incidents across various sectors, including government, private businesses, and non-profit entities, regardless of their size. By implementing ABMS, organizations can effectively assess and mitigate bribery risks, potentially decreasing corruption overall. This system equips organizations with the tools to proactively address bribery threats through targeted preventive strategies. This standard provides a comprehensive framework to ensure transparency, accountability, and compliance with anti-bribery principles in procurement. However, the implementation of ABMS is still a voluntary initiative in Indonesia ([Sarah & Hilmi, 2018](#)).

Alongside ABMS implementation, the Ministry of PUPR is enhancing its internal controls through the Government Internal Control Systems (SPIP), as required by Government Regulation No. 60 of 2008. SPIP is composed of five key components: (1) the control environment, (2) risk evaluation, (3) control measures, (4) information and communication processes, and (5) oversight of internal controls. By adopting SPIP, the Ministry aims to ensure reasonable confidence in achieving organizational goals efficiently and effectively, producing reliable financial statements, safe guarding government assets, and ensuring adherence to legal and regulatory requirements.

In response to Presidential Instruction No. 10/2016 and Government Regulation No. 60/2008, the Ministry of PUPR has created specific regulations to implement ABMS and SPIP within its organization. These include (1) Ministry Regulation No. 20/PRT/M/2018 on SPIP implementation ([The Audit Board of Indonesia \[BPK RI\], 2018](#)) and (2) Instruction No. 4/IN/M/2022 (originally Memorandum No. 01/MD/M/2020, [BPK RI, 2022](#)) addressing risk prevention strategies for goods/services procurement deviations from 2022-2024. To support these initiatives, Internal Compliance Units (UKI) have been established in each department and office as a secondary defense mechanism. UKIs are tasked with monitoring internal control compliance and managing risks, both structurally and functionally. The introduction of UKIs aims to enhance the effectiveness of internal

controls within the ministry, particularly in mitigating procurement fraud risks.

The selection of factors influencing fraud prevention in procurement fraud is based on previous research findings. [Hanindita et al. \(2021\)](#), [Rozah & Pujiyono \(2022\)](#), and [Sartika & Arieysmieta \(2021\)](#) have demonstrated that the implementation of ABMS can help organizations in preventing and reducing incidents of gratuities, corruption, collusion, and nepotism. The effectiveness of SPIP in fraud prevention is supported by studies conducted by [Alfiansyah and Afriady \(2022\)](#), [Oduro & Cromwell \(2018\)](#), [Pane \(2018\)](#), [Pattawe et al. \(2022\)](#), and [Yuniarti & Ariandi \(2017\)](#), which all indicate a positive impact of SPIP on fraud prevention. [Pamungkas and Prasetyo \(2017\)](#) provide evidence supporting the effectiveness of UKI in fraud prevention strategies, they found that UKI can reduce the likelihood of violations and corrupt behavior.

Research results concerning the impact of SPIP on fraudulent activities are not uniform. Various studies have yielded conflicting outcomes, suggesting that the relationship between SPIP implementation and fraud prevention is not straightforward or consistently established across different contexts ([Ayem & Kusumasari, 2020](#); [Padhilah & Burhany, 2020](#); [Pratiwi et al., 2023](#); [Setyawan et al., 2019](#); [Sutoyo et al., 2023](#)). These inconsistencies suggest that there may be factors that can strengthen or weaken the influence of these variables. To sharpen the analysis, this study adds two moderating variables they are organizational commitment and ethical organizational culture.

This study aims to examine multiple elements that contribute to preventing fraud in procurement processes, including the implementation of ABMS, SPIP, and the UKI's role. Additionally, the research will explore how organizational commitment and an ethical organizational culture may moderate these relationships. By analyzing these factors, the study seeks to provide a comprehensive understanding of procurement fraud prevention mechanisms.

## LITERATURE REVIEW

### Auditability Theory

[Power \(1996\)](#) introduced auditability theory, which describes "auditability" as a prerequisite for all inspection and auditing activities, and a foundation for organizational change. This theory incorporates governance elements that focus on three key areas: skilled personnel, efficient processes, and robust internal controls ([Rendon & Rendon, 2015](#)). The employee aspect refers to the expertise of staff handling procurement tasks. The process aspect involves the organization's ability to execute procurement-related functions effectively. The internal control aspect aims to ensure regulatory compliance, monitor enforcement, and report significant weaknesses. Auditability theory emphasizes the need for dynamic internal controls that are consistently monitored, enforced, and promptly reported ([Rendon & Rendon, 2016](#)). This approach ensures organizations maintain an environment conducive to effective auditing and organizational improvement.

### Attribution Theory

Attribution theory, first introduced by [Heider \(2013\)](#), provides a framework for understanding how individuals explain their own and others' behaviors, attributing these actions to internal or external factors ([Viera et al., 2021](#); [Waromi et al., 2024](#)). It delves into the process of understanding reactions to surrounding events by identifying the underlying reasons behind them ([Megawati, 2018](#)). Attribution theory sheds light on how individuals perceive the contributions of others to their behaviors or how their own actions are influenced by internal dispositions, environmental conditions, and other factors ([Arifin, 2022](#)). In essence, it explores the causes behind various occurrences.

### **Fraud**

Fraud, a term often associated with deception and wrongdoing, encompasses a range of illegal acts committed with the intent to deceive or mislead others, perpetrated by individuals both within and outside of organizations ([Karyono, 2013](#)). The Association of Certified Fraud Examiners (ACFE) provides a more comprehensive definition, characterizing fraud as any act of fraud or deception that is perpetrated by an individual or organization that knows or should know that the act could result in an unjust advantage to the individual or organization ([ACFE, 2018](#); [Wuryandini et al., 2022](#)). ACFE classifies fraud into three types, including asset misappropriation, fraudulent financial statements, and corruption.

### **Government Goods/Services Procurement**

Presidential Regulation 12 of 2021 ([BPK RI, 2021](#)), which updates Presidential Regulation 16 of 2018, establishes a thorough guideline for public procurement in Indonesia. This regulation defines government procurement as the complete process of acquiring goods/services for ministries, institutions, and regional bodies funded by either the national or regional budgets. The process spans from the initial identification of needs to the final handover of completed work. The procurement process must adhere to fundamental principles of procurement which include efficiency, effectiveness, transparency, openness, competition, fairness, and accountability.

### **Government Goods/Services Procurement Fraud Prevention**

Steve Albrecht as cited by [Priantara \(2013\)](#) preventing fraud involves strategies aimed at removing opportunities for fraudulent activities. This can be achieved by developing and implementing risk management, especially fraud risk management, and by implementing internal controls and maintaining honest and transparent governance. [Amrizal \(2004\)](#) expands on this concept, describing fraud prevention as a collection of management-led initiatives. These initiatives involve creating policies, systems, and procedures that ensure all levels of the organization - from the board of commissioners to general staff members - take necessary precautions against fraud. This approach emphasizes the importance of organization-wide involvement in fraud prevention efforts.

### **Anti-Bribery Management System (ABMS)**

In response to Presidential Instruction Number 10 of 2016, which focuses on corruption prevention and eradication, the National Standardization Agency (BSN) of Indonesia has introduced the SNI ISO 37001 ABMS. This system is designed to help organizations manage bribery risks by providing a framework for prevention, detection, reporting, and addressing bribery incidents. There are six aspects that must be considered in the implementation of ABMS in accordance with the SNI ISO 37001:2016 standard, including proportional procedures, leader commitment, risk management, due diligence, effective communication, and monitoring and evaluation ([Sartika & Arieysmieta, 2021](#)).

### **Government Internal Control System (SPIP)**

Government Regulation No 60 of 2008 ([BPK RI, 2008](#)) mandates the implementation of SPIP throughout all central and regional government entities. SPIP constitutes a comprehensive framework encompassing ongoing actions and activities undertaken by government leadership and personnel. The primary objectives of SPIP are to provide reasonable assurance regarding the achievement of four key areas: efficient and effective fulfillment of organizational goals, reliability of financial statements, safeguarding of state assets, and adherence to applicable laws and regulations. By establishing these objectives, SPIP serves as a critical mechanism for fostering integrity and accountability within the government sector, thereby ensuring the responsible management of public resources in accordance with established regulations.

### **Internal Compliance Unit (UKI)**

Within the Ministry of PUPR, UKI acts as a second line of defense for each organizational unit. UKI's main role is to enhance supervision, complementing the Risk Owner Unit (UPR) as the first line of defense and the Inspectorate as the third line of defense. UKI has two main tasks in the effort to establish good governance by monitoring internal control compliance and performing risk management.

### **Organizational Commitment**

Organizational commitment refers to employees' willingness to put in extra effort and stay with their company, as reflected in their intention to continue working for the organization in the long term. It reflects employees' belief in the company's vision and mission, their motivation to give maximum effort in their work, and their enthusiasm to continue working. The level of an individual's organizational commitment is also evident in their sense of connection to the company and their personal investment in its objectives ([Kaswan, 2017](#)). Organizational commitment is a measure of how deeply employees are engaged with and devoted to their workplace. Highly committed staff members demonstrate a strong sense of allegiance to the organization. As a result, these employees are more likely to embrace and actively work towards fulfilling the company's vision and mission. They tend to go above and beyond in their efforts to help the organization achieve its goals, showing a personal investment in the company's success.

### **Organizational Ethical Culture**

Organizational ethical culture is shaped by the shared principles, values, and beliefs that guide everyone's behavior ([Parmawan et al., 2017](#)). These values and norms act as a roadmap, influencing how employees work ethically and avoid taking unnecessary risks that could jeopardize the organization's success. The ethical culture of the organization serves as a guide for individuals working within the company to evaluate and make decisions ethically in carrying out their work ([Apriliawati & Suardana, 2016](#)).

### **Hypotheses Development**

#### ***The Influence of ABMS Implementation on Preventing Procurement Fraud***

Auditability theory emphasizes the importance of establishing and actively managing systems to support an organization's governance processes and practices ([Power, 1996](#)). SNI ISO 37001:2016 ABMS is a management system that is considered superior and is used as an international standard to prevent bribery practices, put a communication system in place to guarantee everyone understands how to follow the ABMS standards, ensure fair and objective competition, and place leaders as role models of integrity and professionalism ([Fasa & Sani, 2020](#)). The implementation of ABMS serves as an efficient and effective approach to preventing fraud ([Kafel, 2016](#)). The controls mandated within ABMS facilitate both financial and non-financial controls to deter and detect bribery practices ([Rozah & Pujiyono, 2022](#)).

Extensive research has demonstrated the positive impact of implementing an ABMS on various aspects of organizational governance and fraud prevention. Key findings from notable studies include: [Kusuma et al. \(2023\)](#) established that all six ABMS principles significantly contribute to raising anti-bribery awareness among employees. [Yudistira and Wicaksana \(2022\)](#) highlighted that ABMS implementation leads to process improvements and the introduction of new preventive measures against bribery. [Sartika and Arieyasmiet's \(2021\)](#) case study on the Decentralization and Regional Autonomy Research and Development Center revealed that ABMS implementation effectively curbs corruption, gratuities, collusion, and nepotism involving individuals or corporations. [Fasa & Sani \(2020\)](#) and [Vojković & Katulić \(2023\)](#) emphasized that ABMS, when complemented by a public service management system, facilitates the development of anti-bribery policies and procedures. Based on the aforementioned research findings and the theoretical underpinnings of audibility theory, which emphasizes the importance of



establishing and managing systems to support an organization's governance processes and practices, thus this study puts forth the following ideas:

H1: ABMS implementation positively affects procurement fraud prevention.

### ***The Influence of SPIP Implementation on Preventing Procurement Fraud***

A weak internal control system is one of the factors that create opportunities for fraud. ([Ramadhan & Arifin, 2019](#)). Effective internal control is essential for organization to minimize fraud occurrences, thereby closing the opportunities for deviant behaviors ([Sutoyo et al., 2023](#)). This idea fits with the concept of auditability, which highlights that strong internal controls are necessary for effective processes and good governance in an organization ([Power, 1996](#)).

[Francesco and Hastuti \(2022\)](#) focused on fraud in government procurement by identifying the impact of SPIP implementation on the City Government (Pemda) of Cimahi. The research findings demonstrate that SPIP has a significant and positive effect in preventing procurement fraud. The investigation by [Primastiwi et al. \(2020a\)](#) and [Wardani et al. \(2021\)](#) on the City Government of Yogyakarta proves that SPIP implementation has a positive influence on efforts to prevent fraud in the procurement process in Yogyakarta. Likewise, [Yuniarti and Ariandi \(2017\)](#) show that SPIP implementation significantly affects fraud behavior in intergovernmental organizations. [Oduro and Cromwell \(2018\)](#) examined each element of SPIP in local governments in Ghana. Their research proves that risk assessment and information technology significantly prevent procurement fraud. Highlights theoretical basis: Building on auditability theory, which suggests SPIP can prevent procurement fraud, this study proposes thesecond assumption:

H2: SPIP implementation positively affects procurementfraud prevention.

### ***The Influence of UKI's Role on Preventing Procurement Fraud***

Auditability theory emphasizes governance on aspects of internal control, focusing on monitoring implementation procedures, law enforcement, and regulations ([Power, 1996](#)). Supervision of internal compliance is crucial to ensure that work is carried out according to plans and to detect and rectify unethical actions ([Nazuwir, 2018](#)). UKI functions as the second line of defense for every organizational unit within the Ministry of PUPR, with two main responsibilities: overseeing internal control compliance and managing risks (Instruction No. 4/IN/M/2022). Institute of Internal Auditors ([IIA, 2013](#)) emphasizes the importance of a second line of defense in ensuring strong internal controls, accurate reporting, legal compliance, and timely corrective actions. [Achmad et al. \(2018\)](#) further support this, demonstrating that a well-implemented Three Lines of Defense Model, combined with ethical leadership and proper policies, can effectively prevent corruption.

The studies by [Khairunnisa & Rahadian \(2022\)](#) and [Setiyaviani \(2023\)](#) suggest that a strong UKI within an organization's control environment is linked to more effective employee monitoring and internal controls. [Pamungkas and Prasetyo \(2017\)](#) found that internal control oversight by UKI influences unethical/corruptive behavior variables among employees in the Directorate General of Taxation. These studies prove that UKI functions to reduce opportunities for violations, including ethical codes, discipline, and more significant deviations like fraud. Referring to auditability theory, UKI's role is expected to have a positive impact on preventing procurement fraud. Bringing together the ideas discussed, the third hypothesis is:

H3: The role of the UKI positively affects procurement fraud prevention.

***The Role of Organizational Commitment in Moderating the Implementation of SPIP on Preventing Procurement Fraud***

Attribution theory explores how people explain the causes of their own and others' behavior, considering both internal traits and external circumstances ([Heider, 2013](#)). Internal factors refer to those originating from within an individual. Organizational commitment refers to the strong dedication employees have toward the organization and their belief in its core principles ([Sutrisno, 2015](#)). Organizational commitment, reflecting a strong relationship between employees and organizational goals, plays a crucial role in fraud prevention ([Anggoe & Reskino, 2023](#)). High organizational commitment leads to a dedicated workforce that actively contributes to achieving company objectives, adheres to regulations, and minimizes the risk of fraudulent activity ([Widyawati & Sari, 2017](#)).

Research by [Novitasari and Sari \(2022\)](#) in village governments in Bojonegoro District proves that SPIP implementation coupled with organizational commitment can prevent fraud. Consistent with these findings, [Yusni \(2022a\)](#) analyzed the moderating effect of organizational commitment in e-procurement implementation and found that it has a positive and significant impact on the prevention of procurement fraud. Research by [Rifai & Mardijuwono \(2020\)](#) and [Yusni \(2022b\)](#), directly testing the relationship of organizational commitment in preventing fraud in government agencies, proves that organizational commitment positively influences fraud prevention. This supports [Primastiwi et al. \(2020b\)](#) who state that lower levels of organizational commitment among employees correlate with higher tendencies toward fraud.

Referring to attribution theory, incorporating organizational commitment is expected to moderate the positive impact of SPIP implementation on preventing procurement fraud. Following our previous discussion, the fourth hypothesis is as follows:

H4: Organizational commitment strengthens the positive effects of SPIP implementation on procurement fraud prevention.

***The Role of Organizational Ethical Culture in Moderating the Implementation of SPIP on Preventing Procurement Fraud***

Attribution theory posits that an individual's attitudes towards themselves or others are influenced by internal and/or external factors ([Heider, 2013](#)). External factors refer to those originating outside of an individual, such as situational pressures, job challenges, or specific conditions that influence individual behavior ([Heider, 2013](#)). Organizational ethical culture consists of norms, values, and beliefs within an organization that can influence how members work and behave ethically to prevent actions detrimental to the organization ([Parmawan et al., 2017](#)). [Akbar \(2019\)](#) discovers that organizational ethical culture as a moderating variable plays a significant role in strengthening SPIP implementation efforts to prevent procurement fraud. Likewise, [Abidin et al. \(2023\)](#) also suggest that a strong ethical culture can actually weaken the link between internal controls and fraud risk. This is because a positive ethical culture sets higher standards and steers employee behavior in the right direction, potentially reducing the reliance on stricter controls.

[Fade et al. \(2022\)](#), [Pattiasina et al. \(2022\)](#), and [Pratiwi et al. \(2023\)](#) found a negative link between ethical culture and fraud, meaning a stronger culture leads to less fraud. Based on attribution theory, we believe incorporating a strong ethical culture will moderate the effectiveness of implementing SPIP in preventing procurement fraud. In simpler terms, a positive ethical culture is expected to make SPIP's impact on reducing fraud even stronger. To test this theory, the fifth hypothesis is

H5: Organizational ethical culture strengthens the positive effects of SPIP on procurement fraud prevention

### ***The Role of Organizational Ethical Culture in Moderating the Role of UKI on Preventing Procurement Fraud***

Attribution theory states that an individual's attitudes towards themselves or others are influenced by external factors ([Heider, 2013](#)). External factors refer to those originating outside of an individual that can influence individual behavior ([Heider, 2013](#)). Organizational ethical culture consists of norms, values, and beliefs within an organization that can influence how members work and behave ethically to prevent actions detrimental to the organization ([Parmawan et al., 2017](#)). A strong ethical culture within an organization enhances employees' responsibility in safeguarding its interests, thereby increasing their motivation to expose fraudulent activities ([Khusnah & Jannah, 2021](#)).

One preventive measure against fraud is to uphold integrity and ethics by internalizing organizational values into the organizational culture and introducing this culture to all members ([Khairunnisa & Rahadian, 2022](#)). UKI acts as a vital safeguard within the organization (second line of defense). They monitor internal controls, employee ethics, and disciplinary compliance, manage risks, review supervisor findings, and recommend improvements to business processes ([Pamungkas & Prasetyo, 2017](#); [Setiyaviani, 2023](#)). Research by [Khairunnisa and Rahadian \(2022\)](#) states that UKI plays a fairly effective role in internalizing organizational culture. These findings are related to the study by [Achmad et al. \(2018\)](#), which examined the implementation of the Three Lines of Defense Model in the Ministry of Finance, proving the potential for development and strengthening with support from an anti-corruption culture exemplified by organizational leaders. [Mailina \(2023\)](#), also proves that UKI fulfills its role in mitigating occupational fraud, including through strengthening an anti-corruption culture.

Building on attribution theory, we propose that a strong organizational ethical culture will moderate the effectiveness of the UKI in preventing procurement fraud. In other words, a positive ethical culture may amplify the positive impact of the UKI. Therefore, the sixth hypothesis is:

H6: Organizational ethical culture strengthens the positive effects of UKI's role on procurement fraud prevention.

## **RESEARCH METHOD**

This study uses a quantitative causal research design to elucidate the position of the research variables and identify the relationships between them in accordance with the formulated hypotheses. The population of focus is all employees involved in ABMS implementation in 21 Regional Construction Procurement Selection Implementation Offices (BP2JK). These BP2JKs have received ISO 37001:2016 certification for ABMS. The employees involved in the implementation of ABMS in each BP2JK are not only Civil Servants but also all honorary employees and individual contract employees in each BP2JK. Therefore, the total population in this study cannot be determined.

The sampling technique used in this study is judgment sampling. The sample criteria determined by the researcher are employees who understand the implementation of ABMS, SPIP, and the procurement process of goods/services in the BP2JK. The sample size in this study uses the concept of Rules of Thumb. For studies involving multiple variables (multivariate research), researchers typically recommend a sample size significantly larger than the number of variables. Ideally, this should be ten times or more the number of variables involved ([Bougie & Sekaran, 2019](#)). Considering the theory we discussed about sample size in multivariate research, this study will utilize a minimum of 60 samples, calculated based on a total of 6 variables (1 dependent variable, 3



independent variables, and 2 moderating variables) multiplied by 10. However, to avoid a low response rate, the target number of questionnaires will be doubled to 120 questionnaires.

This study gathers information (primary data) directly from the existing population through a survey. The survey uses a questionnaire, a structured list of questions, to collect data from participants. To measure the variables, the study employed a Likert Scale, a common tool where respondents rate their answers on a scale of 1 to 5. Operationalization for each variable can be seen in [Table 1](#).

**Table 1.** Variable Operationalization

No	Variable	Indicators	Sources
1.	Government Goods/Services Procurement Fraud Prevention (Y)	Enhancing the legal framework	<a href="#">Akbar (2019)</a>
		Transparent procedures	
		Opening tender documents	
		Evaluation	
		Delegation of authority	
		Inspection	
2.	ABMS Implementation (X1)	Procedure	<a href="#">Kusuma et al. (2023)</a>
		Leader commitment	
		Risk management	
		Due diligence	
		Communication	
		Monitoring and evaluation	
3.	SPIP Implementation (X2)	Control environment	<a href="#">Akbar (2019)</a>
		Risk assessment	
		Control activities	
		Information and communication	
		Internal control monitoring	
4.	The Role of UKI (X3)	Employee compliance monitoring	<a href="#">Pamungkas &amp; Prasetyo (2017)</a>
		Internal control monitoring	
		Risk management monitoring	
		Role evaluation	
5.	Organizational Commitment (KO) (Z1)	Belief in organizational goals and values	<a href="#">Musthofa (2018)</a>
		Willingness to support the organization	
		Loyalty	
		Pride of belonging to the organization	
6.	Ethical Culture of Organization (BEO) (Z2)	Leaders as role models	<a href="#">Simbolon (2017)</a>
		Existence of a code of conduct	
		Code of conduct seminar	
		Sanctions for violating the code of conduct	
		Code of conduct supervision	

To explore the complex relationships between various factors in this study, this study used a software-based approach called PLS-SEM ([Hair et al., 2022](#)). This method is particularly useful because it allows us to examine how certain factors might influence or moderate the effects of others.

## RESULTS

### Data Collection Results

Data collection was conducted from July 1, 2024, to July 9, 2024. A total of 160 respondent data were collected. However, 2 outliers were identified and removed due to central tendency bias, resulting in a total of 158 usable data for further analysis. These

outliers were excluded to prevent bias in the constructed relationships. Respondent information was collected through a questionnaire and is available in the demographic data section.

**Table 2.** Respondents' Demographic Data

No	Characteristics	Frequency	Percentage (%)
1	Position		
	Head of BP2JK	4	3%
	Head of General and Administrative Subdivision	7	4%
	Goods/Services Procurement Management Team (PPBJ)	57	36%
	Anti-Bribery Compliance Function Team (FKAP)	70	44%
	Others...	20	13%
2	Regional Office		
	BP2JK Aceh	13	8%
	BP2JK Sumatera Utara	2	1%
	BP2JK Riau	9	6%
	BP2JK Kepulauan Riau	7	4%
	BP2JK Jambi	6	4%
	BP2JK Sumatera Selatan	9	6%
	BP2JK Lampung	10	6%
	BP2JK Banten	6	4%
	BP2JK DKI Jakarta	9	6%
	BP2JK Jawa Barat	12	8%
	BP2JK Jawa Tengah	7	4%
	BP2JK Jawa Timur	8	5%
	BP2JK DI Yogyakarta	9	6%
	BP2JK Kalimantan Timur	2	1%
	BP2JK Bali	6	4%
	BP2JK Nusa Tenggara Barat	3	2%
	BP2JK Sulawesi Utara	7	4%
	BP2JK Sulawesi Tengah	6	4%
	BP2JK Sulawesi Selatan	7	4%
	BP2JK Maluku Utara	9	6%
	BP2JK Papua	11	7%
3	Gender		
	Male	85	54%
	Female	73	46%
4	Educational Background		
	Doctoral Degree	1	1%
	Master Degree	40	25%
	Bachelor Degree	107	68%
	Associate Degree	10	6%

Based on the data in [Table 2](#), the gender distribution of respondents was relatively balanced, with 85 male respondents (54%) and 73 female respondents (46%). The majority of respondents (107 or 68%) had a bachelor's degree (S1/D4), while only one respondent (1%) had a doctoral degree (S3). The highest number of respondents (70 or 44%) held the position of Anti-Bribery Compliance Team (FKAP). Respondents from BP2JK Aceh represented the highest number with 13 respondents (8%), while BP2JK Sumatera Utara and BP2JK Kalimantan Timur had the lowest number with 2 respondents (1%) each.

### Outer Model Test

Outer model testing includes indicator reliability, internal consistency reliability, convergent validity, and discriminant validity.

**Table 3.** Indicator Reliability

Variables	Indicators	Outer Loading	Notes
PBJ	PBJ1	0.891	Reliable
	PBJ2	0.886	
	PBJ3	0.839	
	PBJ4	0.880	
	PBJ5	0.909	
	PBJ6	0.863	
	PBJ7	0.899	
	PBJ8	0.885	
	PBJ9	0.889	
	PBJ10	0.875	
SMAP	SMAP1	0.846	Reliable
	SMAP2	0.880	
	SMAP3	0.892	
	SMAP4	0.882	
	SMAP5	0.884	
	SMAP6	0.901	
	SMAP7	0.891	
	SMAP8	0.829	
	SMAP9	0.892	
	SMAP10	0.886	
	SMAP11	0.896	
	SMAP12	0.876	
SPIP	SPIP1	0.900	Reliable
	SPIP2	0.903	
	SPIP3	0.892	
	SPIP4	0.888	
	SPIP5	0.909	
	SPIP6	0.888	
	SPIP7	0.897	
	SPIP8	0.893	
	SPIP9	0.908	
UKI	UKI1	0.789	Reliable
	UKI2	0.904	
	UKI3	0.896	
	UKI4	0.771	
	UKI5	0.901	
	UKI6	0.881	
	UKI7	0.892	
	UKI8	0.897	
KO	KO1	0.803	Reliable
	KO2	0.827	
	KO3	0.879	
	KO4	0.829	
	KO5	0.853	
	KO6	0.824	
	KO7	0.798	

Variables	Indicators	Outer Loading	Notes
	KO8	0.797	
	KO9	0.782	
	KO10	0.811	
	KO11	0.859	
BEO	BEO1	0.876	Reliable
	BEO2	0.912	
	BEO3	0.918	
	BEO4	0.909	
	BEO5	0.852	
	BEO6	0.894	

The indicator reliability test is conducted by checking that the outer loading value of the indicator is 0.70 or higher. The indicator reliability test results in [Table 3](#) indicate that the outer loading values for all items exceed 0.70, confirming that the indicators for each variable are suitable as research instruments.

**Table 4.** Internal Consistency Reliability

Variables	Cronbach's Alpha	Composite Reliability	Notes
PBJ	0.968	0.972	Reliable
SMAP	0.973	0.976	Reliable
SPIP	0.970	0.974	Reliable
UKI	0.953	0.961	Reliable
KO	0.953	0.959	Reliable
BEO	0.949	0.960	Reliable

Internal consistency reliability testing is carried out by looking at Cronbach's alpha and composite reliability values above 0.70. The internal consistency reliability test results in [Table 4](#) show that all variables have values above 0.70, indicating they meet the minimum threshold for internal consistency reliability.

**Table 5.** Convergent Validity

Variables	AVE	Notes
PBJ	0.777	Valid
SMAP	0.774	Valid
SPIP	0.806	Valid
UKI	0.753	Valid
KO	0.680	Valid
BEO	0.799	Valid

Convergent validity testing is carried out by looking at the Average Variance Extracted (AVE) value above 0.50. The convergent validity test results in [Table 5](#) show AVE value for each variable is above 0.50.

**Table 6.** Discriminant Validity

Variables	BEO	KO	PBJ	SMAP	SPIP	UKI
BEO						
KO	0.265					
PBJ	0.634	0.319				
SMAP	0.433	0.332	0.565			
SPIP	0.841	0.246	0.653	0.455		
UKI	0.249	0.075	0.418	0.154	0.233	

Discriminant validity testing can be measured by the heterotrait-monotrait ratio (HTMT)

value below 0.85. The results of the discriminant validity test show the HTMT value for all pairs of variables in [Table 6](#) are below 0.85. This indicates that all variables are different and indicate that all variables are valid.

### Inner Model Test

Inner model testing is carried out using the bootstrapping method including significance and relevance tests of the path coefficient and the coefficient of determination ( $R^2$ ) test. The significance and relevance of the path coefficients are assessed based on the t-value and p-value.

**Table 7.** Inner Model Test

Path	Path Coefficients	t-Value	p-Value
SMAP → PBJ	0.224	2.568	0.005
SPIP → PBJ	0.505	1.997	0.023
UKI → PBJ	0.253	4.376	0.000
KO X SPIP → PBJ	0.148	2.233	0.013
BEO X SPIP → PBJ	0.298	2.706	0.004
BEO X UKI → PBJ	-0.235	2.751	0.003

The t-values of all paths shown in [Table 7](#) are above the critical value of 1.65 (5% significance of one-tailed test). All path coefficient values are acceptable because they are between -1 and +1, but there is one path coefficient that shows a negative path. The  $R^2$  value on the dependent variable is 0.742. The  $R^2$  value on the dependent variable of PBJ fraud prevention is 0.742. This indicates that the independent and moderation variables are able to explain the dependent variable by 74.2%.

### Hypothesis Test

The bootstrapping results of the significance test are seen by comparing the p-value with the 5% significance limit and the t-value with the critical value of 1.65 (5% significance one-tailed test). Relevance is seen from the path coefficient value, with values close to -1 and 1 represent a negative relationship and a strong positive relationship, respectively. The verification of the proposed hypotheses is presented in tabular format within [Table 8](#).

**Table 8.** Direct Hypothesis Test Results

Hypothesis	Path	Path Coefficient	t-values	p-values	Conclusion
H1	SMAP → PBJ	0.224	2.568	0.005	Accepted
H2	SPIP → PBJ	0.505	1.997	0.023	Accepted
H3	UKI → PBJ	0.253	4.376	0.000	Accepted
H4	KO X SPIP → PBJ	0.148	2.233	0.013	Accepted
H5	BEO X SPIP → PBJ	0.298	2.706	0.004	Accepted
H6	BEO X UKI → PBJ	-0.235	2.751	0.003	Rejected

Based on the results presented in [Table 8](#), several conclusions can be drawn regarding the impact of various factors on fraud prevention in goods and services procurement. Hypothesis 1 posits that the implementation of the ABMS positively affects fraud prevention. The test results yield a t-value of 2.568 and a p-value of 0.005, both of which meet the 5% significance level criteria for a one-tailed test, confirming the validity of this hypothesis. The path coefficient of 0.224 indicates a positive effect, suggesting that the adoption of ABMS significantly aids in preventing fraud during procurement processes.

Similarly, Hypothesis 2 asserts that the implementation of SPIP positively influences fraud prevention in procurement. The results indicate a t-value of 1.997 and a p-value of 0.023, both satisfying the significance criteria for a one-tailed test. With a path coefficient



of 0.505, these findings affirm that the SPIP effectively contributes to preventing procurement fraud, thereby supporting the acceptance of this hypothesis.

Hypothesis 3 explores the role of UKI in enhancing fraud prevention within procurement. The findings reveal a t-value of 4.376 and a p-value of 0.000, which significantly exceed the threshold for a one-tailed test. The positive path coefficient of 0.253 further corroborates that the role of UKI is instrumental in preventing fraud, thus validating this hypothesis.

Moving to Hypothesis 4, which posits that organizational commitment amplifies the positive impact of SPIP implementation on fraud prevention, the results show a t-value of 2.233 and a p-value of 0.013. These results meet the necessary criteria for significance in a one-tailed test. With a positive path coefficient of 0.148, it is concluded that organizational commitment indeed strengthens the positive influence of SPIP in preventing procurement fraud, thereby supporting this hypothesis.

Hypothesis 5 asserts that an organization's ethical culture enhances the positive effect of SPIP on fraud prevention. The results yield a t-value of 2.706 and a p-value of 0.004, both of which meet the 5% significance level for a one-tailed test. The path coefficient of 0.298 indicates a significant positive relationship, leading to the acceptance of this hypothesis and demonstrating the importance of ethical culture in fraud prevention efforts.

In contrast, Hypothesis 6 posits that an organization's ethical culture enhances the role of UKI in preventing procurement fraud. The test results indicate a t-value of 2.751 and a p-value of 0.003, meeting the 5% significance threshold. However, the path coefficient is negative at -0.235, suggesting that the ethical culture of the organization weakens the positive impact of UKI on fraud prevention. Consequently, Hypothesis 6 is rejected, indicating a complex interplay between ethical culture and fraud prevention mechanisms in procurement practices.

## DISCUSSION

### **ABMS Implementation Positively Effects on Procurement Fraud Prevention**

Hypothesis 1 states that the implementation of ABMS has a positive influence on procurement fraud prevention. The test results show that Hypothesis 1 is accepted. This result is in line with the research of [Kusuma et al. \(2023\)](#), which states that the ABMS principles significantly enhance anti-bribery awareness. It is also consistent with qualitative studies conducted by [Hanindita et al. \(2021\)](#), [Rozah & Pujiyono \(2022\)](#), and [Sartika & Arieasmieta \(2021\)](#), which found that implementing ABMS helps organizations prevent and minimize cases of gratification, collusion, and nepotism. [ACFE \(2018\)](#) classifies bribery, collusion, and nepotism as forms of corruption, which are categorized under fraud, thus concluding that ABMS implementation can prevent fraud.

This research supports auditability theory, which asserts that an organization must actively build and manage management systems to support governance practices. ABMS, mandated by the government, aids organizations in both the private and public sectors in controlling bribery practices. The guidelines within ABMS help organizations combat bribery. They offer a clear plan for preventing, uncovering, and dealing with bribery attempts. The implementation of ABMS has proven to help organizations prevent fraud, thereby enhancing organizational governance practices. The empirical evidence from this study underscores the effectiveness of ABMS in preventing fraud. Maintaining a strong ABMS, especially during procurement, is indeed crucial for safeguarding public services from fraudulent activities.

### **SPIP Implementation Positively Effects on Procurement Fraud Prevention**

Hypothesis 2 states that the implementation of SPIP has a positive influence on procurement fraud prevention. The test results show that Hypothesis 2 is accepted. This result is consistent with the research by [Alfiansyah & Afriady \(2022\)](#) and [Pane \(2018\)](#), which demonstrate that effective SPIP implementation can reduce fraudulent behavior. These findings are supported by studies conducted by [Oduro & Cromwell \(2018\)](#), [Pattawe et al. \(2022\)](#), and [Yuniarti & Ariandi \(2017\)](#), which state that SPIP positively influences fraud prevention. The impact of SPIP in preventing procurement fraud is also discussed in [Akbar \(2019\)](#), [Primastiwi et al. \(2020a\)](#), and [Wardani et al. \(2021\)](#), which prove that SPIP significantly and positively prevents procurement fraud.

This study reinforces auditability theory, which highlights the importance of strong internal controls for good governance. These controls ensure compliance with regulations and enable effective monitoring. Auditability theory emphasizes the need for dynamic, monitored, and well-reported internal controls. The government's implementation of SPIP exemplifies this theory by establishing internal controls that promote efficient administration, reliable financial reporting, asset protection, and legal adherence. SPIP has also been shown to reduce procurement fraud by encouraging employee compliance with procurement regulations.

### **The Role of UKI Positively Effects on Procurement Fraud Prevention**

Hypothesis 3 states that the role of UKI has a positive influence on procurement fraud prevention. The test results show that Hypothesis 3 is accepted. This result aligns with [Pamungkas and Prasetyo \(2017\)](#) research also found evidence that aligns with the result which demonstrates that internal control monitored by UKI affects variables related to unethical/corrupt employee behavior. The studies by [Khairunnisa & Rahadian \(2022\)](#), [Mailina \(2023\)](#), and [Setiyaviani \(2023\)](#) support this statement through their qualitative research showing that UKI has effectively supported internal control effectiveness. These studies prove that UKI has played a role in reducing opportunities and violations of ethical codes, discipline, and more significant deviations such as fraud.

This research also supports auditability theory, which emphasizes governance importance in internal control aspects, including monitoring procedural implementation and enforcement of laws and regulations. Oversight of internal compliance is crucial to ensure that work is conducted as planned and to detect and rectify unethical actions. The establishment of UKI is one of the strategies to prevent deviations in procurement at the Ministry of PUPR. UKI serves as the second line of defense for every organizational unit within the Ministry of PUPR, focusing primarily on strengthening oversight of internal control compliance and risk management. [COSO \(2013\)](#) states that an effective internal control structure, including monitoring functions, can help organizations prevent and detect fraud. With monitoring and oversight functions carried out by UKI, organizations can proactively identify potential risks and non-compliance, contributing to a more transparent and accountable work environment where risks of procurement deviations can be minimized.

### **Organizational Commitment Strengthens the Positive Effects of SPIP Implementation on Procurement Fraud Prevention**

Hypothesis 4 states that organizational commitment strengthens the positive influence of SPIP implementation on procurement fraud prevention. The results show that Hypothesis 4 is accepted. This finding is consistent with the research by [Novitasari and Sari \(2022\)](#), demonstrating that SPIP implementation when coupled with organizational commitment, can effectively prevent fraud. The moderating effect of organizational commitment in enhancing fraud prevention is also supported by [Yusni \(2022a\)](#). This strengthening moderating effect is further supported by studies directly examining organizational commitment's positive impact on fraud prevention ([Rifai & Mardijuwono](#),

[2020](#); [Yusni, 2022b](#)).

This research supports attribution theory, which posits that individuals' attitudes toward themselves and others are influenced by internal factors originating within each individual. Organizational commitment reflects employees' high dedication levels and specific beliefs in organizational principles. Internal factors such as strong belief and dedication to the organization can motivate employees to work with integrity and loyalty, maintain compliance with organizational policies, and contribute to achieving organizational goals. Employees with strong commitment not only strive to perform their duties well but are also proactive in preventing and reporting actions that could potentially harm the organization. When organizations establish rules related to procurement, employees with high commitment are motivated to adhere to organizational policies in achieving procurement goals. Organizational commitment as a moderating variable facilitates the SPIP implementation process in preventing fraud.

### **Organizational Ethical Culture Strengthens the Positive Effects of SPIP Implementation on Procurement Fraud Prevention**

Hypothesis 5 states that organizational ethical culture strengthens the positive influence of the SPIP implementation on procurement fraud prevention. The test results show that Hypothesis 5 is accepted. This result aligns with [Akbar \(2019\)](#), which demonstrates that organizational ethical culture as a moderating variable plays a crucial role in enhancing SPIP implementation toward preventing procurement fraud. Building on the work of [Abidin et al. \(2023\)](#), this research further confirms the positive influence of a strong ethical culture on employee behavior. Their findings demonstrate that even with weaker internal controls, a culture of ethics can reduce fraud risk. The moderating effect that strengthens this relationship is further supported by studies directly examining organizational ethical culture in fraud prevention, showing that it significantly impacts fraud prevention ([Fade et al., 2022](#); [Pattiasina et al., 2022](#); [Pratiwi et al., 2023](#)).

This research supports attribution theory, which highlights that individuals' attitudes toward themselves and others are influenced by two factors, one of which is external factors originating outside the individual. Organizational ethical culture encompasses norms, values, and beliefs adopted by the organization, influencing how members work and behave ethically to prevent actions detrimental to the organization. Ethical culture plays a vital role in emphasizing honesty and discipline among employees. Internalizing ethical culture within an organization is not just about moral formation but also an effective strategy to enhance compliance with internal rules and procedures. A strong ethical culture can motivate employees to avoid fraudulent activities, thereby facilitating internal control within the organization. In the context of procurement, when employees are supported by clear and consistently applied ethical values, they are more motivated to work with integrity. This fosters a work environment conducive to preventing fraud in the procurement process.

### **Organizational Ethical Culture Strengthens the Positive Effects of UKI's Role on Procurement Fraud Prevention**

The testing results for Hypothesis 6 indicate that Hypothesis 6 is rejected. The testing results demonstrate that organizational ethical culture (BEO) reduces the positive impact of UKI on preventing procurement fraud. The result suggests that UKI's role itself might not be a major factor in preventing procurement fraud. The analysis reveals a negative moderation effect by BEO. In other words, a strong BEO weakens the link between the UKI role and reduced fraud, with this effect being more pronounced at lower BEO levels.

A stronger ethical culture within an organization seems to diminish the importance of the UKI's role in preventing procurement fraud. A high ethical culture is the result of the success of UKI's role in carrying out the internalization of the previous organizational

culture. When the ethical culture of an organization is still low, the role of UKI will be higher in carrying out the internalization of organizational culture in fraud prevention efforts. This finding is backed by [Khairunnisa and Rahadian \(2021\)](#) research which states that UKI plays a fairly effective role in carrying out the internalization of organizational culture. [Mailina \(2023\)](#) also proves that UKI carries out its role in mitigating occupational fraud, one of which is by strengthening its anti-corruption culture. Organizations with a stronger emphasis on ethical behavior experience a lower incidence of fraud ([Fade et al., 2022](#); [Pattiasina et al., 2022](#); [Pratiwi et al., 2023](#)). A strong ethical culture will raise standards and positively influence employee behavior ([Abidin et al., 2023](#)).

Attribution theory aligns with our findings. This theory explains how people perceive the causes of others' actions, considering their attitudes, surrounding conditions, and various other influences ([Arifin, 2022](#)). Ethical culture as an external factor in attribution theory not only shapes individual behavior but can also influence the overall work environment, creating an atmosphere that supports compliance with rules and prevention of fraud. When organizational members feel that ethical values are valued and consistently applied, employees are more likely to participate in maintaining organizational integrity, thereby lowering the risk of fraud. An externally stronger organizational ethical culture can change the behavior of individuals or groups to adapt to environmental conditions that were previously unethical to become ethical. In the context of public procurement, the consistent application of ethical culture in an organization can change employee perceptions of the ethics and compliance of the public procurement process, which in turn will increase integrity in public procurement. Therefore, the shift in UKI's contribution to the prevention of procurement fraud can be interpreted as the result of strengthening an ethical culture that encourages employees to behave in accordance with the organization's ethical culture.

## CONCLUSION

This study found that several factors can significantly reduce procurement fraud in the Ministry of PUPR. These include implementing ABMS and SPIP, along with a strong role for the UKI. ABMS helps by setting clear standards to prevent and detect bribery fraud. SPIP strengthens internal controls to ensure financial accuracy, asset protection, and regulatory compliance. UKI plays a key role by supervising internal controls and managing risk. The study also highlights the importance of organizational commitment and ethical culture. When employees are highly committed and believe in the organization's principles, they're more likely to prevent and report fraud. A strong ethical culture further discourages fraud by encouraging ethical behavior. Interestingly, a strong ethical culture can also lessen the need for UKI's oversight. This is because employees become more ethical and compliant on their own.

The limitation of this study is the uneven number of respondents in all BP2JK. It is feared that this condition does not adequately represent the conditions in the centers with low response rates. Suggestions for future research are to be able to test the moderating effect of organizational commitment and organizational ethical culture on all independent variables, namely ABMS implementation, SPIP implementation, and the role of UKI. By testing the moderating effect on all independent variables, it is hoped that a more comprehensive understanding of how these factors affect fraud prevention in public procurement can be obtained.

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## DECLARATION OF CONFLICTING INTERESTS

The authors declared no potential conflicts of interest.



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