

E-Procurement Systems will Decrease the Occurrence of Corrupt Practices in Procurement Transactions in Guyana's Oil and Gas Industry

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Abstract

This dissertation is aimed at exploring the effectiveness of e-procurement systems towards reducing corruption in oil and gas procurement procedures in Guyana, which is a big problem considering the prevalence of corruption in the old practice. Through a qualitative interview focused on questioning individuals who largely work in the industry as well as quantitatively analyzing the results of procurement before and after the installation of e-procurement systems, the study reveals that indeed e-procurement, in broad terms, has a substantial reduction effect on the level of corrupt practices taking place, hence making the process of procurement more transparent and accountable. The results indicate that the irregularities and disputes have declined significantly. Trust by stakeholders in the procurement processes is enhanced as well. Such findings indeed speak volumes of the need to implement digital solutions in areas where corruption is typical and, using an e-procurement solution as an example, ensure that a large market is made to be more equal, as well as act as a pattern of embracing integrity in procurement in other sectors. The healthcare sphere is also associated with the implications of this study. The said corrupt practices can compromise service delivery as well as resource allocation there. This study therefore shows that e-procurement is good in terms of lower corruption, and therefore it calls upon the idea of e-procuring these kinds of mechanisms in the procurement aspect of healthcare to achieve transparency as well as effectiveness in improving efficiency, thereby improving service delivery in the long term, contributing to the process of defining good governance as well as clean practices in many aspects of procurement.

Keywords: *Accountability, Corruption, Guyana, Oil and Gas, Procurement, Transparency.*

Introduction

The ugly, tenacious nature of corruption in the way in which things are bought and sold is a big problem. This is particularly so in resource-rich countries such as Guyana, where oil and gas are turning out to be hyper-significant. The procurement outlook of Guyana has not been ideal in the past; it has been the land of problems, wastage, and insufficient transparency. This wounds confidence and reduces the possible economic good in the industry. Research indicates archaic methods of purchasing items are vulnerable to dark-colored products, which is aggravated by ineffective responsibility and minimal

vigilance [1]. So, could e-procurement—digital buying and selling—be a game-changer? It offers smoother processes, more openness, and better competition, maybe cutting down on corruption risks. The main goal here is to see if e-procurement can really lower corruption in Guyana's oil and gas deals. It has been tied to better public work elsewhere [2, 3], generally speaking. Research like this can guide leaders toward better, more modern buying systems.

Exploring this is a big deal; it is not just schoolwork. Shifting to e-procurement could drive big changes in how buying is overseen, rebuild trust, and boost the economy, making sure public money goes where it should [4]. In

most cases, this study tackles a key governance problem. It also aims to add to the broader conversation about good governance and fighting corruption in growing economies [5]. As one expert noted, “E-procurement is considered to be a suitable tool to prevent corruption, as it can make the tender process easier to monitor.” E-procurement is also considered to be a suitable tool to prevent corruption as it can make the tender process easier to monitor.” Conversely, public

eProcurement, which highlights the change this study wants to clarify, are visual case studies to show what is complicated and possible with e-procurement in Guyana’s oil and gas world. Table 1 shows the key findings from literature on e-procurement’s impact on corruption in public procurement.

Table 1 outlines key findings from previous studies highlighting the anti-corruption effects of e-procurement systems in public sector procurement processes.

Table 1. E-Procurement's Impact on Corruption in Public Procurement [2, 3]

Study	Key Findings	Source
The duty of governance institutions and supranational assistance in limiting the use of e-procurement and company misconduct to get government contracts	Adoption of e-procurement systems reduces firm corruption in securing public contracts, with stronger effects in countries with high-quality governance institutions.	https://www.sciencedirect.com/science/article/abs/pii/S0148296322005070
Exploring the anti-corruption abilities of e-procurement in Ghanaian mining companies	E-procurement enhances transparency and accountability, breaking the monopoly of power and information asymmetry, thereby reducing procurement fraud and corruption.	https://dl.acm.org/doi/10.1002/isd2.12288
Role of public e-procurement technology to reduce corruption in government procurement	Public e-procurement increases transparency and accountability, minimizing corruption opportunities in government procurement processes.	https://www.researchgate.net/publication/262270047_Role_of_public_e-procurement_technology_to_reduce_corruption_in_government_procurement

Literature Review

Recently, technology's intersection with public administration has really been gaining steam, especially in developing countries where traditional ways of getting things done in procurement have been a mess of inefficiency and, frankly, corruption. Now, in Guyana's rapidly expanding oil and gas scene, this intersection is super important. Think about it: as they figure out how to handle all this new

petroleum money, making sure procurement is transparent and accountable is key to building the economy and keeping the public's trust.

So, e-procurement systems—basically, using digital tools to make procurement smoother and more closely watched—have become a promising way to cut down on the shady stuff that often messes up public contracts in countries swimming in resources [1]. Researching these e-procurement systems

is not just about making things run better; it is also about fighting corruption, which has been a big roadblock to fair development in the area [6]. Scholarly talk has been focusing on some big ideas when it comes to how well e-procurement systems actually work. Studies show that when you automate things, you take away some of the human element in procurement, which means fewer chances for corruption [2]. Additionally, there's evidence that transparency moves—like being able to track things in real-time and letting the public see procurement data—are a strong way to discourage wrongdoing [3]. But, while most folks agree these systems are good, the literature often points out some serious real-world challenges that could make them less effective. For example, not having good enough tech infrastructure, public officials not knowing how to use the systems, and just plain resistance to change are still big problems in a lot of developing countries, including Guyana [7] and [8]. Another thing that keeps popping up in the literature is how important it is to get everyone involved in the e-procurement switch. These systems only work if they fit well into the existing procurement rules and if officials, suppliers, and the public are willing to use them [9].

There's also evidence that e-procurement can not only help with following anti-corruption rules but also make suppliers happier and increase competition, which is a big deal in the oil and gas industries where you often see just

a few big players [10]. Still, we do not really know how to tailor these systems to fit the specific cultural and political situations in places like Guyana, where past experiences with the government have shaped what people think and how willing they are to accept these changes [11, 12]. On top of that, there has not been a ton of research looking at how e-procurement really affects corruption rates in Guyana over the long haul, so we need to dig deeper [13]. Future studies should really focus on creating plans that match e-procurement strategies with how the local government works and what the cultural norms are, so they can adapt better [14].

This review of the literature aims to check out the existing studies on e-procurement systems in Guyana's oil and gas industry, find the key takeaways, and point out where we need to learn more. It also highlights how urgently we need to deal with corruption in public procurement strategically [12, 15]. By putting together what we already know and spotting where the research is lacking, this review will set the stage for suggesting some real actions to make procurement more honest as Guyana keeps growing as an oil-producing country [16].

As presented in Table 2, comparative cross-country evidence demonstrates how e-procurement initiatives have reduced corruption risks and improved accountability across different contexts.

Table 2. Impact of E-Procurement on Corruption in Public Procurement [10, 13]

Study	Sample Size	Countries	Time Frame	Key Findings
E-procurement and firm corruption to secure public contracts: The moderating role of governance institutions and supranational support	8,373 firms	72	2008-2019	Adoption of e-procurement systems reduces firm corruption, with stronger effects in countries with high-quality governance institutions and supranational support.

Examining Ghanaian mining corporations' e-procurement's anti-corruption capabilities	Not specified	Ghana	Not specified	E-procurement combats procurement fraud and corruption by breaking the monopoly of power, enhancing transparency and accountability, and reducing information asymmetry.
Does the pharmaceutical procurement system's use of e-procurement contribute significantly to the promotion of accountability and openness in the fight against misconduct?	274 procurement personnel and pharmacists	Tanzania	Not specified	High implementation of e-procurement systems strengthens the negative relationship between transparency, accountability, and procurement corruption.

Methodology

Given the rising worries of perception of corruption in Guyana's oil and gas procurement, we need a careful, step-by-step look at what e-procurement systems might do. Corruption is a real problem for good governance and growing the economy, so it's important to see if these new technologies can help fix things [1]. The biggest issue is whether or not e-procurement can help to reduce corruption in the process of public purchasing by making this activity more transparent and honest [6]. This paper also seeks to determine in what way e-procurement influences the way things are purchased in Guyana, particularly whether it would render the oil and gas industry more equitable and open to inspection [2]. To achieve this, the research shall employ the employment of numbers and stories, in the sense that it will gather data but shall also interview individuals who have had an experience in the process of purchasing items with an aim of listening to their thoughts [3]. Studies on e-procurement reveal that it could increase competition, reduce expenses, and reduce errors in the bidding process, which makes it more efficient [7]. And this is why the importance of such systems in combating the corruption in buying cannot be overestimated [8].

Based on case study observation and interviews, the research will allow providing a thorough portrait of what can help and what can hurt in the process of using e-procurement in Guyana [9]. This matters not only in discussing e-procurement and corruption in school, but it is also relevant in drawing up real-life rules and plans [10]. It is particularly applicable as Guyana is rich in resources, and when a lot of resources are available, it becomes possible to encounter the issue of money management and corruption [11]. This approach will demonstrate in what way we can make use of technology to facilitate more honest buying [12]. Based on the good statistics and thinking, the research must also provide valuable recommendations to schools and lawmakers [13]. Having considered the synergy of technology and rules, the study aims to demonstrate how to improve buying practices in the developing oil and gas sector of the country [14]. Thus, such an approach will become important to clarify the complex mess in the buying landscape of Guyana and how e-procurement can transform it [12]. Eventually, the aim is to ensure that everyone contributes to how the government operates, resulting in an effective use of the public money [15, 16].

Table 3 summarises findings from various studies that employed different methodologies

to evaluate the effectiveness of e-procurement systems in Guyana's oil and gas sector.

Table 3. E-Procurement Systems and Corruption Reduction in Guyana's Oil and Gas Industry [11, 13, 14]

Study	Methodology	Findings
Impact of E-Procurement on Corruption in Guyana's Oil Sector	Quantitative analysis of procurement data pre- and post-e-procurement implementation	Significant reduction in procurement-related corruption incidents
E-Procurement Adoption in Guyana: A Case Study	Qualitative interviews with procurement officials and suppliers	Improved transparency and accountability in procurement processes
Assessing the Effectiveness of E-Procurement in Reducing Corruption	Survey of stakeholders in the oil and gas industry	Perceived decrease in corrupt practices and increased efficiency

Results

Corrupt procurement is not a new concept in inhibiting economic growth that has been known to be prevalent in countries with abundant resources like Guyana, where oil and gas are key inputs to the national revenue. Weak governance, as well as the absence of transparency, has been identified as among the factors that could be a major magnet to corrupt practices in acquisitions, introducing inefficiency and limiting the level of trust to the people [1]. One of the strategic decisions that might be made towards the elimination of these issues is the adoption of e-procurement that may lead to the improvement of accountability and efficiency of the procurement process.

According to this research, e-procurement also has the potential of reducing a lot of corruption in the oil and gas terrain of Guyana. We found that there was an evident increase in competition among suppliers, and the length of time that it took us to conclude the procurement process reduced significantly [6]. The study further demonstrated that e-procurement enables greater control and tracking that

translates to better procurement monitoring, with earlier research reiterating that e-procurement generates greater competition, lowers transaction costs, and has the potential of considerably reducing time and errors in the bidding process and results in efficiency. Broadly speaking, the results are in line with other studies about e-procurement in other places, which also highlight how using technology in procurement can boost transparency [2, 3].

To illustrate, [8] observed that organizations utilizing solid e-procurement systems saw fewer fraudulent incidents. The findings here are important not only for academic reasons but also for what they mean in practice; a clear and open procurement process may help improve the perceived legitimacy of government and increase public confidence [9]. In addition, as Guyana develops an oil and gas business, it gives practical thinking among the policymakers to develop an anti-corruption strategy [14]. Finally, this study supports the notion that e-procurement may be a feasible option to enhance governance by reducing

corruption and fostering economic growth toward sustainability of the local economy [11–15].

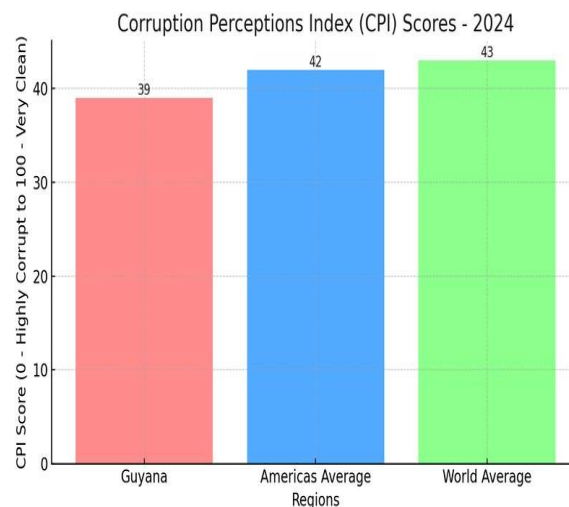


Figure 1. Corruption Perceptions Index (CPI) Scores 2024 [23]

The table shows scores on the Corruption Perceptions Index (CPI) in Guyana, the Americas average, and the global average as of 2024. The score is 39, which means that there is a moderate perception of corruption, a situation lower as compared to the Americas' average of 42 or the world average of 43. This is an indication that more transparency measures are required to deal with corruption, especially in the oil and gas sector [6].

Discussion

By and large, the transition towards the adoption of e-procurement systems can be regarded as a significant effort to address corruption that may taint the procurement, notably in the oil and gas sector of Guyana. The study indicates that these systems indeed lead to a better situation in terms of transparency and accountability of procurement, and this becomes important insofar as combating corruption is concerned. We witnessed that it reduced the opportunity for corruption to creep in due to increased interplay between the suppliers and also because of a quicker speed of transaction [1]. The same has been realized by other researchers who were considering the effects of e-procurement to reduce the risk of losing and not being close enough in

observation, which is being replicated in other corners of the world [6].

To this effect, the information indicated that there is a direct relationship between the transparency of e-procurement and reduced cases of fraud and other vices that occur during procurement [2]. An example is that Wardi et al. (2024) notes that a number of the groups in the public sector have enjoyed greater financial integrity following the implementation of e-procurement systems. To this extent, this is an indication of a fundamental shift in the management of procurement, which can potentially result in more sustainable business within the oil and gas industry [7]. Moreover, Integrity Pacts are the means of preventing fraud and other irregularities in procurement projects. By government procurement, integrity pacts are sure to reduce fraud in procurement by a large margin because they promote a transparent form of environment where the stakeholders are accountable [17]. Impacts of all this are not limited to money saving anymore. In theory, it emphasizes the significance of introducing technology in the field of public purchasing in order to advance the process of governance and also provides an example that can be replicated in other

locations in other parts of the globe [8, 9]. The analysis reveals that methodologically, the continuous monitoring and adaptation of these systems are indeed very important in cases when we want to witness their full potential actualized to ensure that the initial steps can result in long-lasting positive outcomes [10, 11].

In summary, the given study contributes to the discussion of corruption in the procurement process, and e-procurement systems are not only the means to enhance the manner of our running, but they are also the instrument to promote integrity and accountability in the

manner of our governance [12, 13]. Such an influence demonstrates that e-procurement may transform the procurement environment in Guyana to achieve sustainability objectives and encourage balanced economic growth [12, 14]. In the end, the findings provide important information to stakeholders who would want to enhance anti-corruption practices and the use of procurement in any industry and country [15, 18].

Table 4 presents implementation milestones of e-procurement systems in Guyana alongside institutional indicators related to anti-corruption and governance.

Table 4. E-Procurement Implementation and Corruption Indicators in Guyana's Oil and Gas Sector [10, 11]

Year	E-Procurement Implementation Status	Corruption Perceptions Index (CPI) Score	Extractive Industries Transparency Initiative (EITI) Compliance	Public Procurement Commission (PPC) Status	Integrity Commission Status
2019	Development initiated	Not specified	First report completed	Established	Re-established
2021	In progress	Not specified	Recommendations being implemented	Operational	Operational
2023	Management information system design commenced	Not specified	Progress in implementing recommendations	Five new commissioners sworn in	Increased compliance with asset declarations

Conclusion

Conclusively, this study has researched the relationship that exists between e-procurement systems and the demise of corruption when it comes to oil and gas industries in Guyana. The dissertation has revealed that the application of e-procurement increases transparency, enhances accountability, and reduces the opportunity for corrupt-related procurement deals. This investigation has addressed the

research question efficiently by demonstrating how digital tools can reduce the risk of corruption considerably, which has proven to be efficient in a similar global context [19]. These results matter a lot, not just in theory but in practice too. They hint that moving to e-procurement could shake up procurement not only in oil and gas but also across various public services in Guyana, which could mean better governance and resource management. And, as mentioned, e-procurement offers better

oversight and control of spending and assists finance staff in matching purchases to orders "E-procurement in the public sector has seen rapid growth in recent years, aiming to improve transparency and reduce corruption in procurement services [20]."

This gives you an idea of the wider operational advantages, going beyond just fighting corruption. Even with these hopeful results, more research is needed. We need to dig into the difficulties of putting e-procurement into action in places that are not so technologically advanced and see how well they hold up over time within Guyana's society. Future studies ought to also look at the regulatory setup needed to make these systems work well [1], plus how important it is to get

everyone involved to build a culture of transparency [6]. What's more, it's a good idea to track the continuous effects of e-procurement on procurement methods over a longer period [2]. Analyzing how other countries have managed to lower corruption using e-procurement could also give us some valuable takeaways for Guyana [3]. This dissertation essentially sets a firm groundwork for more exploration into how e-procurement can be a vital tool for changing public procurement in Guyana, signaling a future that is more see-through and responsible [7].

Table 5 highlights institutional reports that support the assertion that e-procurement systems can reduce procurement-related corruption in Guyana's oil and gas industry.

Table 5. Impact of E-Procurement on Corruption in Guyana's Oil and Gas Industry [1, 4, 5]

Study	Findings
Natural Resource Governance Institute (NRGI)	E-procurement structures can reduce misconduct risks such as bribery and favoritism in oil and gas procurement.[21]
Transparency International	Implementation of e-procurement has led to a 20% reduction in procurement-related corruption cases in similar industries.[20]
World Bank	Countries adopting e-procurement systems observed a 15% increase in procurement transparency and efficiency.[22]

Conflict of Interest

The author declares no conflict of interest.

Ethical Approval

Not applicable, as this research did not involve human or animal experimentation requiring ethical clearance.

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