

## RESEARCH ARTICLE

# Global Perspectives on Corruption in Public Procurement: Unveiling an Integrated Systemic and Behavioral Mitigation Framework

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## ABSTRACT

Corruption in public procurement continues to undermine governance effectiveness, service delivery and public trust. This study aims to analyze procurement corruption using an integrated systemic and behavioral perspective that captures both institutional weaknesses and collective social dynamics. A scoping review of evidence across diverse geographic contexts is undertaken, applying Agency Theory and Collective Action Theory to assess existing anti-corruption approaches and their contextual limitations. The study finds that compliance- and sanction-focused agency models are inadequate for addressing the complex and socially embedded nature of procurement corruption. More sustainable outcomes emerge from integrated approaches that combine institutional reforms, behavioral change interventions, stakeholder engagement and digital transparency mechanisms. The findings provide actionable guidance for policymakers and procurement authorities on designing context-sensitive anti-corruption strategies that strengthen accountability, improve service delivery, and rebuild public trust, while fostering collective responsibility and ethical norms within procurement systems. The paper advances public procurement scholarship by integrating agency and collective action perspectives within a unified analytical framework.

**Keywords:** Corruption; public procurement; public procurement corruption; Collective Action Theory, Agency Theory

## 1. INTRODUCTION

Corruption in public procurement has become a widespread global issue. It weakens the efficiency, effectiveness, and integrity of both private and public sector operations. Corruption involves the misuse of public office for personal gain in obtaining goods, services, and projects, resulting in higher costs, lower quality, and unfair distribution of resources.<sup>1</sup> Public procurement accounts for a significant portion of government expenditure, comprising an estimated 12-20% of gross domestic product (GDP) worldwide and up to 30% in developing countries, particularly in Africa.<sup>2</sup> The large scale of procurement emphasizes its vital role in national growth. The World Economic Forum estimates that corruption costs governments approximately \$2.6 trillion annually, with a significant portion of these losses resulting from corrupt procurement activities.<sup>3</sup> Such corruption not only increases expenses<sup>4</sup> but also worsens the quality and accessibility of public services,<sup>5</sup> which impedes economic progress and development.<sup>6</sup>

Literature on corruption in public procurement covers various malpractices such as bribery, favoritism, embezzlement, and bid-rigging,<sup>7</sup> driven by a complex mix of historical, socio-economic, cultural, and institutional factors.<sup>8</sup> Despite years of efforts to reduce procurement corruption through regulatory reforms, transparency initiatives, and anti-corruption agencies, the problem persists in both developed and developing countries.<sup>9</sup> Traditional anti-

corruption strategies, primarily based on the agency model, focus on misaligned incentives and weak oversight, where public officials (agents) act against the interests of the public (principals).<sup>10</sup> While helpful, this approach oversimplifies the issue by not fully considering systemic challenges, such as institutional weaknesses, deep-rooted cultural norms, and the role of informal governance structures, including organized crime networks.<sup>11</sup> Current strategies rely too heavily on transparency and accountability as cures, neglecting the complex social, cultural, and psychological factors that drive corrupt actions.<sup>12</sup> This gap underscores the need for a more comprehensive understanding of the systemic and behavioral aspects of procurement corruption, thereby enabling the development of more effective and lasting anti-corruption solutions.

The evolving understanding of corruption in public procurement suggests that it should be seen as both isolated incidents of wrongdoing and a systemic issue deeply rooted in broader governance, cultural, and institutional contexts.<sup>13</sup> This perspective recognizes that corruption is sustained by ingrained norms, informal networks, and weak governance structures, which compromise procurement integrity and normalize corrupt practices, making it difficult for individuals to abstain without facing repercussions.<sup>14</sup> Additionally, insights from behavioral science reveal that corrupt behavior is influenced by cognitive biases, social norms, and psychological factors, extending beyond rational choice. When corruption is perceived as common and acceptable,

- 1 OECD, PREVENTING CORRUPTION IN PUBLIC PROCUREMENT (OECD Publ'g 2016), [https://baselgovernance.org/sites/default/files/202003/oecd\\_preventing\\_corruption\\_in\\_public\\_procurement\\_2016.pdf](https://baselgovernance.org/sites/default/files/202003/oecd_preventing_corruption_in_public_procurement_2016.pdf).
- 2 World Bank, ENHANCING GOVERNMENT EFFECTIVENESS AND TRANSPARENCY: THE FIGHT AGAINST CORRUPTION (2020), <https://documents1.worldbank.org/curated/en/235541600116631094/pdf/EnhancingGovernment-Effectiveness-and-Transparency-The-Fight-Against-Corruption.pdf>.
- 3 United Nations, Cost of Corruption at Least 5 Per Cent of Global Gross Domestic Product, Secretary-General Says in International Day Message, UN PRESS (Dec. 5, 2018).
- 4 G. WOODS & E. MANTZARIS, ANTI-CORRUPTION READER (Sch. of Pub. Leadership, Univ. of Stellenbosch, Anti-Corruption Ctr. for Educ. & Rsch. 2012). See also: R.A. Komakech, T.O. Ombati & R.W. Kikwatha, *Supply Chain Management, Total Quality Management, and Circular Economy: A Bibliometric Analysis and Systematic Literature Review*, 15 INT'L J. BUS. & SOC. SCI., no. 2, at 17, 17-44 (2024).
- 5 B.C. Basheka, *Public Procurement Governance: Toward an Anti-Corruption Framework for Public Procurement in Uganda*, in PUBLIC PROCUREMENT, CORRUPTION AND THE CRISIS OF GOVERNANCE IN AFRICA 113-41 (N. Dorasamy & O. Fagbadebo eds., Springer 2021). See also: I.A. Abdulwaheed & L.D. Ohida, *Effects of Corruption on Service Delivery in Nigeria: A Study of Osun State Public Service*, 3 ZAMFARA J. POL. & DEV., no. 3, at 19, 19 (2022).
- 6 K.V. Thai, *Public Procurement Re-examined*, 1 J. PUB. PROCUREMENT 9, 9-50 (2001). See also: T. SØREIDE, CORRUPTION IN PUBLIC PROCUREMENT: CAUSES, CONSEQUENCES, AND CURES (Chr. Michelsen Inst. 2002). See also: MICHAEL JOHNSTON, SYNDROMES OF CORRUPTION: WEALTH, POWER, AND DEMOCRACY (Cambridge Univ. Press 2005). See also: SUSAN ROSE-ACKERMAN & BONNIE J. PALIFKA, CORRUPTION AND GOVERNMENT: CAUSES, CONSEQUENCES, AND REFORM (Cambridge Univ. Press 2016).
- 7 See: WOODS & MANTZARIS, *supra* note 4. See also: OECD, IMPLEMENTING THE OECD PRINCIPLES FOR INTEGRITY IN PUBLIC PROCUREMENT: PROGRESS SINCE 2008 (OECD Pub. Governance Revs. 2013), <https://doi.org/10.1787/9789264201385-en>. See also: IMF, CORRUPTION: COSTS AND MITIGATING STRATEGIES (2016), <https://www.imf.org/external/pubs/sdn/2016/sdn1605>. See also: T.J. Lebakeng, *Political Polarisation, Compromised Procurement and Poor Service Delivery in the Kingdom of Lesotho*, in PUBLIC PROCUREMENT, CORRUPTION AND THE CRISIS OF GOVERNANCE IN AFRICA 205-222 (2021).
- 8 J.M. Ntayi, P. Ngoboka & C.S. Kakooza, *Moral Schemas and Corruption in Ugandan Public Procurement*, 112 J. BUS. ETHICS 417, 417-36 (2013).
- 9 ALINA MUNGIU-PIPPIDI, THE QUEST FOR GOOD GOVERNANCE: HOW SOCIETIES DEVELOP CONTROL OF CORRUPTION (Cambridge Univ. Press 2015).
- 10 A. Persson, B. Rothstein & J. Teorell, *Why Anticorruption Reforms Fail—Systemic Corruption as a Collective Action Problem*, 26 GOVERNANCE 449, 449-71 (2013).
- 11 M. FAZEKAS & J.R. BLUM, IMPROVING PUBLIC PROCUREMENT OUTCOMES (Policy Rsch. Working Paper, 2021).
- 12 ROBERT KLITGAARD, CONTROLLING CORRUPTION (Univ. of Cal. Press 1988).
- 13 Persson et al., *supra* note 10.
- 14 Heather Marquette & Caryn Peiffer, *Corruption and Collective Action* (Dev. Leadership Programme (DLP) Rsch. Paper No. 32, Univ. of Birmingham 2015).

individuals are more likely to engage in such behavior, driven by peer influence and moral disengagement.<sup>15</sup> Addressing this requires innovative mitigation strategies that integrate behavioral interventions, such as nudges, ethical training, and changes in social messaging, to reshape motivations and decision-making processes in procurement.

Research on integrating systemic and behavioral anti-corruption strategies in public procurement is limited. Systemic strategies aim to strengthen governance and institutional frameworks to reduce corruption by improving regulations, boosting institutional capacity, and dismantling corrupt networks.<sup>16</sup> In contrast, behavioral approaches focus on the psychological and social factors that maintain corrupt practices.<sup>17</sup> Despite the potential for these strategies to work together, they are rarely combined into a comprehensive framework that addresses both the structural and human aspects of corruption. This study aims to fill this gap by conducting a scoping review to examine how these two approaches can be integrated and to answer the following research questions. Scoping reviews help provide an initial overview of the quantity and scope of existing research, identifying the nature and extent of available evidence, and highlighting areas of ongoing study.<sup>18</sup> The three specific research questions addressed in this study are as follows:

1. How are current theoretical frameworks, such as Agent Theory and Collective Action Theory, applied in the context of corruption in public procurement?
2. What is the nature and extent of corruption in public procurement?
3. What targeted anti-corruption measures can be recommended to address the specific systemic and behavioral drivers of corruption in each region?

By addressing these questions, this research advances the theoretical discussion on public administration and supply chain management by highlighting the dual function of procurement in ensuring regulatory compliance and regulating markets. It enhances our understanding of

how procurement policies can influence societal change and contributes to theory by broadening the concept of corruption beyond the traditional principal-agent model. By integrating insights from Collective Action Theory, the study provides a more comprehensive understanding of procurement corruption as a complex, multidimensional problem shaped by systemic, cultural, and behavioral factors. Lastly, viewing public procurement as a strategic instrument for achieving policy goals, such as advancing sustainability and controlling market behaviors, provides managers with a broader framework for utilizing procurement processes to achieve various policy objectives, thereby strengthening their strategic influence beyond mere purchasing.

## 2. METHODOLOGY

This study employs a scoping literature review to examine the systemic and behavioral factors that contribute to public procurement corruption. The review is chosen for its ability to map the extent and scope of existing research, accommodating various study designs and methods, which is essential for understanding complex topics such as procurement corruption.<sup>19</sup> The review helps identify key drivers of corruption, evaluate current anti-corruption strategies, and detect gaps in the literature to inform future research and policy development. The study also follows a systematic process, developing research questions to guide the review focused on public procurement corruption and its systemic and behavioral factors to assess mitigation strategies and pinpoint areas requiring further research. The detailed data-gathering plan included an initial phase of broad searching using a typical scoping review strategy. The following key search terms were used “public procurement corruption”, “public procurement”, “systemic factors”, “behavioral factors”, “anti-corruption strategies”, “procurement and corruption”. Keywords were carefully selected based on initial ideas, concepts, and constructs that reflect the thematic complexity of corruption and public

<sup>15</sup> Dan Ariely, *The (Honest) Truth about Dishonesty: How We Lie to Everyone—Especially Ourselves*, 17 VISION 194, 194–95 (2012).

<sup>16</sup> B.A. Olken, *Monitoring Corruption: Evidence from a Field Experiment in Indonesia*, 115 J. POL. ECON. 200, 200–49 (2007). See also: R.A. Komakech, *Corruption in Public Procurement in Uganda: What to Do?*, in PROCEEDINGS OF THE 2D INT'L CONF. ON GOVERNANCE AND SERV. DELIVERY IN DEV'G ECONOMIES (2019). See also: I.T. Arista & M. Fazekas, *Public Procurement Corruption*, in ELGAR ENCYCLOPEDIA OF CORRUPTION AND SOCIETY 281–85 (Edward Elgar Publ'g Ltd. 2024), <https://doi.org/10.4337/9781803925806.ch62>.

<sup>17</sup> H.M.L. Heringer, *Culture of Systemic Corruption*, 21 CADERNOS DE DEREITO ACTUAL 49, 49–63 (2023).

<sup>18</sup> H. Arksey & L. O'Malley, *Scoping Studies: Towards a Methodological Framework*, 8 INT'L J. SOC. RSCH. METHODOLOGY 19, 19–32 (2005). See also: M.J. Grant & A. Booth, *A Typology of Reviews: An Analysis of 14 Review Types and Associated Methodologies*, 26 HEALTH INFO. & LIBRS. J. 91, 91–108 (2009).

<sup>19</sup> M.T. Pham et al., *A Scoping Review of Scoping Reviews: Advancing the Approach and Enhancing the Consistency*, 5 RSCH. SYNTHESIS METHODS 371, 371–85 (2014). See also: H. Khalil et al., *An Evidence-Based Approach to Scoping Reviews*, 13 WORLDVIEWS ON EVID.-BASED NURSING 118, 118–23 (2016). See also: JOHNSTON, *supra* note 6. See also: Grant & Booth, *supra* note 18.

procurement factors, as well as the comprehensive coverage of the relevant search space across systemic, institutional, and behavioral aspects.

A total of 420 records were identified using Harzing's Publish or Perish software,<sup>20</sup> accessing Google Scholar as the search engine. Google Scholar was chosen for its extensive disciplinary coverage and citation capacity across all peer-reviewed journal articles, book chapters, working papers, as well as highly relevant grey literature published by key international organizations such as the Organisation for Economic Co-operation and Development (OECD), the International Monetary Fund (IMF), and the World Bank. This was important because empirical knowledge of corruption in public procurement, along with the factors and mechanisms underlying it, is informed by a multidisciplinary set of research literature (political science, public administration, behavioral economics, criminology, and procurement/supply chain management) and publications. An additional 17 grey literature reports were identified through manual searches of institutional repositories and specialist databases of major international organizations. The primary database included 437 documents.

The search records underwent a three-tier screening process. Initially, all titles and abstracts of the resulting records were evaluated for relevance based on a predefined set of inclusion criteria: (i) studies had to specifically address public procurement, corruption, or systemic and behavioral governance factors; (ii) be published in English; and (iii) fall within the date range from 1972 (the earliest available record) to 2024 (the current year). This process led to the exclusion of 215 documents, most of which (174) were unrelated to procurement or corruption and were published in fields such as general psychology, medical science, industrial engineering, education, and public administration/public policy, none of which were specific to procurement or related to corruption issues. The remaining 222 studies were then subjected to a more detailed secondary screening.

The secondary database consisting of 222 records was examined in greater detail to ensure strict scope alignment and methodological appropriateness. Studies that lacked sufficient methodological information, those that investigated corruption without a specific focus on the procurement sector and domain, and procurement studies unrelated to corruption were excluded. Consequently, a further 118 studies were omitted, leaving 104 for a comprehensive full-text eligibility review. This review of the remaining 104 studies was conducted using a specially designed and piloted review matrix<sup>21</sup> with criteria assessing relevance to the research questions, conceptual or theoretical contribution, and methodological clarity (qualitative, quantitative, or mixed methods). Articles lacking at least one of the key search terms related to procurement and corruption in the title, abstract, or keywords were excluded. An additional 30 studies were dismissed at this stage due to limited methodological detail, absence of full text, poor thematic fit, or duplication. Notably, the set of non-eligible studies included articles from diverse disciplines not focused on procurement, such as general psychology (behavioral or general studies unrelated to corruption), economics (beyond the specific topic of procurement), public policy, public administration, governance (non-procurement-specific contexts), as well as medical/health sciences, and agriculture or farming.

The remaining 74 publications, after removing duplicates, were included in the data extraction and analysis. These encompassed various types of scholarly articles, key academic works on corruption theories,<sup>22</sup> empirical studies on public procurement corruption,<sup>23</sup> and independent audits and policy documents<sup>24</sup> and works on behavioral insights related to social norms and ethics.<sup>25</sup> The search also identified foundational sources on the methodological aspects of scoping reviews.<sup>26</sup> The PRISMA-ScR<sup>27</sup> flowchart summarizing the process of literature identification, screening, and selection is provided in Figure 1.

<sup>20</sup> Anne-Wil Harzing, A total of 420 records were identified using Harzing's Publish or Perish software (2022).

<sup>21</sup> D. Moher, A. Liberati, J. Tetzlaff, D.G. Altman & Prisma Group, *Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement*, 151 ANNALS INTERNAL MED. 264, 264–69 (2015). See also: Komakech, Ombati & Kikwatha, *supra* note 4.

<sup>22</sup> See: ROSE-ACKERMAN & PALIFKA, *supra* note 6.

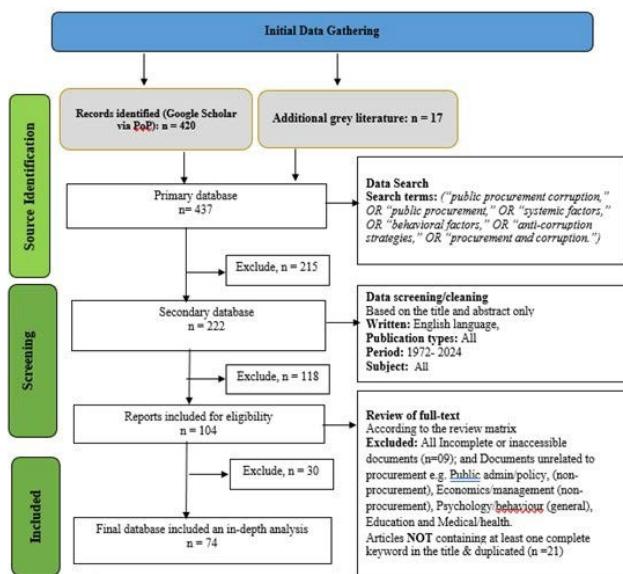
<sup>23</sup> B.C. Basheka, *Public Procurement Corruption and Its Implications on Effective Service Delivery in Uganda: An Empirical Study*, 2 INT'L J. PROCUREMENT MGMT. 415, 415–40 (2009). See also: FAZEKAS & BLUM, *supra* note 11.

<sup>24</sup> See also: World Bank, *supra* note 2.

<sup>25</sup> CRISTINA BICCHIERI, *NORMS IN THE WILD: HOW TO DIAGNOSE, MEASURE, AND CHANGE SOCIAL NORMS* (Oxford Univ. Press 2016).

<sup>26</sup> Z. Munn et al., *Systematic Review or Scoping Review? Guidance for Authors When Choosing Between a Systematic or Scoping Review Approach*, 18 BMC MED. RSCH. METHODOLOGY 1, 1–7 (2018).

<sup>27</sup> M.J. Page et al., *The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews*, 372 BMJ n71 (2021), <https://doi.org/10.1136/bmj.n71>.



**Figure 1: Schematic representation of the scoping review (PRISMA) process**

**Source:** Authors compilation (2025).

Data extraction involved gathering publication details, the country or region of focus, key concepts, systemic and behavioral drivers of corruption, and other relevant information. The data analysis used a thematic synthesis approach<sup>28</sup> to identify common themes and patterns within the extracted data. Citation information, as provided by the Publish or Perish software, was included in the extracted data. In scoping reviews, a formal quality appraisal is often not required. However, this study employed a focused approach to evaluate the relevance and credibility of the included sources.<sup>29</sup> This involved assessing based on methodological clarity and conceptual consistency with the research questions, using a checklist adapted from Moher et al.<sup>30</sup> The final selected publications formed the foundation of the evidence chart, developed through an evidence-based process to support the final scoping review report. This rigorous process adheres to ethical research standards, ensuring the accurate representation of sourced material and transparency in data extraction and analysis. It maintains the integrity and credibility of the review by presenting a balanced view that reflects the diversity of findings and perspectives in the literature.<sup>31</sup>

### 3. RESULTS AND DISCUSSION

The study of corruption in public procurement has garnered significant scholarly attention because the sector is prone to corrupt practices that can undermine economic growth, erode public trust, and compromise governance effectiveness. Over time, various theories have been developed and used to understand the causes, mechanisms, and effects of corruption in public procurement. These theories provide frameworks that explain why corruption occurs, the conditions that support it, and possible ways to reduce it. Notable theories include Agency Theory (AT), Institutional Theory (IT), Public Choice Theory (PCT), Rational Choice Theory (RCT), and Collective Action Theory (CAT). Given the complex nature of corruption in public procurement, scholars and practitioners have recommended combining systemic and behavioral theories to address this issue. For example, systemic approaches based on the Principal-Agent Theory (PAT) focus on establishing strong legal and regulatory systems to deter corruption by aligning the interests of agents with those of principals, thereby reducing opportunities for corrupt acts.<sup>32</sup> Conversely, the CAT suggests that corruption is not merely individual misconduct but involves complex social interactions among multiple stakeholders who participate in corrupt behavior because it is viewed as a norm or a necessary evil to achieve personal or organizational goals.<sup>33</sup>

It is essential to recognize that systemic reforms, such as improved procurement laws and transparent processes, are crucial but may not be sufficient to combat corruption. These reforms can fall short without addressing the underlying behavioral factors that influence individual decisions toward corruption. Behavioral strategies address these aspects by shaping individual and organizational ethics and culture, fostering integrity, and reshaping norms and expectations.<sup>34</sup> These strategies emphasize the importance of education, ethical training, and building a strong organizational culture that discourages corrupt practices. This section will critically examine the AT and CAT theories to show how combining regulatory reforms with behavior change strategies can effectively reduce both opportunities for and motivations behind corrupt behavior.

28 J. Thomas & A. Harden, *Methods for the Thematic Synthesis of Qualitative Research in Systematic Reviews*, 8 BMC MED. RSCH. METHODOLOGY 1, 1–10 (2008).

29 D. Levac, H. Colquhoun & K.K. O'Brien, *Scoping Studies: Advancing the Methodology*, 5 IMPLEMENTATION SCI. 69 (2010).

30 See: Moher et al., *supra* note 21.

31 See: Munn et al., *supra* note 26.

32 See: ROSE-ACKERMAN & PALIFKA, *supra* note 6.

33 See: Persson et al., *supra* note 10.

34 See also: BICCHIERI, *supra* note 25.

### 3.1. Theoretical foundation

Corruption in public procurement undermines economic growth, public trust, and efficient governance. Different theories explain its causes, processes, and effects, including AT, IT, PCT, RCT, and CAT. Scholars recommend a dual approach that combines systemic and behavioral views. Systemic methods, such as those based on AT, focus on legal and regulatory frameworks to align the interests of agents with those of principals, thereby reducing corruption risks.<sup>35</sup> In contrast, CAT argues that corruption is a collective problem rooted in deep-seated social norms rather than just individual misconduct.<sup>36</sup> While systemic reforms, such as better procurement laws and transparency measures, are vital, they may not be sufficient without also addressing behavioral factors. Behavioral strategies emphasize ethical training, promoting integrity, and changing organizational cultures.<sup>37</sup> This section critically analyses AT and CAT to show how combining regulatory and behavioral strategies can effectively reduce corruption in public procurement.

#### 3.1.1. Agency Theory

Agency Theory<sup>38</sup> explains corruption as a result of misaligned incentives between principals (e.g., government) and agents (e.g., procurement officers) who act on their behalf.<sup>39</sup> Corruption occurs when agents exploit information asymmetry and weak enforcement mechanisms for personal gain.<sup>40</sup> In public procurement, decision-making authority and access to sensitive information create opportunities for corrupt activities, such as bribery and bid-rigging.<sup>41</sup> When the expected benefits of corruption outweigh the risks of

detection and punishment, agents are motivated to engage in unethical behavior.<sup>42</sup>

To reduce these risks, transparency measures such as open bidding, public contract disclosures, and independent audits are vital. However, AT has its limits. It assumes corruption is driven by rational self-interest, ignoring social, cultural, and institutional factors.<sup>43</sup> In many developing nations, corruption is deeply ingrained in political systems, where patronage networks significantly influence procurement decisions.<sup>44</sup> The theory also oversimplifies principal-agent relationships, overlooking broader stakeholder networks, including intermediaries, regulatory agencies, and private sector players.<sup>45</sup> Additionally, systemic flaws, political interference, and cultural norms can sustain corruption, undermining enforcement efforts.<sup>46</sup> In settings with widespread corruption, agents often see corrupt practices as standard business practices.<sup>47</sup> Therefore, while AT emphasizes misaligned incentives and information asymmetry, a wider approach incorporating CAT is needed to address collective corruption issues.<sup>48</sup>

#### 3.1.2. Collective Action Theory

The CAT, as explained by Ostrom<sup>49</sup> and Persson,<sup>50</sup> provides a distinctive perspective on understanding corruption in public procurement. It views corruption as a systemic problem caused not just by individual actions, but also by group behaviors and shared expectations. According to this theory, individuals may perceive corruption as a rational choice when they believe others are engaging in it and when acting with integrity seems pointless or counter-productive.<sup>51</sup> When corruption is widespread, people may engage in it not

35 See also: ROSE-ACKERMAN & PALIFKA, *supra* note 6.

36 See: Persson et al., *supra* note 10.

37 M.H. BAZERMAN & A.E. TENBRUNSEL, *BLIND SPOTS: WHY WE FAIL TO DO WHAT'S RIGHT AND WHAT TO DO ABOUT IT* (Princeton Univ. Press 2011). See: BICCHIERI, *supra* note 25.

38 K.M. Eisenhardt, *Agency Theory: An Assessment and Review*, 14 ACAD. MGMT. REV. 57, 57–74 (1989).

39 S.P. Shapiro, *Agency Theory*, 31 ANNU. REV. SOCIOL. 263, 263–84 (2005).

40 J.G. LAMBSDORFF, *THE INSTITUTIONAL ECONOMICS OF CORRUPTION AND REFORM: THEORY, EVIDENCE AND POLICY* (Cambridge Univ. Press 2007). See also: T. BESLEY, *PRINCIPLED AGENTS? THE POLITICAL ECONOMY OF GOOD GOVERNMENT* (Oxford Univ. Press 2006).

41 E. Auriol, *Corruption in Procurement and Public Purchase*, 24 INT'L J. INDUS. ORG. 867, 867–85 (2006).

42 A. Shleifer & R.W. Vishny, When the expected benefits of corruption outweigh the risks of detection and punishment, agents are motivated to engage in unethical behavior (1993).

43 See: Persson et al., *supra* note 10.

44 See: MUNGIU-PIPPIDI, *supra* note 9.

45 See: Marquette & Peiffer, *supra* note 14.

46 See: Arista & Fazekas, *supra* note 16.

47 See: ROSE-ACKERMAN & PALIFKA, *supra* note 6.

48 E. Ostrom, *Collective Action Theory*, in *THE OXFORD HANDBOOK OF COMPARATIVE POLITICS* 186–208 (C. Boix & S. Stokes eds., Oxford Univ. Press 2007).

49 E. OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (Cambridge Univ. Press 1990).

50 See: Persson et al., *supra* note 10.

51 E. Ostrom, *Analyzing Collective Action*, 41 AGRIC. ECON. 155, 155–66 (2010).

only for personal gain but also because they believe others will do the same, making integrity seem ineffective.<sup>52</sup> This leads to deeply rooted corrupt networks that make reform efforts more difficult. Public procurement involves numerous stakeholders, and shared norms can inadvertently reinforce corruption, thereby discouraging ethical behavior.<sup>53</sup> The CAT argues that anti-corruption efforts should focus on changing collective norms and expectations so that integrity and accountability become the standard.<sup>54</sup> Conventional top-down enforcement methods are insufficient; instead, promoting cooperation among public officials, private sector actors, and civil society organizations is essential.<sup>55</sup>

One key strategy in the CAT is forming coalitions and improving transparency through multi-stakeholder engagement.<sup>56</sup> The involvement of civil society organizations and the media in procurement oversight can increase scrutiny and accountability, thereby reducing the risks of corruption.<sup>57</sup> Developing collaborative governance practices ensures that corruption is punished while ethical behavior is rewarded.<sup>58</sup> Social norms and peer influence significantly shape procurement practices. The behavior of key players can set the standard for entire organizations, reinforcing either ethical or corrupt practices. Targeted interventions, such as public awareness campaigns, social norm shifts, and ethical leadership, can gradually change attitudes toward corruption, making it less socially acceptable and riskier.<sup>59</sup>

Despite its strengths, the CAT faces challenges, especially in highly corrupt environments where trust in collective anti-corruption efforts is low.<sup>60</sup> People may hesitate to act with integrity due to fear of retaliation or doubts about the effectiveness of collective action.<sup>61</sup> Moreover, the CAT assumes a level of social capital and cooperation that might not exist in highly hierarchical or authoritarian societies.<sup>62</sup> Still, the CAT offers a valuable framework for understanding

corruption as a systemic problem that needs coordinated action among stakeholders. Combining insights from both the Agency Theory and the CAT provides a comprehensive approach to combating corruption in public procurement, striking a balance between regulatory enforcement and behavioral and institutional reforms. Effective anti-corruption policies must strengthen oversight while creating an environment where integrity is possible and beneficial for all involved actors.

### 3.2. The Nature of corruption in public procurement

#### 3.2.1. Corruption

Corruption is commonly understood as the misuse of public power for personal gain. Still, its expressions and implications can vary widely across contexts and theoretical viewpoints. Rose-Ackerman<sup>63</sup> views corruption as a symptom of institutional dysfunction, where public officials and private actors prioritize personal gain over public interests. This definition highlights the structural issues within institutions that enable corrupt practices to flourish. Klitgaard<sup>64</sup> simplifies the phenomenon by suggesting that corruption arises when monopoly power, discretion, and accountability are out of balance, highlighting the need for a proper equilibrium in governance structures to prevent corruption. Transparency International<sup>65</sup> (TI) offers a more operational definition, characterizing corruption as the misuse of entrusted power for private gain, encompassing acts such as bribery, embezzlement, bid-fixing, and influence peddling. These foundational perspectives lay the groundwork for understanding corruption as a multifaceted issue that can manifest in various forms, shaped by the interplay of institutional, economic, and individual factors.

Building on these concepts, Heringer<sup>66</sup> defines

52 See: Marquette & Peiffer, *supra* note 14.

53 M. Baur & M. Grimes, *Indignation or Resignation: The Implications of Transparency for Societal Accountability*, 27 GOVERNANCE 291, 291–320 (2014), <https://doi.org/10.1111/gove.12033>.

54 B. ROTHSTEIN, THE QUALITY OF GOVERNMENT: CORRUPTION, SOCIAL TRUST, AND INEQUALITY IN INTERNATIONAL PERSPECTIVE (Univ. of Chi. Press 2011).

55 See: Marquette & Peiffer, *supra* note 14.

56 See: Ostrom, *supra* note 51.

57 See: Baur & Grimes, *supra* note 53.

58 See: ROTHSTEIN, *supra* note 54.

59 S. Williams & J. Tillipman, *An Overview of Corruption and Public Procurement*, in ROUTLEDGE HANDBOOK OF PUBLIC PROCUREMENT CORRUPTION 3–12 (2024).

60 See: Persson et al., *supra* note 10.

61 See: Marquette & Peiffer, *supra* note 14.

62 See: ROTHSTEIN, *supra* note 54.

63 See: ROSE-ACKERMAN & PALIFKA, *supra* note 6.

64 See: KLITGAARD, *supra* note 12.

65 Transparency International, *What Is Corruption?* (2023), <https://www.transparency.org/en/what-is-corruption>.

66 See: Heringer, *supra* note 17.

corruption as conduct that deviates from formal obligations for personal or familial gain, encompassing bribery, nepotism, and misappropriation. This perspective suggests that corruption breaches legal norms, contravenes ethical standards, and undermines trust, thereby undermining the integrity of public institutions. This understanding corresponds with the broader conceptualization of corruption as a moral, administrative, and financial irregularity that distorts the distribution of public resources.<sup>67</sup> Such a perspective is essential for framing corruption as a governance issue that necessitates comprehensive reforms at both institutional and behavioral levels. An earlier study by Rose-Ackerman<sup>68</sup> adds another dimension to the discussion by characterizing corruption as a behavior in which public officials prioritize personal gain over the public good, thus breaching the social contract. This perspective highlights the moral and ethical implications of corruption and the responsibility of public officials to serve the public interest. Furthermore, it suggests that corruption is not merely a transactional matter, but a fundamental violation of the relationship between the state and its citizens, which can erode public trust and hinder development.

Similarly, Wathne<sup>69</sup> argues that the complex nature of corrupt practices makes it difficult to capture all their forms and implications within a single definition. He defines corruption as the abuse of entrusted power for personal gain, acknowledging how corruption appears in various contexts. This understanding is essential for developing targeted anti-corruption strategies that consider cultural, institutional, and economic factors that promote corruption. For example, in many developing countries, corruption in public procurement is often linked to political patronage and clientelism, which complicates efforts to improve transparency and accountability.<sup>70</sup> Building on this discussion, the literature highlights specific challenges and risk factors related to

corruption in public procurement. Mahmood<sup>71</sup> describes how, in countries like Bangladesh, corruption worsens due to weak institutional structures, political interference, and insufficient oversight mechanisms. This situation is reflected in the research of Mahuwi & Israel,<sup>72</sup> who demonstrate that, within the pharmaceutical procurement system, the high value and complexity of goods, combined with weak regulatory enforcement, create opportunities for corrupt practices. These findings underscore the importance of robust governance and regulatory frameworks, combined with technological solutions like e-procurement, to enhance transparency and accountability.

### 3.2.3. Public procurement corruption

Public procurement corruption involves manipulating procurement processes for personal gain, including bribery, bid rigging, and collusion.<sup>73</sup> This kind of corruption distorts competition, inflates contract costs, and diverts resources from essential public projects.<sup>74</sup> In many developing countries, systemic governance failures, weak accountability mechanisms, and political interference worsen corruption in procurement.<sup>75</sup> Strengthening institutional oversight and increasing transparency are key to addressing these problems. Snider & Rendon<sup>76</sup> argue that procurement corruption reflects broader institutional weaknesses, necessitating comprehensive anti-corruption strategies that extend beyond punitive measures. Mungiu-Pippidi<sup>77</sup> highlights the failure of one-size-fits-all anti-corruption models and advocates for approaches tailored to specific contexts. Development partners must work with local stakeholders to create effective procurement frameworks that promote transparency and minimize corruption risks.<sup>78</sup>

Public procurement corruption has profound economic effects. Hafner et al.<sup>79</sup> estimate that procurement-related losses can reach 10-20% even in developed

<sup>67</sup> See: Ntayi et al., *supra* note 8.

<sup>68</sup> See: ROSE-ACKERMAN & PALIFKA, *supra* note 6.

<sup>69</sup> C. WATHNE, UNDERSTANDING CORRUPTION AND HOW TO CURB IT: A SYNTHESIS OF THE LATEST THINKING (Chr. Michelsen Inst. 2021), <https://www.u4.no/publications/understanding-corruption-and-how-to-curb-it.pdf>.

<sup>70</sup> WOODS & MANTZARIS, *supra* note 4.

<sup>71</sup> S.A.I. Mahmood, *Public Procurement and Corruption in Bangladesh: Confronting the Challenges and Opportunities*, 2 J. PUB. ADMIN. & POL'Y RSCH. 103 (2010).

<sup>72</sup> L. Mahuwi & B. Israel, *Promoting Transparency and Accountability Towards Anti-Corruption in Pharmaceutical Procurement System: Does E-Procurement Play a Significant Role?*, 21 MGMT. MATTERS, no. 1, at 20, 20-37 (2024).

<sup>73</sup> See: OECD, *supra* note 1. See also: Komakech, *supra* note 16.

<sup>74</sup> See: Arista & Fazekas, *supra* note 16.

<sup>75</sup> See: Mahmood, *supra* note 71.

<sup>76</sup> K.F. Snider & R.G. Rendon, *Public Procurement: Public Administration and Public Service Perspectives*, 18 J. PUB. AFFS. EDUC. 327, 327-48 (2012).

<sup>77</sup> See: MUNGIU-PIPPIDI, *supra* note 9.

<sup>78</sup> See: Basheka, *supra* note 5.

<sup>79</sup> M. HAFNER ET AL., THE COST OF NON-EUROPE IN ORGANISED CRIME AND CORRUPTION: ANNEX II—CORRUPTION (RAND 2016).

countries. The IMF (2016) emphasizes that corruption increases contract costs and lowers service quality, thereby harming economic growth. Hoekman & Sanfilippo<sup>80</sup> argue that corruption hinders fair competition, discouraging investment and innovation. Strengthening anti-corruption measures ensures that public funds support sustainable development goals. Cultural and socio-political factors influence procurement corruption.

In many African contexts, traditional norms and patronage systems influence perceptions of corruption.<sup>81</sup> Anti-corruption strategies must be culturally adaptable, leveraging community values to promote accountability. Ntayi et al.<sup>82</sup> identify moral schemas that influence corruption, such as ethical egoism and social identity, highlighting the need for behavioral interventions in conjunction with regulatory reforms.

The CAT<sup>83</sup> offers a framework for understanding corruption as a systemic issue. Corruption endures when individuals believe others are involved in similar practices, creating a self-sustaining cycle.<sup>84</sup> Breaking this cycle requires collaboration among multiple stakeholders, focusing on building trust and increasing institutional transparency rather than relying solely on punishments. Public procurement corruption calls for comprehensive strategies that combine systemic and behavioral approaches. Improving regulatory oversight, increasing transparency measures, and promoting collective action are crucial for creating resilient procurement systems. This study contributes to the discussion by presenting an integrated approach that addresses both the institutional and behavioral aspects of corruption, thereby supporting sustainable governance reforms.

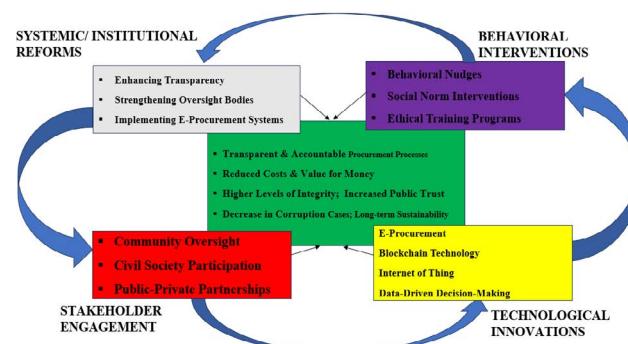
### 3.3. Anti-corruption to address the systemic and behavioral drivers of corruption in public procurement

The comprehensive framework illustrated in Figure 2 presents an integrated approach to combating corruption in public procurement. It utilizes four interconnected components: (a) systemic/institutional reforms, (b) behavioral interventions, (c) stakeholder engagement, and (d) technological innovations. This holistic approach addresses both structural and human aspects of corruption.

It recognizes that effective anti-corruption strategies must strengthen institutional integrity while also influencing individual and collective behaviors. Systemic reforms, such as improving transparency and implementing e-procurement systems, support behavioral interventions like nudges and social norm campaigns to promote ethical decision-making and reduce opportunities for corruption. Stakeholder engagement, including community oversight and public-private partnerships, ensures that diverse voices contribute to the accountability and governance of organizations. Meanwhile, technological innovations, such as blockchain and data-driven decision-making, enhance the efficiency and transparency of procurement processes. By combining these elements, the framework aims to create a strong anti-corruption ecosystem that reduces corruption and fosters sustainable improvements in the integrity and trust of public procurement.

#### 3.3.1. System / institutional reforms

Systemic and institutional reforms are essential for improving the integrity and efficiency of public procurement processes. These reforms aim to strengthen governance structures and regulatory frameworks to foster a more transparent, accountable, and resilient procurement system. The three key elements of systemic reforms are increasing transparency, empowering oversight bodies, and adopting e-procurement systems.



**Figure 2: An Integrated Systemic and Behavioral Framework for Mitigating Corruption in Public Procurement**

**Source:** Authors compilation (2025).

<sup>80</sup> See: Bernard Hoekman & Marco Sanfilippo.

<sup>81</sup> See: H.K. Sama, *Relevance of African Socio-Cultural Values in Curbing Corruption in Public Procurement*, 8 J. INT'L TRADE, LOGISTICS & L. 37, 37–47 (2022). See also: Ntayi et al., *supra* note 8.

<sup>82</sup> See also: Ntayi et al., *supra* note 8.

<sup>83</sup> See also: Persson et al., *supra* note 10.

<sup>84</sup> See also: Marquette & Peiffer, *supra* note 14.

### 3.3.1.1. Increased transparency

Enhancing transparency in public procurement involves making procurement processes open and accessible to the public, thereby reducing information asymmetries that can lead to corrupt practices. Transparency ensures that critical information such as tender announcements, bid evaluations, and contract awards are available to all stakeholders, including suppliers and the general public. According to Bauhr & Grimes,<sup>85</sup> transparent procurement processes reduce opportunities for corruption by enabling public scrutiny and facilitating competitive bidding, which is essential for achieving value for public spending. Komakech<sup>86</sup> notes that initiatives to enhance transparency, such as the public disclosure of procurement data and open contracting, are essential in fostering public trust and ensuring that procurement decisions serve the public interest.

### 3.3.1.2. Strengthened oversight bodies

Effective oversight is crucial for detecting and preventing corrupt practices in public procurement. Strengthening oversight bodies involves providing these institutions with the necessary authority, resources, and independence to rigorously monitor procurement activities. Robust oversight mechanisms help identify and address irregularities, ensuring that procurement procedures are followed and violations are promptly investigated and sanctioned. Basheka<sup>87</sup> emphasizes that independent and well-resourced oversight bodies are critical for enforcing compliance with procurement regulations and maintaining the integrity of procurement systems. These bodies play a pivotal role in creating accountability frameworks that deter corrupt behavior by holding public officials and contractors accountable for their actions.

### 3.3.1.3. Implementing e-procurement systems

The adoption of e-procurement systems represents a significant step forward, enhancing the efficiency and transparency of procurement processes. These systems automate various stages of the procurement cycle,

including tendering and contract management, thereby reducing human discretion and the potential for corrupt practices.<sup>88</sup> E-procurement systems generate digital records of procurement transactions, creating an audit trail that allows for better oversight and accountability. The systems also enhance access to procurement information for suppliers and the public, promoting a more competitive and transparent procurement environment. These systems can lead to shorter procurement cycle times, cost savings, and a lower risk of corruption, making it an essential tool for modernizing public procurement practices.<sup>89</sup> E-procurement in this regard, significantly reduces corruption levels in Indonesia's government procurement, especially in provinces with higher government spending or capital expenditure.<sup>90</sup> Implementing these systemic reforms in public procurement processes is crucial to building strong institutions capable of effectively preventing and addressing corruption, ultimately improving the overall governance and efficiency of public sector operations.

## 3.3.2. Behavioral approaches

Behavioral approaches to combating corruption in public procurement focus on understanding and influencing the psychological, social, and cultural factors that lead individuals to engage in corrupt actions. These approaches provide an alternative or complement to traditional systemic measures, such as legal and institutional reforms, by targeting the behavioral reasons behind corruption. These behavioral strategies, which aim to promote ethical decision-making and reduce opportunities for corruption in public procurement, include:

### 3.3.2.1. Behavioral nudges

Nudges refer to subtle adjustments in the choice architecture that guide people toward better decisions without limiting their freedom of choice.<sup>91</sup> Behavioral nudges have been intentionally used in public procurement to promote integrity and prevent corruption. These strategies utilize insights from behavioral science to influence procurement

<sup>85</sup> See: Bauhr & Grimes, *supra* note 53.

<sup>86</sup> See: Komakech, *supra* note 16.

<sup>87</sup> See: Basheka, *supra* note 5.

<sup>88</sup> See: Komakech, *supra* note 16.

<sup>89</sup> A. Davila, M. Gupta & R. Palmer, *Moving Procurement Systems to the Internet: The Adoption and Use of E-Procurement Technology Models*, 21 EUR. MGMT. J. 11, 11–23 (2003).

<sup>90</sup> A.C. Puspita & Y.M.L. Gultom, *The Effect of E-Procurement Policy on Corruption in Government Procurement: Evidence from Indonesia*, 47 INT'L J. PUB. ADMIN. 117, 117–29 (2024), <https://doi.org/10.1080/01900692.2022.2093900>.

<sup>91</sup> R.H. THALER & C.R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* (Yale Univ. Press 2008).

officials' decisions gently, supporting ethical behavior without resorting to coercion. For example, initiatives such as anti-corruption posters, text message reminders, and brief pre-work quizzes have been introduced to reinforce ethical standards and increase awareness about the impacts of corruption.<sup>92</sup>

Ariely<sup>93</sup> further observed that nudges, such as reminders of legal and ethical responsibilities or public acknowledgments of transparency, can significantly influence decision-making by subtly guiding individuals toward honest behavior. These interventions are especially useful in creating an environment that promotes integrity, particularly in situations where traditional enforcement methods, such as detection and punishment, are less effective due to systemic corruption. A field experiment in South Africa showed the power of social norms nudges, revealing that posters with positive messages about declining bribery rates reduced officials' willingness to engage in corrupt acts.<sup>94</sup> This suggests that when people believe corruption is not the norm, they are less likely to participate in unethical conduct, demonstrating the potential of nudges to change attitudes and behaviors within public procurement systems.

### 3.3.2.2. Ethics training programs

Training procurement officials in ethics is a crucial part of behavioral strategies. These training programs aim to increase awareness of ethical challenges, enhance moral reasoning, and develop the skills necessary for ethical decision-making in procurement processes. Research shows that regular ethics training can raise procurement officials' awareness of corrupt practices and empower them to resist unethical influences.<sup>95</sup> However, the success of these programs depends on their frequency, content, and the support from the broader organizational culture. Furthermore, fostering a culture of accountability, where individuals feel personally responsible for their actions and the results of procurement processes, can further reduce corrupt practices.

### 3.3.2.3. Social norms

Behavioral approaches also use social norms to combat corruption. Interventions focused on social norms, such as campaigns that highlight the prevalence of ethical behavior, can potentially change perceptions about what is considered normal or acceptable in procurement settings.<sup>96</sup> These methods are based on the idea that people are influenced not only by formal rules but also by the actions of their peers and the social expectations within their organizations. For example, sharing stories that highlight the detrimental effects of corruption on society and showcasing examples of integrity in public service can help shift social norms and reduce tolerance for corrupt practices.<sup>97</sup> Research by Bicchieri & Xiao and Williams & Tillipman indicates that when people perceive disapproval of corruption from their peers and community members, they are more likely to act ethically.<sup>98</sup>

### 3.3.3. Stakeholder engagement and collective action

According to the CAT, corruption in public procurement persists when individuals believe others are also engaging in corrupt practices, making personal integrity seem futile.<sup>99</sup> To address this problem, the framework emphasizes the importance of stakeholder engagement and collective action in promoting transparency and accountability. Key elements of this approach include:

#### 3.3.3.1. Community oversight

Community oversight involves the active participation of local community members, including citizens, local leaders, and grassroots organizations, in monitoring and evaluating public procurement processes. It aims to empower communities to hold public officials accountable through public hearings, citizen report cards, and participatory budgeting. The goal is to create a system of checks and balances that reflects the concerns and priorities of the local population, ensuring the effective and fair use of public

92 See: Williams & Tillipman, *supra* note 59.

93 See: Ariely, *supra* note 15.

94 See also: Williams & Tillipman, *supra* note 59.

95 See: Ntayi et al., *supra* note 8.

96 See: Komakech, Ombati & Kikwatha, *supra* note 4.

97 OECD, BEHAVIOURAL INSIGHTS FOR PUBLIC INTEGRITY: HARNESSING THE HUMAN FACTOR TO COUNTER CORRUPTION (OECD Publ'g 2018), <https://doi.org/10.1787/9789264297066-en>.

98 See also: BICCHIERI, *supra* note 25. See also: Williams & Tillipman, *supra* note 59.

99 See: Persson et al., *supra* note 10.

resources.<sup>100</sup> Community oversight is primarily grassroots, emphasizing the direct involvement of ordinary citizens in oversight efforts. These strategies aim to establish trust, alter social norms, and cultivate an environment where integrity is collectively valued and corruption is less likely to flourish.

### 3.3.3.2. Civil society participation

Civil Society Organizations (CSOs), media outlets, advocacy groups, and professional associations play a vital role in promoting transparency, accountability, and ethical standards in public procurement. These organizations often have specialized knowledge and resources that enable them to engage in policy advocacy, public education, and independent oversight of procurement processes. They utilize tools such as public hearings, citizen report cards, and the publication of procurement data in accessible formats to empower communities to hold public officials accountable and reduce information asymmetry that can lead to corruption. Basheka<sup>101</sup> notes that these groups can influence procurement policy by advocating for reforms, conducting independent audits, and leveraging media platforms to raise awareness about corruption issues.

### 3.3.3.3. Public-private partnerships

Collaboration among the public sector, private companies, and international organizations can strengthen the integrity of procurement processes by aligning interests and establishing shared accountability.<sup>102</sup> These partnerships may include joint initiatives to promote best practices, such as anti-corruption pacts or integrity agreements, in which public and private sector participants commit to upholding high ethical standards.

## 3.3.4. Technological innovations and data analytics

Technology and data analytics play a crucial role in enhancing transparency and efficiency in public procurement. Automating tasks and offering real-time data access help reduce corruption risks and enhance oversight.

### 3.3.4.1. E-procurement

<sup>100</sup> See: Mahuwi & Israel, *supra* note 72.

<sup>101</sup> See: Basheka, *supra* note 5.

<sup>102</sup> S. Lee, *Managing Accountability Demands in Collaborative Governance*, 32 J. PUB. ADMIN. RSCH. & THEORY 641, 641–48 (2022).

<sup>103</sup> See: Komakech, *supra* note 16.

<sup>104</sup> See: Davila et al., *supra* note 89.

<sup>105</sup> See: FAZEKAS & BLUM, *supra* note 11.

<sup>106</sup> N. Kshetri, *Can Blockchain Strengthen the Internet of Things?*, 19 IT PROF'L 68, 68–72 (2017).

The adoption of e-procurement systems streamlines procurement processes, reduces human discretion, and creates a transparent audit trail that strengthens accountability. This ultimately encourages fair competition and the efficient use of public resources.<sup>103</sup> This approach helps minimize the risk of favoritism and ensures that procurement decisions are based on merit rather than personal influence.

### 3.3.4.2. Blockchain technology

Blockchain technology provides immutable transaction records, preventing tampering and ensuring traceability. This discourages corrupt practices and increases stakeholders' trust and confidence in the procurement system.<sup>104</sup> By making every transaction transparent and verifiable, it boosts the credibility of public procurement activities.

### 3.3.4.3. Data-driven decision making

Utilizing big data analytics to monitor procurement activities enables the identification of patterns of corruption, such as abnormal bidding behavior or repeated contract awards to the same vendors. It provides data-driven insights that support proactive risk management and policy changes for better governance.<sup>105</sup> This method enables real-time monitoring and early detection of potential red flags, thereby enhancing the integrity of procurement processes.

### 3.3.4.4. Internet of Things (IoT)

IoT can improve monitoring in public procurement by enabling real-time tracking of goods and services. This technological advancement boosts compliance and operational efficiency by making sure procurement activities meet contractual obligations and quality standards.<sup>106</sup> Such transparency decreases opportunities for fraud and manipulation and promotes greater accountability throughout the procurement process. The comprehensive framework for fighting corruption in public procurement aims to achieve key goals that strengthen the integrity, efficiency, and accountability of procurement practices.

Firstly, it aims to boost transparency and accountability

by implementing systemic reforms, such as e-procurement systems and strong oversight mechanisms, which reduce information gaps and opportunities for corruption while ensuring prompt detection and redress of violations. Secondly, the framework improves efficiency and value for money in public spending by using advanced technologies like Blockchain and data analytics to streamline processes, reduce human discretion, and enhance the quality of goods and services. Thirdly, the framework aims to enhance institutional integrity and public trust through behavioral interventions, including ethical training and social norm campaigns, thereby fostering a culture of integrity and accountability within procurement agencies. Fourthly, by addressing both structural and behavioral factors, the framework significantly reduces corruption incidents, resulting in cleaner procurement processes and better outcomes for public sector projects. Finally, it encourages sustainable anti-corruption practices by embedding systemic and behavioral approaches into the daily operations of procurement entities, ensuring that anti-corruption efforts are sustained over time and become an integral part of governance. These results collectively lead to more effective and transparent public procurement systems that support good governance and public confidence.

#### 4. IMPLICATIONS OF THE STUDY

The results of this study have important implications for advancing the field of public procurement and enhancing anti-corruption efforts. By adopting an integrated approach that considers systemic and behavioral factors, we deepen our theoretical understanding of procurement corruption and provide practical guidance for policymakers and practitioners.

##### 4.1. Implications for research

Firstly, this research enhances the theoretical understanding of corruption in public procurement by demonstrating the value of combining AT and CAT. The findings highlight the importance of examining the structural and regulatory elements of procurement corruption, as well as the behavioral and social factors that sustain these practices. The study emphasizes the importance of scholars re-evaluating corruption research by considering both systemic and human aspects within a unified analytical framework, thereby providing a more comprehensive approach to analyzing corruption that transcends the limitations of

applying a single theory.

Secondly, the research emphasizes the importance of cross-disciplinary research in understanding the complexities of corruption. It encourages future studies to incorporate insights from behavioral economics, psychology, and sociology to explain better the factors that influence procurement behaviors. This approach can lead to stronger theoretical models that account for the diverse motivations and social contexts influencing corrupt practices. The study also recommends that future theoretical work examine how formal regulatory frameworks interact with informal governance structures, since this relationship is vital for understanding how corruption persists or is reduced in various environments.

Ultimately, the research highlights the importance of evaluating the effectiveness of integrated anti-corruption frameworks across diverse institutional and cultural contexts. Comparative studies that analyze how systemic and behavioral interventions are implemented and their outcomes across different regions can help refine current theories and develop new conceptual frameworks. This research would improve the general applicability of anti-corruption strategies and shed light on the conditions that make specific interventions more successful.

##### 4.2. Implications for practice

This study provides a comprehensive framework for practitioners to design and implement more effective anti-corruption strategies in public procurement. Emphasizing systemic reforms, such as enhancing transparency and strengthening oversight bodies, provides policymakers with practical insights to develop robust regulatory frameworks and accountability mechanisms. Additionally, incorporating behavioral interventions, such as ethical training and social norm campaigns, can help build a culture of integrity within procurement institutions, reducing the dependence on punitive measures alone. The framework's focus on stakeholder engagement highlights the importance of involving community members, civil society organizations, and private sector partners in monitoring and oversight activities to ensure transparent and accountable procurement processes. Furthermore, adopting technological innovations like e-procurement systems and blockchain technology provides practical tools for reducing human discretion, automating compliance checks, and enabling real-time monitoring, thereby increasing overall efficiency and

transparency in public procurement operations.

## 5. CONCLUSION

The study provides a comprehensive examination of corruption in public procurement by advancing an integrated framework that combines systemic and behavioral mitigation strategies. The findings demonstrate that conventional anti-corruption approaches, which rely predominantly on legal and regulatory controls, are insufficient to address the complex, socially embedded nature of procurement corruption. Instead, sustainable reform requires simultaneous attention to institutional structures, governance incentives and human behavior. By extending the agency-based perspective through the incorporation of Collective Action Theory, this research deepens theoretical understanding of how collective behaviors, social norms and shared expectations sustain corrupt practices. The proposed framework offers a coherent analytical and practical guide for policymakers and procurement authorities to design context-sensitive anti-corruption interventions that align institutional reforms with behavioral change mechanisms. Ultimately, the study contributes to strengthening institutional integrity, enhancing accountability and rebuilding public trust in public procurement systems across diverse regional and governance contexts.

Moreover, the study makes a significant contribution to public administration and supply chain management by offering practical strategies for policymakers and practitioners. By emphasizing the role of technological innovations such as e-procurement and blockchain technology, the study provides tangible solutions for enhancing transparency and accountability in procurement processes. Additionally, it highlights the importance of stakeholder engagement through community oversight and public-private partnerships, which are crucial for cultivating a culture of integrity and trust within public procurement systems. This comprehensive approach aims to combat corruption and build a culture of integrity and trust, promoting long-term sustainability and good governance. As a result, the research provides valuable guidance for developing and implementing effective anti-corruption strategies that can adapt to diverse socio-political environments, ultimately promoting positive systemic change and enhancing public sector governance.

### 5.1. Limitations of the study

The study also acknowledges some limitations. For example, behavioral evidence has several limitations. Many interventions, such as ethics training, social norms, and

nudges, are mainly supported by pilot-scale or context-specific experiments, making it unclear whether behavioral interventions are effective in different settings. This is because social relationships between bribe-givers and bribe-takers, and their impact on corruption, are often influenced by local cultural norms, power dynamics, and societal expectations regarding how to treat superiors and seek reciprocation. Furthermore, the empirical evidence on the sustainability of behavioral change among public procurement officials is limited. As a result, the broader applicability of behavioral insights is restricted to contexts where cultural attitudes towards corruption differ from those in the locations where interventions have been tested. Another limitation is that the study included only publications in English, which may introduce language bias. It is also important to note that regional differences in academic output mean some contexts, especially fragile ones, are underrepresented in the review.

### 5.2. Areas for further study

Based on the findings, future research should investigate how the integrated framework can be applied across various procurement settings, examining how systemic and behavioral interventions can be tailored to different institutional and cultural contexts. There is a need for long-term studies that evaluate the lasting effects of these interventions on procurement integrity and public trust. Additionally, research could explore the role of emerging technologies, such as Artificial Intelligence, Blockchain, the Internet of Things, and Big Data Analytics, in improving the detection and prevention of corrupt practices in public procurement. Further studies should also consider the impact of global political and economic changes, such as populism and protectionism, on public procurement corruption and the success of anti-corruption strategies.

### AI Use Disclosure

The authors used artificial intelligence (AI) tools for grammar and spelling checks and to assist with APA referencing styles. The AI tools did not contribute to the research design, analysis, interpretation, or intellectual content of the manuscript. The authors retain full responsibility for the content of the work.

### Disclosure of interest

The authors have no competing interests to declare.