

# Corruption in Road Sector Procurement in Ghana

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**Abstract - Corruption in road sector procurement is becoming devastating by the day. The paper sought to identify causes, most prevalent corruption, opportunities, reasons for engaging in corruption, and measures for fighting the menace in the road sector. The purposive sampling technique was used to select the various institutions because they are the government agencies responsible for the country's rural, urban and highway networking. The selection of the respondents was done using a snowball sampling technique. Out of ninety-two questionnaires administered, eighty were returned, representing an 87% response rate. Statistical Package for Social Science (SPSS) and Excel software were used for the data analysis. A conducive and enabling work environment was found to be the major cause of corruption in road procurement. The most prevalent corruption identified was indirect payments, inappropriate gifts, hospitality, entertainment, and travel. Lack of financial control was attributed to the surge in corruption in the road sector. The key reasons procurement officials engage in corruption are the benefits they gain when they succeed and the lack of monitoring, supervision, and sanctions. Respondents claimed that senior management commitment, clear communication of guidelines and policies, and taking action against perpetrators are the main measures for subduing corruption. These institutions' internal control mechanisms, institutional frameworks, and structures should be strengthened to minimise procurement corruption. The paper identifies the salient issues of corruption that future policies can help to curb. Corruption within the road sector can be suppressed by eliminating bad cultural practices and business methods. Top management would need a high-level commitment to clamp down on illicit behaviours to set the tone for elevated ethical standards that frown upon corrupt practices.**

## 1. Introduction

The weakening national development and higher tax and loan rates have increased corruption and attendant negative economic consequences (Haughton and Ivey, 2023; Abdullahi et al., 2023; Brandt and Svendsen, 2013). In the construction industry, corruption can occur during project initiation,

planning and design, tendering and construction, and operation and maintenance stages (Alani, 2022; Lehtinen et al., 2022; De Jong et al., 2009; Hosseini et al., 2020; Shoar et al., 2023; Tabish and Jha, 2011a). Lee (2020) and Savuth (2012) postulated that corruption-related losses in public procurement accounted for an average of 10 to 25 percent and, in the worst-case scenario, as much as 50 percent of a contract's value. Collusive behaviour among officials in the public procurement space often poses a challenge and continues to affect efficiency in Ghana's public procurement process and the general development of society at large (Lassou et al., 2023; Sutthi, 2012). Public procurement is the purchase of goods, services, and works by state institutions or agencies in accordance with state-mandated laws (Nkunda et al., 2023; Kola, 2023; Procurement Board, 2013). The World Bank (2013) defines public procurement as "any form of purchase made by an entity using public funds." It is a critical determinant in determining development results, and when done efficiently and transparently, it plays a vital role in delivering more effective public services (Changalima et al., 2021; World Bank, 2013). Procurement has long been identified as a high-risk sector for fraud and corruption (Dikmen and Cicek, 2023; Rustiarini et al., 2023; Matthew, 2013). Public procurement strives to provide cost-effectiveness and efficiency, promote justice and transparency, and assure non-discriminatory public procurement (Matthew, 2013).

In Ghana, procurement fraud and collusive behaviour in procurement processes have been major challenges for successive governments (Ghana News Agency - GNA, 2015). Akomah and Nani (2016a) conceded that corruption in procurement is now endemic. The public sector is the most affected, as contract sums are typically exaggerated, and public monies seep into private wallets to the detriment of growth through collusive bids. The alleged fraud case involving a private businessman and three ex-government officials accused of defrauding the state of around GH51.2 million through cooperation and a bribe of approximately GH400,000.00 some years ago tainted public procurement (GNA, 2015). Numerous obstacles impede the implementation of the Public Procurement Law, according to Panya and Awuor (2023), Ackom et al. (2022), Ameyaw et al. (2012), and Dagaba (2013). These include insufficient procurement

professional capability and a lack of contact between procurement firms and the Public Procurement Authority (PPA). In addition to these is the deliberate control of competition in some procurements, non-compliance with legal provisions, the division of contracts into smaller lots, the absence of clear procedures for emergency procurement, the high cost of advertising, the sluggish pace of regularising draught regulations, a lack of funds, and uncooperative suppliers. According to Dagaba (2013), although the Public Procurement Act has established guidelines, principles, and tender committees to take responsibility for its aim, it has failed to offer emergency procurement procedures, leaving practitioners with leeway. The public procurement authority reported a lack of qualified procurement personnel in the system following a 2006 evaluation, which they acknowledged has resulted in numerous inconsistencies and excessive inefficiency of the concept (Asiedu and Adaku, 2020; Dagaba, 2013). Against this backdrop, the study sought to identify the causes, most prevalent corruption, opportunities, reasons for engaging in corruption, and the measures for fighting the menace in Ghana.

## 2. Procurement Corruption in Perspective

This section presents an overview of corruption, its occurrence, cost, and causes in road sector procurement and the procurement law in Ghana.

### 2.1 Procurement and the Shades of Corruption

Corruption in infrastructure projects has disastrous repercussions for the economy and the populace. Estimates place corruption-related financial losses in the infrastructure sector between 5 and 20 percent of construction costs (Campos et al., 2021; Wells, 2015). Transparency International defined corruption as “the abuse of entrusted power for private gain” (Transparency International, 2015a). Corruption is usually divided into “petty and grand corruption.” Petty corruption is the daily abuse of power conferred by low- and middle-level public officials in their interactions with citizens. Grand corruption, on the other hand, is perpetrated by relevant institutions, governments, government agencies, courts, and other state apparatus. “Political corruption” is a subcategory related to manipulating policies, institutions, and procedural norms in transferring funds or other resources (Transparency International, 2015a). Anti-Corruption Resource Centre (2015), Batrancea et al. (2023), and Dyck et al. (2023) categorised corruption based on the frequency of the phenomenon: “sporadic corruption” is linked to occasional opportunities, whereas “systemic corruption” is an integral and essential component of the economic, social, and political systems.

### 2.2 Public Procurement Act 2003 (Act 663) and its Challenges

Ghana’s Public Procurement Act of 2003 (Act 663) is structured to promote public procurement as an instrument for national development. It came into force to align the application of procurement-related rules with international conventions and treaties and to promote the integrity of the country’s public procurement system by instilling confidence in procurement procedures (World Bank, 2013). The new structure was expected to foster fairness, eliminate favouritism, and enhance public procurement competition, efficiency, transparency, and accountability. The Public Procurement Act of 2003 (Act 663) instituted the Public Procurement Board (PPB) as the central authority for policy formulation and supervision of all procurement processes. Each PPB entity is required to have a procurement committee to assure compliance with the Act. Tender Review Boards (TRBs) were also established to provide concurrent approvals for contract award recommendations made by tender committees. The Act repealed the district tender board regulations, 1995 (L.I 1606), the Ghana National Procurement Agency Decree, 1976 (S.M.C.D 55), and the Ghana Supply Commission Law, 1990 (PNDCL 245) to make way for the Public Procurement Act, 2003 (Act 665). The Procurement Act of Ghana, Act 663 (2003), has implemented several pertinent modern procurement principles to correct the widespread corruption and anomalies in public procurement. Regrettably, the Act’s implementation faces obstacles that threaten achieving its goals.

### 2.3 Public Procurement Corruption

Governments and public institutions acquire goods and services at the lowest feasible total cost through public procurement. Ameyaw et al. (2012) estimated that public procurement accounted for 50 to 70 percent of government expenditures. Abuse of power can result in a secret vertical relationship between one or more bidders and procurement officials, which manifests as a conflict of interest, bribery, kickback, information leakage, or manipulation in public procurement (Akomah and Nani, 2018; Akomah and Nani, 2016b). Another dimension of abuse of power for private gain is a secret horizontal relationship between bidders and corrupt public officials, resulting in collusion or rigging (Jones, 2021; European Union, 2014). Any relationship between an official with an entrusted public office and a bidder amounts to insider trading, as better referred to by Akomah (2014). Corruption and collusion frequently occur in tandem and ultimately have the same effect. Procurement corruption defies the principle of value for money. Corruption disturbs market mechanisms and impedes economic development (European Union, 2014). The European Union (2014) defined corruption as using authority

for personal advantage. Poisson (2010) and Zakari and Button (2022) claimed that public officials are constantly exposed to corrupt practices due to the lucrative character of procurement enterprises. They highlighted that corruption within public procurement is not new but has gained momentum due to considerable research over the last decade. Public procurement corruption has devastating effects on nations' resources, international image, economy, and business climate and should not be underestimated in any way (Akomah and Nani, 2016a).

## 2.4 How Corruption Occurs in Procurement

According to reports by the OECD (2014) and Dikmen and Cicek (2023), government procurement is the most susceptible to corruption and corrupt practices. In addition to the volume of transactions and financial interests at stake, corruption risks are exacerbated by the process's complexity, the direct interaction between public officials and businesses, and the number of parties involved. Various corrupt acts, such as embezzlement, undue influence, public officials' bribery in the contract award process, or deception in proposal evaluations, invoices, or contract obligations, may exploit these vulnerabilities. Significant corruption risks exist in numerous OECD nations due to conflicts of interest in decision-making, which can distort the allocation of resources through public procurement (European Commission, 2014a). The volume and complexity of a specific procurement process play a crucial role in public servants' corruption in Ghana (Auditor-General's Report Ghana, 2016). The more expansive the acquisition, the more vulnerable the system becomes. Public officials frequently demand bribes, which suppliers frequently pay as a percentage of the contract's value (Gauthier et al., 2021; Nam and Thanh, 2021; Chan et al., 2021). Soreide (2009), Zabyelina (2023), and Dikmen and Cicek (2023) posited that bribery is the most prevalent form of corruption and is defined as an offer of money, goods, or services in exchange for an undue advantage. Bribes can influence the government's choice of suppliers of goods and services. Bribery can sometimes be detected by highly skilled professionals and through efficient organisational frameworks. In some countries, the penalties for such unlawful behaviour can be severe. Since bribery violates the law, the potential benefits are uncertain. Due to the illegality of the agreement, the briber is susceptible to deviations from the terms, as such agreements cannot generally be enforced in court. The OECD Foreign Bribery Report (2014) provided additional evidence to bolster the vulnerability of public procurement to corruption. Public procurement corruption can occur at both the national and subnational levels.

In accordance with the premise that legislators and public officials at subnational levels are more accountable to the

citizens they serve, decentralisation may reduce the scope for corruption. Mutingi et al. (2019) and Akomah (2014) discovered that corruption in Ghana's procurement system sometimes comes in the form of kickbacks, facilitation payments, extortion, fraud, abuse of discretion, cronyism, tribalism, nepotism, and favouritism. It occurs because of personal or organisational interest or one's quest for personal enrichment. On the contrary, business entities engage in corruption for jobs, undue leverage, and excessive profit margins to stay in business. Rose Ackerman (1978) postulated that private sector involvement in corruption is for two reasons: to obtain government benefits and to escape certain costs.

## 2.5 High Cost of Corruption in Public Procurement

The direct costs of corruption include the misallocation of public funds, higher costs, and a decline in the quality of goods, services, and works (OECD, 2015a). Those who pay bribes attempt to recoup their funds by inflating prices, invoicing for unperformed work, failing to meet contract standards, reducing the quality of work, or using substandard materials for public works. This causes inflated prices and a decline in quality. According to a study conducted by the OECD and the World Bank, corruption in the infrastructure and extractive sectors leads to the misallocation of public funds and the provision of subpar and inadequate services (OECD, 2015a). It is difficult to determine the precise cost of corruption due to its concealed nature; however, it is estimated that between 10 and 30 percent of the investment in publicly funded construction projects may be lost due to mismanagement and corruption (COST, 2012). Wells (2014) found that 20-30% of the value of initiatives is lost due to pervasive corruption. The Construction Sector Transparency Initiative (COST) (2012) also estimated that "annual losses in global construction through mismanagement, inefficiency and corruption to reach USD 2.5 trillion in 2020." Corruption is estimated to cost the European Union €120 billion annually (European Commission, 2014a), representing approximately 1% of the EU's gross domestic product and slightly less than the EU's 2014 annual budget of €143 billion (European Commission, 2014b).

## 3. Methodology

Qualitative and quantitative techniques were used for the study because they provide the opportunity for presenting a greater diversity of divergent views (Creswell and Clark, 2011). The two techniques assist in answering questions that cannot be answered by either technique alone (Cameron, 2015). Qualitative content analysis was the most suitable technique for analyzing the qualitative data. The use of this technique led to the eliciting of meaning (Bengtsson, 2016)

from the open-text responses provided by respondents (Lindgren et al., 2020); these responses were aggregated into themes and coded for analysis (Kyngas, 2020; Rufai and Bunce, 2020) to determine the number of occurrences of such responses or percentage of cases, barriers, or responsibilities. The research population comprised civil engineers, quantity surveyors, procurement officers, construction managers, and project managers of the Ghana Highway Authority, Feeder Roads, and Urban Roads.

Purposive sampling was used in selecting the institutions, while snowball sampling was used in selecting respondents due to the COVID-19 global pandemic. Based on what the researchers had in mind and the study's goal (Gentles et al., 2015), the right institutions with expertise in road works were selected as identified above. After this, some key experts from these institutions were identified, and the study's goal was discussed with them, after which they were also asked to recruit others or reference other colleagues in other regions and districts (Emerson, 2015). An extensive literature review of the subject preceded the study. Among the things that were reviewed were the general picture of procurement and corruption, public procurement and shades of corruption, the Public Procurement Act and its challenges, occurrence, cost, and causes of corruption in public procurement. A cross-sectional design approach was adopted. Ninety-two (92) respondents were drawn from all over the country. A preliminary questionnaire was drafted based on the state of corruption in road sector procurement in the country. The drafted questionnaire was given to three professionals with expertise in procurement to verify and make their inputs. The validated questionnaire and accompanying inputs led to the development of a structured final questionnaire for the investigation. The questions in the questionnaire were both closed and open-ended. In the closed-ended questions, respondents were allowed to select from predetermined optional responses and rank based on a Likert scale where 1 = very low influence and 5 = very high influence. The open-ended questions were designed to encourage respondents to provide answers in open-text format. The questions were divided into two sections, namely, introductory and core sections. The introductory section sought to collect the personal details of respondents.

In contrast, the core section was meant to deduce information on the causes of corruption, prevalent forms of corruption, the discovery of corruption, motivation, incentives for engaging in corruption, measures aimed at restraining corruption, and entrusted authority for the fight against corruption. Multiple approaches were employed during data collection. Questionnaires were distributed electronically to the (92) respondents via E-mail and WhatsApp application platform only. Hand-delivered hardcopy questionnaires were

not considered partly because of the COVID-19 pandemic. Out of the 92 questionnaires distributed, 80 were retrieved, representing an 87% response rate. Data were statistically analysed using the Statistical Package for Social Science (SPSS) and Excel software. Post-data collection screening was done to check for consistency. The data were coded using SPSS. Descriptive statistics was deployed to express the frequencies and percentages of some items. Motivational factors that influence the opportunity for corruption were subjected to principal component (PC) analysis. Factors were extracted for analysis if they had factor loadings exceeding 0.50. Explanatory variables with such factor loadings were considered pure characteristics of what they sought to measure.

#### 4. Findings

The findings from the survey work on corruption in the road construction sector are presented in this section.

##### 4.1 Personal Details of the Respondents

Figure 1 below shows that the majority (32.5%) of the respondents were civil engineers, 31.3% were quantity surveyors, 10% were procurement officers, 18.8% were construction managers, and the least (7.5%) were project managers.

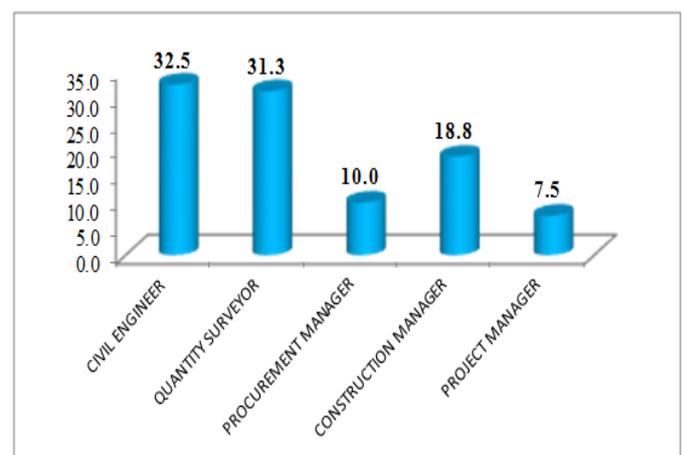


Figure 1: Profession of respondents

##### 4.2 Educational Qualification of Respondents

The majority (40.0%) of the respondents had Bachelor of Science degrees, 37.0% had a Construction Technician Certificate (CTC)/Higher National Diploma (HND), and 20% had Master of Science degrees. Only (3.0%) of the respondents possessed terminal degrees, as illustrated in Fig. 2.

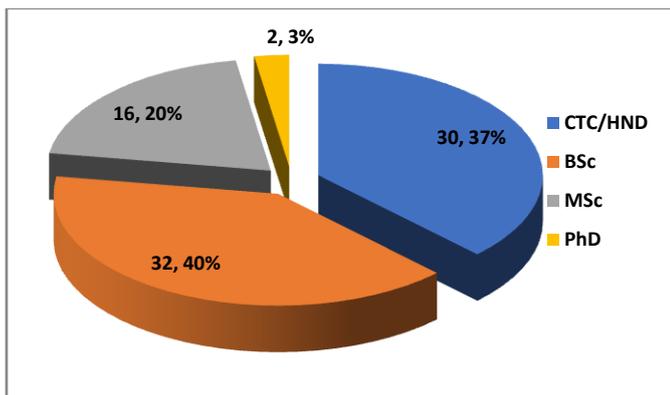


Figure 2: Educational qualification

### 4.3 Working Experience of Respondents

The information in Fig. 3 shows that respondents had varied years of experience. The majority (54.0%) of the respondents had 5 to 10 years of experience in the road sector, 22.0% had 1 to 4 years, 21% had 11 to 15 years of experience, and (3.0%) had 20 years or more experience.

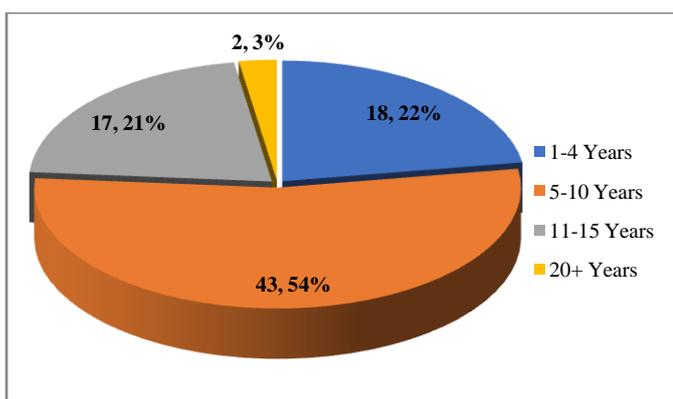


Figure 3: Working experiences

### 4.4 Major Causes of Corruption in Road Sector Procurement

Corruption does not operate in a vacuum and occurs due to many factors. The majority, 39(48.8%) of the respondents, agreed that corruption thrives because of the conducive and enabling work environment created for it in the performance of procurement functions, and 13(16.3%) strongly agreed to that same factor. Out of the of respondents, 19(23.8%) were silent on it, 7(8.8%) disagreed and 2(2.5%) strongly disagreed. The majority, 31(38.8%) of the respondents, indicated that they deem public disclosure of procurement anti-corruption programmes and controls by organisations more valuable to their reputations and brand, but 29(36.3%) see it as somewhat valuable. Contrary to the earlier assertions was the response of 8(10.0%) who claimed that public disclosure of anti-corruption programmes was unimportant. The remaining 12(15.0%) did not have any idea about the subject and responded “do not know.”

### 4.5 Views of Respondents on Corruption

The views of respondents on the subject of corruption were wide-ranging. A greater percentage (38.8%) of the respondents posited that corruption in procurement has become more important and gained thrust over the past five years. However, (15%) think the subject would remain important over the next five years. It was the opinion of (21.3%) of the respondents that regulation and enforcement of procurement laws had been strengthened over the past five years; (8.8%) maintained that regulation and enforcement of procurement laws would be strengthened over the next five years. Contrary to the assertion of the immediate response above, (16.3%) highlighted that corruption is the cost of doing business and cannot be eradicated, as revealed in Table 1.

Table 1: Views on corruption

	N	Percent (%)
The issue of corruption has become more important over the past five years	31	38.8
The issue of corruption would gain more importance over the next five years	12	15.0
Regulation and enforcement of procurement laws have been strengthened over the past five years	17	21.3
Regulation and enforcement of procurement-related laws would be strengthened over the next five years	7	8.8
Corruption is the cost of doing business and cannot be eradicated	13	16.3
Total	80	100.0

N: Number of respondents

#### 4.6 Prevalent Corruption among Roads Construction Companies/Procurement Officers/Consultants

As confirmed in Table 2, the majority (82.3%) of corruption cases, according to respondents, come as indirect payments (e.g., payments to agents, intermediaries, or other third parties) among road construction companies, procurement officers, and consultants. However, respondents think (68.4%) corruption cases manifest through inappropriate gifts, hospitality, entertainment, and travel. Respondents highlighted that a few (46.8%) corruption cases come as non-cash payments (company, products, services, and favours.).

**Table 2: Prevalent corruption in road sector procurement**

	Responses		Percent (%) of Cases
	N	Percent (%)	
Indirect payments (e.g., payments to agents, intermediaries, or other third parties)	65	19.8	82.3
Inappropriate gifts, hospitality, entertainment, travel	54	16.4	68.4
Non-cash payments (company, products, services, and favours.)	37	11.2	46.8
Sponsorships (e.g., for an event or participation at an event) or donations to extortionists preferred cause	40	12.2	50.6
Political donations	44	13.4	55.7
Employee expenses (e.g., bribes made via employee/corporate credit cards/mobile money account)	46	14.0	58.2
Direct payments (e.g., payments made directly from company bank accounts or petty cash)	43	13.1	54.4

N: Number of respondents

#### 4.7 The Impact of Corruption on Road Sector Procurement

According to Table 3, (54) of the respondents affirmed that corruption destroys the corporate image of companies. Conversely, (48) of the respondents claimed that corruption in road sector procurement results in financial loss. Very few (19) indicated that it leads to enforcement costs.

**Table 3: Impact of corruption**

	Responses		Percent (%) of Cases
	N	Percent (%)	
Corporate reputation	54	20.5	70.1
Legal/enforcement action	34	12.9	44.2
Regulatory action	36	13.7	46.8
Loss of human capital (recruiting, morale, turnover)	37	14.1	48.1
Financial loss to the state	48	18.3	62.3
Operational interruption	35	13.3	45.5
Enforcement costs	19	7.2	24.7

N: Number of respondents

#### 4.8 How Corruption is Discovered

As indicated by respondents, the survey results in Table 4 reveal that about (36.4%) of corruption cases were discovered through companies’ internal control systems and were reported by employees through the normal chain of command. Some (33.8%) cases were discovered through whistleblowers, while (19.5%) were discovered through government agencies, anti-corruption agencies, and civil society organisations.

**Table 4: The discovery of corruption in companies**

	Responses		Percent (%) of Cases
	N	Percent (%)	
Discovered through internal control systems	28	14.6	36.4
Reported by the employee through the normal chain of command	28	14.6	36.4
Discovered through whistleblowers	26	13.5	33.8
Discovered by accident	23	12.0	29.9
We have not experienced any corruption	23	12.0	29.9
Discovered through external audit	21	10.9	27.3
Discovered by government agencies, Anti-Corruption Agencies, and Civil Society Organisations (CSOs) (e.g., Serious Fraud Office (SFO), Economic and Organised Crime Office (EOCO), and Commission on Human Rights and Administrative Justice (CHRAJ).	15	7.8	19.5
I do not know; I am not aware of my company experiencing any corruption	28	14.6	36.4

N: Number of respondents

#### 4.9 Opportunities that Instigate Corruption in Public Procurement

There are several motivating factors or incentives for engaging in corruption. Table 5 shows a recorded mean range of 3.68 to 4.15 and a standard deviation range of 1.023 to 1.178 for the motivating factors of procurement corruption. Respondents ranked lack of financial control as the most critical variable that provides the opportunity for procurement officers to engage in corruption. The variable recorded a mean of (4.15) and a standard deviation of (1.045). The next variable was a conflict of interest, with a mean of (4.13) and a standard deviation of 1.023). Other respondents believed that restricted access to information incentivises procurement officers to act corruptly. This recorded a mean of (3.99) and a standard deviation of (1.049). The extent of the discretionary powers at the disposal of procurement officers was ranked 4<sup>th</sup>, with the type of funding scheme occupying the 5<sup>th</sup> position among the variables. However, the complexity of technology was ranked the least, as noted in Table 5.

**Table 5: Opportunities for procurement officers to engage in corruption**

	N	M	SD	Mean rank
Size of the contract	80	3.81	1.092	7
Complexity of technology	80	3.68	1.178	9
Discretion	80	3.95	1.042	4

Lack of financial control	80	4.15	1.045	1
Restricted access to information	80	3.99	1.049	3
Funding Schemes	80	3.90	1.014	5
Immediacy	80	3.78	1.158	8
Soft social control	80	3.85	1.148	6
Conflict of interest	80	4.13	1.023	2

N: Number of respondents; M: Mean; SD: Standard Deviation

#### 4.10 KMO and Bartlett’s Test for Prospects Corruption

The p-value of the KMO = 0.839 is greater than the 0.05 significance level for the measure of sampling adequacy. Bartlett’s test of sphericity is rejected at a significance level of 0.05. Therefore, the correlation matrix is not an identity matrix since the p-value is less than 0.05, as in Table 6.

Table 6: KMO and Bartlett’s test for opportunities that inspire corruption

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</b>		<b>0.839</b>
	Approx. Chi-Square	369.974
Bartlett’s Test of Sphericity	Df	36
	Sig.	.000

#### 4.11 Rotated Component Matrix for Prospects of Corruption

All the variables under consideration (components 1 and 2) shown in Table 7 have stronger factor loadings ranging from 0.599 to 0.898, higher than the minimum requirement of 0.50. Component 1 had factor loadings ranging from 0.607 to 0.864, and Component 2 had factor loadings ranging from 0.572 to 0.898. Hence, all the variables are opportunities that influence corruption in procurement.

Table 7: Rotated component matrix for opportunities that influence corruption

	Component	
	1	2
Discretion	0.607	
Lack of financial control	0.826	
Restricted access to information	0.864	
Funding Schemes	0.657	
Conflict of interest	0.744	
Size of the contract		0.572

Complexity of technology	0.898
Immediacy	0.659
Soft social control	0.599

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

#### 4.12 Why do Procurement Officials Engage in Corruption?

There are many reasons why people behave in a particular way. The information provided in Table 8 indicates that the first fundamental reason a procurement officer would engage in corruption is a lack of monitoring, supervision, and sanctions. This factor recorded a mean score of (3.88), followed by the value of the possible benefits the individual stands to gain with a mean of (3.78). The actual need for the procurement officer was ranked third, while professional integrity was considered the least reason.

**Table 8: Reasons for engaging in procurement corruption**

	N	M	SD	Mean rank
The value of possible benefits	80	3.78	1.359	2
Professional integrity	80	3.43	1.290	4
The actual need for the procurement officer	80	3.56	1.168	3
Lack of monitoring, supervision, and sanctions	80	3.88	1.296	1

N: Number of respondents; M: Mean; SD: Standard Deviation

#### 4.13 Measures to Minimise Potentials for Corruption in the Road Sector

Corruption is a canker that must be fought. Though it cannot be eradicated, it can be controlled when all hands get on deck. Most respondents (68) highlighted senior management commitment as a key factor in fighting corruption in the road sector. Another group (56) conceded that corruption could be repressed if actions are taken against perpetrators, and (55) admitted that the fight against road sector corruption could be achieved through effective communication of guidelines and policies. Two groups each (51) conceded that it could also be managed by providing adequate training for practitioners and hiring people with high ethical standards. Aggressive enforcement by regulatory agencies is considered the least among the measures, as recorded in Table 9.

**Table 9: Ways of minimising the likelihood of corruption in the road sector**

	Responses		Percent (%) of Cases
	N	Percent (%)	
Commitment from senior management	68	20.6	87.2
Communicate clear guidelines and policies	55	16.7	70.5
Hire people with high ethical standards	51	15.5	65.4
Consistently take action against all perpetrators	56	17.0	71.8
Provide adequate training for practitioners	51	15.5	65.4
Aggressive enforcement by regulatory agencies	49	14.8	62.8

N: Number of respondents

#### 4.14 Barriers to the Implementation of Procurement Anti-Corruption Programmes in organisations

Table 10 shows the various barriers to implementing anti-corruption programmes within organisations. It was revealed that (72.4%) of the barriers to implementing anti-corruption programmes arise from country-specific cultural practices and ways of doing business. The survey indicated that (71.1%) came about due to conflict of interest, competitiveness versus ethical control, and (69.7%) through organisational culture. It was averred that (45%) and (44%) of the barriers are due to industrial practices and corporate culture, respectively. Judicial corruption was found to be the least barrier to the implementation of anti-corruption programmes within organisational setups.

**Table 10: Barriers to anti-corruption programmes in organisations**

	Responses		Percent (%) of Barriers
	N	Percent (%)	
Country-specific cultural practices and ways of doing business	55	17.4	72.4
Conflicting interests; competitiveness vs. ethical control	54	17.0	71.1
Corporate culture	44	13.9	57.9
Systemic government corruption	38	12.0	50.0
Organisational structure	53	16.7	69.7
Industry practices	45	14.2	59.2
Judicial corruption	28	8.8	36.8

N: Number of respondents

#### 4.15 Who is Responsible for Corruption Prevention in an Organisation?

The survey implied that (92.3%) of the responsibilities for preventing corruption in organisations lie with every staff member because all members are responsible for their high ethical standards. It was also recorded that (62.8%) of the responsibilities lie with senior management, while (53.8%) lie with internal audit. The result showed that the responsibility for preventing corruption does not lie with external auditors. A system must have internal mechanisms to monitor and efficiently audit its operations.

**Table 11: Responsibility for the fight against procurement corruption in an organisation**

	Responses		Percent (%) of Responsibilities
	N	Percent (%)	
Senior management	49	15.2	62.8
All staff members are responsible for their high ethical standards	72	22.3	92.3
Internal audit	42	13.0	53.8
Local management/business units	36	11.1	46.2

Regulatory/compliance officer	36	11.1	46.2
Government/government agencies	35	10.8	44.9
Office of General Counsel/lawyers	27	8.4	34.6
External auditors	26	8.0	33.3

N: Number of respondents

### 5. Discussion

Corruption has crowded Ghana’s public procurement system and is gradually creating dissatisfaction among its citizens. One sector overwhelmed by corruption is the road sector; the rate and magnitude are obnoxious and debilitating. It thrives because multiple actors and stakeholders often create the right environment and platform (Denny et al., 2023; Chayes, 2015; Lord, 2016). The root of this destructive menace is spreading fast because public and private sector actors care less about reputation. Sadly, many companies operating within this space have no anti-corruption programmes to restrict this menace; the case is not different in some state agencies. In state agencies where they exist, people have maneuvered their way around it. Public officials have now become more powerful than the laws and structures of state institutions partly because of political connectivity; this has led to the creation of more favourable settings leading to the sustenance and enhancement of corruption activities. On the other hand, companies have no anti-corruption disclosure to instill confidence in the public concerning their activities and operations. Many respondents believed that public declaration of companies’ procurement anti-corruption programmes and controls would greatly enhance companies’ reputation and brand.

The subject of corruption has become topical for the past decade due to the rate of occurrence and will continue to gain more attention (Akomah and Nani, 2016a) because citizens are now becoming more conscious of how governments use state resources. Though successive governments have tried to develop laws and regulations, notable among them is the Public Procurement Act; the state for years has lacked the willpower to implement them through enforcement rigorously. The current step in the right direction is establishing the Office of the Special Prosecutor (OSP), but the actions and inactions of the government rendered that office toothless and stifled its mandate for some time. The joy of the Ghanaian people to see perpetrators of procurement crime brought to book was abruptly curtailed by the government’s ineptitude in the era of the former Special Prosecutor. The current OSP has reignited public trust. The former Special Prosecutor (SP), Mr. Martin

Amidu, 2019, highlighted that section 79 of the OSPs Act hinders authority (Graphic Online, 2019).

Activities of corruption are illusive and shrouded in secrecy, making the fight against it daunting. The subject is gradually becoming a nightmare and albatross to the public and private sector interaction. For fear of being caught, offenders have devised new strategies to access their private interests. Indirect payments are meditative and organised procurement crime (OECD, 2007) to arrive at an interest. Ancarani et al. (2019) and Rose-Ackerman (1978) conceded that the prime motive behind indirect payments is to obtain competitive superiority and evade cost. The benefit derived from a procurement contract, according to Argandona (2003), determines the scale of indirect payment that is often at stake; sometimes, public officials set their ceilings, and companies or individuals have to bargain or walk away.

On the other hand, (Rose-Ackerman, 1978; Klitgaard, 1988) revealed that the payment scale sometimes depends on the riskiness of one’s action and negotiation skills. It is a known fact that corruption comes in many forms, and one such form is offering inappropriate gifts, hospitality, entertainment, and travel; non-cash payments (company, products, services, and favours) to procurement officials by companies or their representatives. Though immoral, officials enjoy them and sometimes ask for them or even more. This supports the study by (Akomah and Nani, 2018), who discovered such practices as some of the major corrupt practices in Ghana’s public procurement process. Wallis (2012) averred that such practices affect the public and negatively impact government revenue, influence resource allocation, violate the rule of law (Jain, 2001), increase the cost of transactions, lead to financial loss and unfruitful economic results (Begovic, 2005); harms the quality of service and influence efficiency of service delivery (Graycar and Sidebottom, 2012). OECD (2017) emphasised that corruption impedes development, creates a market imbalance, and smears credibility.

The corporate image of a company is the picture that is imprinted on the minds of people. It is what the company stands for (Cetin and Tekiner, 2015) and what draws people

closer to it (Bozkurt, 2018). One thing that can taint the corporate image of a company or a state institution is corruption; it drives away genuine would-be customers. Bozkurt (2018) claimed that it casts a snare on the credibility of a company or institution. Because of uncertainties, people feel unsafe dealing with corrupt companies and institutions (Jain, 2001). Many businesses and government agencies have been destroyed because of deep-seated corruption, and Ghanaian institutions are no exception. Lawal (2007) claimed that corruption perverts state or business integrity. Finn (1961) stated that with the advent of competition in modern business, companies would be disadvantaged if they only compete based on product and functions, specifications, and quality.

De Graaf (2007) argued that people act corruptly because of bad moral character. He views it as a weakness and defect. Akomah and Nani (2016b) indicated that a highly skilled procurement workforce with the right training could overcome some of the flaws that result in corruption. De Graaf (2007) argued that a person or an entity's desire to engage in corruption hinges on the benefit and the chances of being caught. Sometimes corruption occurs due to the structure and culture of organisation, the incoherent distinction between public and private roles, or lack of ethical standards. These call for continuous structural reforms in institutions and companies to modernise their governance frameworks to ensure broader control and accountability to limit corruption and corrupt practices (OECD, 2017). The OECD views internal control systems as important mechanisms for fighting corruption. An agency's structure should be crafted to allow employees to report suspected actions of corruption through their normal chain of command with their identities carefully protected. According to the OECD, strengthening internal controls creates an environment for improved governance and accountability. Government agencies, civil society organisations, and quasi-governmental organisations can solidify their operations to help protect the public purse and preserve the sanity and sanctity of public transactions. Akomah (2014), in his study, identified weaknesses in institutional structures, limited accountability, insufficient enforcement, and poor management practices as the major causes of corruption. Corruption cannot be effectively fought with weak institutional frameworks and administrative structures.

Pinder (1998) viewed motivation as anything that rekindles the energy within a person to produce a behaviour. Barg et al. (2014) perceived motivation as an inner drive to fulfill a need. Corruption takes place because actors see a need that, to them, requires fulfillment. Though corruption in procurement is considered illegal, people make a way around it because of the interest at stake. Ameyaw et al. (2012) and

Akomah (2014) revealed that public procurement officials acting on behalf of the state engage in corruption. Respondents disclosed that this activity flourishes due to a lack of financial control, conflict of interest, restricted access to information, the extent of discretionary powers at the disposal of public officers, and the type of funding scheme. These were seen as the major catalysts of corruption in procurement. Conflict of interest and the extent of discretionary powers were noted as some of the causes of corruption (Osei-Tutu et al., 2010). This finding was confirmed by Akomah and Nani (2018). Myint (2000) observed that procurement systems in institutions are somehow susceptible to the exercise of discretion, and sometimes such discretions become excessive.

Every system operated by people needs some form of monitoring and supervision and sometimes some form of sanctions to deter wrong behaviour. When there are no penalties, individuals take the system for granted. Ghana's Public Procurement Act offers some forms of checks and balances intending to limit corruption, but professionals and industry players have still found a way to bypass them to pursue their interests. Ameyaw et al. (2012) revealed that private consultants, state officials, and contractors have devised means of outwitting the system. The huge sums of taxpayers' money involved in public procurement show why procurement systems cannot run without monitoring and supervision. State agencies and companies have a responsibility to structure their systems in such a way that they would be able to unearth such illicit practices. Akomah and Nani (2018) believed sanctions could help sanitise the procurement environment. It was advised that training employees and resourcing them with the right information and the needed material resources could go a long way to purge the system of this peril. They also highlighted the code of ethics introduction to rebrand procurement activities in the country and introduce practitioners to high ethical standards and practices. The battle against corruption needs coordinated effort; it should not be the assignment for senior management alone but for all staff. Management of state agencies and companies must ensure that policies and guidelines concerning procurement operations are unambiguously communicated to employees and all who have a role to play in procurement assignments. Internal auditing should be given attention and considered a structure for fighting corruption.

However, establishing such mechanisms encounters staunch opposition in organisations due to conflicts of interest, organisational culture, industrial practices, and corporate culture. Some firms see corruption as the only means to surviving in today's ever-changing business environment, with others in the public sector viewing it as a means of enrichment.

## 6. Implications of the study

The implication of the study is that it identifies the prevalent forms of corruption, the impact of corruption, opportunities that inspire corruption, reasons why people engage in corruption, barriers to anti-corruption, and responsible agents in the fight against corruption in road sector procurement. Theoretically, this study contributes to existing knowledge on corruption in the road sector. In practice, it pinpoints the areas that need urgent policy attention if the menace of corruption is to be minimised.

## 7. Conclusions and Recommendations

The study results revealed that institutional structures must be considered again to save the public purse and conserve resources. State institutions and companies should audit their systems and structures to identify the pockets of limitations that provide opportunities for corruption to thrive. This would lead to improved organisational and institutional frameworks and control mechanisms that stand the test of time. Internal auditing should be used to stifle corrupt practices and corruption activities. These offices of state and corporate institutions should be empowered because they serve as one of the anti-corruption units. Limiting corruption in institutions and companies would create timeless corporate or institutional images that would go a long way to reinforce public confidence.

The study discovered insidious corrupt practices in the nation's road procurement system. Institutions and corporate bodies should develop specific anti-corruption programmes that meet their needs and operations. Such programmes or policies would gain credence when it is made public. State anti-corruption agencies should be resourced to undertake their mandated responsibilities and not be hindered by manipulation. The Office of the Special Prosecutor must be fully resourced to function. The intention of establishing anti-corruption structures alone is not enough.

To sanitise the procurement space, a declaration of intent should be made regarding receiving all gifts. This is because gifts can corrupt good manners and lead to compromises that could taint an institution's credibility or procurement process. Institutions should develop procurement policies that dictate the acceptable and unacceptable practices and the consequences for their violations. The penalties must be so hefty that they would deter would-be perpetrators. It is advised that such sanctions be carefully graded to cover all forms of violations and staff. The magnitude of the offense should be proportional to the sanction and not tread on the path of vindictiveness, as doing so would destroy the very reason for its introduction.

Leadership of institutions should discourage all forms of cultural practices that activate corruption. This can be done by establishing whistleblowing systems to monitor such activities. In addition to this, organisational structures should be crafted in a way that makes people accountable.

The responsibility of repressing corruption should be expanded to involve all staff. Every staff must become a gatekeeper to guard the sanity of organisations' practices and protect their image. Senior management should diversify their leadership to encourage employees of institutions and corporate organisations to have a sense of belonging in dealing with the defects, bottlenecks, and cracks in their system.

Several factors were discovered through the survey to be the causes of corruption. No matter the temptations public officials face, they are supposed to act as professionals and uphold integrity in their service to the state for all the benefits they receive. One way the state can clamp down on the menace of corruption is to reconsider the extent of discretionary powers entrusted to public officials, as they can sometimes become the recipe for smoldering corruption in state institutions. The law should be restructured and crafted so that public officials would not have the opportunity to outstep their boundaries.

## REFERENCES

- [1] Abdullahi, S. I., Shuaibu, M., Yusufu, M., Shehu, K. K., & Rafay, A. (2023). Economic growth, financial development and bank failure: The case of corruption in Nigeria. In concepts, cases, and regulations in financial fraud and corruption. IGI Global.
- [2] Ackom, P. S., Owusu Kwateng, K., Tetteh, F. K., & Wiesche, M. (2022). Understanding e-government services: integration of process virtualization theory and user resistance. *Digital Policy, Regulation and Governance*, 24(5), 418-434.
- [3] Akomah, B. & Nani, G. (2016b). Public procurement corruption: types, approaches, and collusion or rigging. *African Journal of Applied Research*, 3(3), 57-68.
- [4] Akomah, B. B. & Nani, G. (2014). Redefining corrupt public procurement practices in Ghana based on stakeholders' perception. Master's thesis. Kwame Nkrumah University of Science and Technology, Kumasi.
- [5] Akomah, B. B. & Nani, G. (2016a). Determining the causes of corruption in public procurement in Ghana. *African Journal of Applied Research*, 3(3), 82-93.
- [6] Akomah, B. B. & Nani, G. (2018). Redefining corrupt public procurement practices in Ghana based on stakeholders' perception. *International Journal of Innovative Research and Development*, 7(9), 15-23.

- [7] Alani, S. H. N. (2022). Managing the corruption risk at the operation and maintenance stage in the construction projects in Iraq. *Innovative Infrastructure Solutions*, 7(1), 112.
- [8] Ameyaw, C., Mensah, S., & Osei-Tutu, E. (2012). Public procurement in Ghana: The implementation challenges to the Public Procurement Law 2003 (Act 663). *International Journal of Construction Supply Chain Management*, 2(2), 55-65.
- [9] Ancarani, A., Di Mauro, C., Hartley, T., & Tátrai, T. (2019). A comparative analysis of SME friendly public procurement: results from Canada, Hungary and Italy. *International Journal of Public Administration*, 42(13), 1106-1121.
- [10] Argandona, A. (2003). Private-to- private corruption, IESE Business School. Madrid, Spain, paper #531.
- [11] Asiedu, R. O., & Adaku, E. (2020). Cost overruns of public sector construction projects: a developing country perspective. *International Journal of Managing Projects in Business*, 13(1), 66-84.
- [12] Auditor-General's Report (2016). Public accounts of Ghana-ministries, departments and other agencies (MDAs).
- [13] Barg, J. E., Ruparathna, R., Mendis, D., & Hewage, K. N. (2014). Motivating workers in construction. *Journal of Construction Engineering*, 2014, 1-11. <http://dx.doi.org/10.1155/2014/703084>.
- [14] Batrancea, L. M., de Jesús Bello Gómez, F., Nichita, A., & Dragolea, L. L. (2023). Crunching numbers in the quest for spotting bribery acts: A cross-cultural rundown. In *The ethics of bribery: theoretical and empirical studies*. Cham: Springer International Publishing.
- [15] Begovic, B. (2005). *Corruption: concepts, types, causes, and consequences*. Washington DC: Center for International Private Enterprise.
- [16] Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus open*, 2, 8-14.
- [17] Bozkurt, M. (2018). Corporate image, brand, reputation concepts and their importance for tourism establishments. *International Journal of Contemporary Tourism Research* 2 (2018), 60 - 66. Available from: <http://dergipark.gov.tr/ijctr> (accessed September 18, 2020).
- [18] Brandt, U. S. & Svendsen, G. T. (2013). Why does bureaucratic corruption occur in the EU? *Public choice*, 157, 585-599.
- [19] Cameron, R. (2015). Mixed methods research workshop, Deakin University, Melbourne.
- [20] Campos, N., Engel, E., Fischer, R. D., & Galetovic, A. (2021). The ways of corruption in infrastructure: Lessons from the Odebrecht case. *Journal of Economic Perspectives*, 35(2), 171-190.
- [21] Cetin, S. & Tekiner, M. A. (2015). Key determinants of corporate image: Law enforcement agency sampling internal stakeholder survey. *Journal of Management and Economy Finances*, 13, 1.
- [22] Chan, F., Gibbs, C., Boratto, R., & Speers, M. (2021). Understanding transnational bribery: A corporate crime framework. *Crime, Law and Social Change*, 75, 221-245.
- [23] Changalima, I. A., Mushi, G. O., & Mwaiseje, S. S. (2021). Procurement planning as a strategic tool for public procurement effectiveness: experience from selected public procuring entities in Dodoma city, Tanzania. *Journal of Public Procurement*, 21(1), 37-52.
- [24] Chayes, S. (2015) *Thieves of state: why corruption threatens global security*. London: W.W. Norton.
- [25] Creswell, J., Plano Klassen, A., Clark, V., & Smith, K. (2011). *Best practice for mixed methods research in the health sciences*. Bethesda: National Institutes of Health.
- [26] Dabaga, J. (2013). Weaknesses of the Public Procurement Act of Ghana, Act 663 (2003). Available from: <http://thechronicle.com.gh/weaknesses-of-the-procurement-act-of-ghana-act-663-2003> (accessed July 14, 2020).
- [27] De Graaf, G. (2007). Causes of corruption: towards a contextual theory of corruption. *Public Administration Quarterly*, 31(1), 39-86.
- [28] De Jong, M., Henry, W. P., & Stansbury, N. (2009). Eliminating corruption in our engineering/construction industry. *Leadership and Management in Engineering*, 9(3), 105-111.
- [29] Denny, E. K., Phan, N., Romero, D., & Wibbels, E. (2023). Incentives, audits and procurement: Evidence from a district-level field experiment in Ghana. *Governance*, 1-22. <https://doi.org/10.1111/gove.12798>.
- [30] Dikmen, S., & Cicek, H. G. (2023). Fighting against corruption and bribery in public procurements during the Covid-19 pandemic. In *The ethics of bribery: Theoretical and Empirical Studies*. Cham: Springer International Publishing.
- [31] Dyck, A., Morse, A., & Zingales, L. (2023). How pervasive is corporate fraud?. *Review of Accounting Studies*, 1-34.
- [32] Emerson, R. W. (2015). Convenience sampling, random sampling, and snowball sampling: How does sampling affect the validity of research? *Journal of Visual Impairment and Blindness*, 109(2), 164-168.
- [33] European Commission (2014a). A new EU framework to strengthen the rule of law. *Communication, COM (2014) 158 Final*.

- [34] European Commission (2014b), EU budget 2014 financial report. Available from: <http://ec.europa.eu> (accessed June 08, 2020).
- [35] European Union [EU] (2014). How the EU works. Available from: [http://europa.eu/about-eu/index\\_en.htm](http://europa.eu/about-eu/index_en.htm) (accessed September 24, 2020).
- [36] Finn, D. (1961), The price of corporate vanity, *Harvard Business Review*, 39, 135-143.
- [37] Gauthier, B., Goyette, J., & Kouamé, W. A. (2021). Why do firms pay bribes? Evidence on the demand and supply sides of corruption in developing countries. *Journal of Economic Behaviour & Organisation*, 190, 463-479.
- [38] Gentles, S. J., Charles, C., Ploeg, J., & McKibbin, K. A. (2015). Sampling in qualitative research: Insights from an overview of the methods literature. *The qualitative report*, 20(11), 1772-1789.
- [39] Government of Ghana. (2007). The Public Procurement Authority: Short-term training modules on the Public Procurement Act 2003, (Act 663). Available from: [www.ppda.gov.gh](http://www.ppda.gov.gh) (accessed July 12, 2020).
- [40] Graphic Online (2109). 11 types of corruption offences the Special Prosecutor can investigate. Available from: <https://www.graphic.com.gh/news/general-news/martin-amidu-11-types-of-corruption-offences-the-special-prosecutor-can-investigate.html> (accessed September 18, 2020).
- [41] Graycar, A. & Sidebottom, A. (2012). Corruption and control: a corruption reduction approach. *Journal of Financial Crime*, 19(4), 384-399.
- [42] Haughton, A., & Ivey, W. (2023). Corruption and the informal economy in Jamaica. In *Overcoming productivity challenges in small countries: Lessons from Jamaica*. Cham: Springer Nature Switzerland.
- [43] Hosseini, M. R., Martek, I., Banihashemi, S., Chan, A. P., Darko, A., & Tahmasebi, M. (2020). Distinguishing characteristics of corruption risks in Iranian construction projects: A weighted correlation network analysis. *Science and engineering ethics*, 26, 205-231.
- [44] Jain, A. K. (2001). Corruption: a review. *Journal of Economic Surveys*, 15(1), 71-116.
- [45] Jones, A. (2021). Combatting corruption and collusion in UK public procurement: Proposals for Post-Brexit reform. *The Modern Law Review*, 84(4), 667-707.
- [46] Julius Otusanya, O. (2011). Corruption as an obstacle to development in developing countries: a review of literature. *Journal of Money Laundering Control*, 14(4), 387-422.
- [47] Klitgaard, R. (1988). *Controlling corruption*. California: University of California Press.
- [48] Kola, J. (2023). The 'local content' concept in public procurement: global trends in the development of public procurement law on the examples of the USA, South Africa and Poland. *Ruch Prawniczy, Ekonomiczny i Socjologiczny*, 85(1), 85-105.
- [49] Kyngas, H. (2020). Inductive content analysis. The application of content analysis in nursing science research, 13-21.
- [50] Lassou, P. J. C., Sorola, M., Senkl, D., Lauwo, S.G. and Masse, C. (2023), "Monetization of politics and public procurement in Ghana", *Accounting, Auditing & Accountability Journal*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/AAAJ-07-2021-5341>.
- [51] Lawal, G. (2007). Corruption and development in Africa: challenges for political and economic change. *Humanity and Social Sciences Journal*, 2(1), 1-7.
- [52] Lee, J. S. (2022). Simulating competitive bidding in construction collusive bidding cases. *Journal of Management in Engineering*, 38(5), 04022050.
- [53] Lehtinen, J., Locatelli, G., Sainati, T., Arto, K., & Evans, B. (2022). The grand challenge: Effective anti-corruption measures in projects. *International Journal of Project Management*, 40(4), 347-361.
- [54] Lindgren, B. M., Lundman, B., & Graneheim, U. H. (2020). Abstraction and interpretation during the qualitative content analysis process. *International journal of nursing studies*, 108, 103632.
- [55] Lord, Nicholas. (2016). Establishing enforcement legitimacy in the pursuit of rule-breaking "global elites": The case of transnational corporate bribery.' *Theoretical Criminology*, 20, 376-399.
- [56] Matthew, K., Patrick, K., & Denise, K. (2013). The Effects of Fraudulent Procurement Practices on Public Procurement Performance. *International Journal of Business and Behavioural Sciences*, 3 (1).
- [57] Mutungi, F., Baguma, R., Janowski, T., & University Krems, Austria, D. (2019, June). Towards digital anti-corruption typology for public service delivery. In *Proceedings of the 20th Annual International Conference on Digital Government Research* (pp. 484-494).
- [58] Myint, U. (2000). Corruption: Causes, consequences and cures. *Asia-Pacific Development Journal*, 7(2), 33-58.
- [59] Nam, P. X., & Thanh, T. T. (2021). Effects of bribery on firms' environmental innovation adoption in Vietnam: mediating roles of firms' bargaining power and credit and institutional constraints. *Ecological Economics*, 185, 107042.
- [60] Nkunda, R. M., Kazungu, I., & Changalima, I. A. (2023). Collaborative Procurement Practices in Public Organisations: A Review of Forms, Benefits and

- Challenges. *Ghana Journal of Development Studies*, 20(1).
- [61] OECD (2007). *Bribery in public procurement: methods, actors and counter-measures*. Paris: Organisation for Economic Co-operation Development.
- [62] OECD (2017). *OECD Public governance reviews: Internal control and risk management for public integrity in the Middle East and North Africa*. Available from: <file:///Users/thedonkarlos/Desktop/corruption-risks-internal-control-mena.pdf> (accessed September 18, 2020).
- [63] Organisation for Economic Co-operation and Development OECD (2014). *Bribery in public procurement: Methods, actors and counter-measures*. Centre for Democratic Development (CDD-Ghana), 4 (2), 1-6.
- [64] Organisation for Economic Co-operation and Development OECD (2015a). *Consequences of corruption at the sector level and implications for economic, growth and development*. OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264230781-en>
- [65] Osei-Tutu, E., Badu, E. & Owusu-Manu, D. (2010). Exploring corruption practices in public procurement of infrastructural projects in Ghana. *International Journal of Managing Projects in Business*, 3(2), 236-256.
- [66] Panya, K. O., & Awuor, E. (2023). Public procurement reforms in Africa: challenges, constraints and improvement opportunities. *The Strategic Journal of Business & Change Management*, 10(2), 1435-1456.
- [67] Pinder, C. C. (1998). *Work motivation in organisational behaviour*. New Jersey: Prentice Hall.
- [68] Poisson, M. (2010). *Corruption and education*. Paris: UNESCO, International Institute for Educational Planning.
- [69] Public Procurement Act, 2003 (Act 663) of the Republic of Ghana.
- [70] Rose-Ackerman, S. (1978). *Corruption: A study in political economy*. New York: Academic Press.
- [71] Rufai, S. R., & Bunce, C. (2020). World leaders' usage of Twitter in response to the COVID-19 pandemic: a content analysis. *Journal of public health*, 42(3), 510-516.
- [72] Rustiarini, N. W., Nurkholis, N., & Andayani, W. (2019). Why people commit public procurement fraud? The fraud diamond view. *Journal of public procurement*, 19(4), 345-362.
- [73] Savuth (2012). Forensic accounting and fraud risk factors: The influence of fraud diamond theory. *European Journal of Business and Management*, 7(28).
- [74] Shoar, S., Yiu, T. W., Payan, S., & Parchamijalal, M. (2023). Modeling cost overrun in building construction projects using the interpretive structural modeling approach: a developing country perspective. *Engineering, Construction and Architectural Management*, 30(2), 365-392.
- [75] Soreide, T. (2009). Too risk averse to stay honest? Business corruption, uncertainty and attitudes toward risk. *International Review of Law and Economics*, 29 (4), 388-395.
- [76] Tabish, S. Z. S., & Jha, K. N. (2011a). Analyses and evaluation of irregularities in public procurement in India. *Construction Management and Economics*, 29(3), 261-274.
- [77] The Construction Sector Transparency Initiative COST (2012). Press release, Available from: <http://www.constructiontransparency.org> (accessed June 28, 2020).
- [78] Transparency International (2015a). *FAQS on corruption*. Available from: <https://www.transparency.org> (accessed August 22, 2020).
- [79] Wallis, J. J. (2006). The concept of systematic corruption in American history, NBER.
- [80] Wells, J. (2014). *Corruption and Collusion in Construction: A view from the industry*. In T. Søreide & A. Williams (Eds.), *Corruption, grabbing and development: Real world challenges*. Massachusetts: Edward Elgar Publishing.
- [81] Willis, J. W. (2007). *Foundations of qualitative research: Interpretive and critical approaches (1st edn.)*. California: Sage Publications Inc.
- [82] World Bank (2003a). *Public Procurement Act of Ghana - Country procurement assessment report*. Washington D.C., America, The World Bank Report #29055. (4).
- [83] World Bank (2013). *Ghana's comprehensive approach to public procurement reform*. Available from <http://www.worldbank.org> (accessed May 18, 2020).
- [84] Zabyelina, Y. (2023). Revisiting the concept of organized crime through the disciplinary lens of economic criminology. *Journal of Economic Criminology*, 1, 100017.
- [85] Zakari, M. B., & Button, M. (2022). Confronting the monolith: insider accounts of the nature and techniques of corruption in Nigeria. *Journal of White Collar and Corporate Crime*, 3(2), 100-108.

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