

The Role of E-Government, Political Will & Accountability in Reducing Corruption in Ghana

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Abstract

The global surge in technological advancements and the consequential ubiquity of the internet have revolutionized governance and business operations. This transformation, accelerated by the COVID-19 pandemic, has propelled governments to leverage electronic means for enhanced service delivery. In Ghana, the potential of e-government in reducing corruption has been widely discussed. Corruption, a pervasive global issue, particularly hampers the progress of developing nations like Ghana, eroding transparency, accountability, and good governance, thereby fostering economic inequality and inefficient resource utilization. This research delves into the intricate relationship between e-government, political will, and accountability—integral facets of Ghana's multifaceted strategy to reduce corruption. With a focus on the Ghanaian context, the study aims to bridge existing research gaps by investigating how education, gender, and age moderate the relationship between e-government and corruption, as well as the mediating role of transparency in this connection. Five central research questions guide the study, exploring relationships and potential moderating and mediating factors. Data, sourced from 323 Ghanaian citizens and six interviewees, underwent comprehensive quantitative and qualitative analyses. The findings reveal negative correlations between e-government, political will, and accountability with corruption, indicating their potential in corruption reduction. While quantitative analysis did not establish education, gender, and age as significant moderators, qualitative insights suggested nuanced influences on the e-government-corruption relationship. Significantly, transparency emerged as a crucial mediator, underscoring its pivotal role in the interplay between e-government and corruption in Ghana. This study underscores the imperative of comprehending these dynamics to effectively reduce corruption in Ghana, offering valuable insights for policymakers, researchers, and practitioners in the realms of governance, technology, and anti-corruption initiatives.

Introduction

The global evolution of technology, particularly the internet, has transformed the operations of governments and businesses, enhancing service delivery (Sanchez-Torres & Miles, 2017). The COVID-19 pandemic has accelerated digital transformation, creating an environment conducive to e-government. In Ghana, the adoption of information and communication technology (ICT) has been pivotal in improving public service, transparency, and citizen engagement. Initiatives like the Ghana Information Network for Sharing of Knowledge (GINKS) and the National Information and Communication Technology (ICT) for Accelerated Development Policy signify Ghana's commitment to e-government (Tchao et al., 2017).

Corruption poses a significant challenge to Ghana's development, prompting the government's anti-corruption efforts, including e-government initiatives (Abdulai & Zu, 2015; Adomako, Danso, & Fosu, 2016). While existing strategies have been implemented, corruption remains a pervasive issue. This study addresses the research gap by exploring the potential of e-government to reduce corruption in Ghana and examines moderating (education, gender, age) and mediating (transparency) variables. The study's main questions and objectives include: examining the relationship between e-government and corruption, investigating the role of political will and leadership in corruption, assessing the relationship between accountability and corruption, analyzing the moderating effect of education, gender, and age and the mediating role of transparency on e-government and corruption.

The study holds significance in several aspects:

1. **Holistic Approach:** Provides a comprehensive understanding of corruption reduction by considering the interplay of e-government, political will, leadership, and accountability.
2. **Contribution to Knowledge:** Addresses the research gap by exploring the relationship between e-government and corruption, introducing mediating and moderating variables.
3. **Contextual Insight:** Offers insights into factors influencing the effectiveness of e-government initiatives in the specific context of Ghana.
4. **Policy Development:** Informs policymakers on crafting integrated strategies leveraging e-government, political will, leadership, and accountability for effective anti-corruption measures.

Theoretical Framework

The theoretical framework of the study centers around two main theories: the principal-agent theory and institutional theory. The principal-agent theory, originating in the 1970s, posits that agents (government officials) may act in their own interests, diverging from the interests of their principals which in this study is the public (Groenendijk, 1997). This theory highlights informational asymmetry, suggesting that agents exploit such disparities for personal gains, often engaging in corrupt practices (Groenendijk, 1997). The study emphasizes that this theory is instrumental in understanding corruption in the public sector, particularly among government officials seeking to exploit loopholes or inadequate internal controls.

Another theoretical underpinning is the institutional theory, which explores social phenomena and organizational behavior (Scott, 2014). This theory contends that societies and organizations inherently adopt customs, standards, and practices that become deeply ingrained and shape their behavior (DiMaggio & Powell, 1983). Institutions, both formal and informal, significantly influence individual and collective behavior. In the context of Ghana,

institutional theory helps analyze corruption dynamics, acknowledging the impact of formal and informal institutions on behavior, with cultural practices such as gift-giving being potential contributors to corruption.

The conceptual framework serves as the study's theoretical structure, illustrating relationships between key variables (Sachdeva, 2023; Swaen & George, 2022). The independent variables are e-government, political will, and accountability, while corruption serves as the dependent variable. Transparency acts as a mediating variable, and gender, age, and education are considered moderating variables. The conceptual framework visually maps the intricate network of these variables and guides the research design, data collection, and analysis.

Transparency, defined as the accessibility of information to citizens and stakeholders, is proposed as a mediating variable in the relationship between e-government and corruption (Piotrowski, 2007). Studies suggest that e-government enhances transparency by facilitating communication between citizens and the government, enabling online access to services, and fostering citizen engagement (Ahmad & Almarri, 2018). The study hypothesizes a significant indirect effect of e-government on corruption through transparency.

Education and gender are identified as moderating variables. Education, linked to citizens' ability to adopt e-government services, is expected to influence the effectiveness of e-government in reducing corruption (Law, 2010). The study aims to investigate the moderating role of education on the e-government-corruption relationship. Gender, as another moderating variable, is seen as influential in shaping corruption perceptions and engagement with e-government initiatives (Khan et al., 2018). The underrepresentation of women in decision-making processes and potential exclusion from technology-dependent initiatives in Ghana may impact the effectiveness of anti-corruption efforts.

Age is proposed as a moderating variable, considering its potential influence on technology adoption and attitudes towards e-government. The study suggests that age may moderate the relationship between e-government adoption and corruption reduction in Ghana, with younger individuals being more likely to adopt e-government services and potentially experiencing greater impacts on corruption reduction (Hendricks & Payne, 2017).

Research Methodology

Chapter 3 outlined the research methodology employed to investigate the complex interplay between e-government, corruption, and various moderating and mediating variables in the Ghanaian context. This chapter is pivotal for ensuring the credibility and reliability of the study's findings and conclusions.

The research design, a critical aspect of any study, is introduced, highlighting the rationale for adopting a mixed methods approach. This design incorporates both quantitative and qualitative methods, leveraging the strengths of each to overcome their respective limitations. The quantitative component involves a survey with close-ended questions, utilizing a 5-Likert scale for precise data collection. Concurrently, qualitative insights are gathered through interviews, offering a deeper understanding of participants' perspectives and experiences.

Sampling, a crucial step in ensuring the generalizability of findings, employs a stratified random sampling technique based on Ghana's administrative regions. This approach acknowledges the diverse socio-cultural, economic, and political dynamics across regions. The study's target population is Ghana, with proportional sampling within each stratum to prevent

over- or under-representation of specific areas. The sample size of at least 200 citizens was determined through a sample size formula, ensuring adequate representation.

Data collection involved primary and secondary sources. Primary data was obtained through surveys and interviews, while secondary data was sourced from journal articles, newspapers, academic books, and government documents. The analysis utilizes descriptive statistics, correlational and multiple regression analyses, mediation and moderation analyses, and thematic analysis for qualitative data. The validity and reliability of the research are addressed through rigorous methods. The questionnaire underwent pilot testing, questions were aligned with established scales, and consistency was maintained in data collection and analysis. Thematic analysis enhanced the reliability of qualitative data, supported by software tools.

Results and Discussion

The fourth chapter of the research paper presents empirical findings and insights derived from data gathered on corruption, e-government, and related variables in the Ghanaian context.

Demographic Characteristics of Sample

Item	Dimension	Frequency	Percent
Gender	Male	216	66.9
	Female	107	33.1
Age Group	18-24	15	4.6
	25-34	96	29.7
	35-44	173	53.6
	45-54	24	7.4
	55 & above	15	4.6
	Total	323	100.0
Educational level	Secondary school or lower	21	6.5
	Vocational or technical training	12	3.7
	Bachelor's Degree	163	50.5
	Master's Degree	119	36.8
	PhD or higher	8	2.5
	Total	323	100.0

Gender distribution: 66.9% male, 33.1% female.

Age distribution: 53.6% in the 35-44 age group, 29.7% in the 25-34 age group.

Educational level: 50.5% had a Bachelor's degree, 2.5% had a PhD or higher.

Geographical Location

Respondents from various regions in Ghana participated, with the Greater Accra region having the highest representation at 17.65%.

Descriptive Statistics

Variables	Mean	Std. Deviation	Minimum	Maximum
Independent Variables				
E-government	3.11	0.73	1.00	5.00
Political Will & Leadership Accountability	2.03	0.68	1.00	5.00
Accountability	2.22	0.73	1.00	5.00
Dependent variable				
Corruption	3.89	0.64	1.00	5.00
Mediating variable				
Transparency	2.13	0.75	1.00	5.00

E-government was perceived moderately at a mean score of 3.11 while Political will and leadership was assessed as relatively low at a mean score of 2.03. Corruption was perceived as relatively high with a mean score of 3.89 while transparency recorded a moderately low mean score of 2.13.

Reliability and Validity

High reliability was indicated by Cronbach's alpha values (>0.6) for all variables.

Questions was designed based on established scales and past research which helped to establish validity.

Correlational Analysis

There were strong correlations observed between variables, revealing intricate relationships.

Variables	1	2	3	4	5
E-government (1)	1				
Corruption (2)	-.131*	1			
Political Will & Leadership (3)	.339**	-.407**	1		
Transparency (4)	.337**	-.434**	.689**	1	
Accountability (5)	.380**	-.417**	.715**	.749**	1

E-government negatively correlated with corruption, emphasizing the potential of e-government in reducing corruption. The comprehensive interplay of E-Government, Political Will, Transparency, and Accountability demonstrates that these components are not siloed

but function in unison to combat corruption in Ghana. E-government programs that are effective increase transparency, making government actions more visible. As a result, accountability mechanisms are fueled, which are driven by political will and leadership. When these variables work synergistically, they form a robust system that inhibits corruption and supports ethical governance.

Multiple Regression Analysis

Multiple regression showed significant prediction of corruption by e-government, political will, and accountability

<i>Model</i>	Unstand. Coeff		Stand. Coeff.		
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>	<i>p-value</i>
Constant	28.041	1.534		18.280	.000
Age	-.153	.235	-.033	-.650	.516
Gender	.479	.417	.059	1.148	.252
Education level	.007	.233	.001	.028	.977
E-government	.048	.049	.055	.992	.322
Political will	-.213	.068	-.227	-3.134	.002*
Accountability	-.290	.077	-.275	-3.745	.000**
R ²	.205				
Adjusted R ²	.190				
F-value	13.619				

Note: ** p< 0.01, * p<0.05

Accountability and political will had significant negative impact on reducing corruption.

Qualitative Analysis - Relationship Between E-Government and Corruption

E-government was seen as having the potential to combat corruption through reducing direct human interactions and enhancing transparency. The findings highlight the potential of e-government initiatives in Ghana to combat corruption by reducing direct human interactions, enhancing transparency, and streamlining processes. However, the success of these initiatives is contingent on comprehensive digitalization, system auditing and monitoring. While some positive examples of successful implementation exist, challenges such as inadequate resources and a lack of proactive measures within law enforcement agencies hinder the impact of these initiatives. The perception of increased corruption is tied to a lack of accountability and effective enforcement, leading to calls for robust action to address corruption at its root. Overall, the findings underscore the importance of integrating e-government initiatives with comprehensive strategies to effectively combat corruption in Ghana.

Mediation Analysis

The mediation analysis explored the role of transparency in mediating the relationship between e-government and corruption. Quantitative results demonstrated a significant indirect effect, supporting the hypothesis that transparency mediated the relationship between e-government and corruption (b= -0.13, t = -2.36). The direct effect of e-

government on corruption in the presence of the mediator (transparency) was found to be insignificant ($b = 0.015$, $p = 0.743$), while the total effect was significant ($b = -0.114$, $p < 0.05$). Thus, transparency was identified as a mediator in the e-government-corruption relationship.

Qualitative insights indicated that interviewees acknowledged the potential of transparency to mediate the relationship between e-government and corruption, emphasizing its role in holding government officials accountable and preventing corrupt practices. However, reservations were expressed regarding the current level of transparency in government operations, indicating the need for additional efforts to enhance transparency effectively. The analysis highlighted the challenges in implementing transparency, including issues related to national security, institutional resistance, and weak regulations. Overall, the findings underscored the complex relationship between transparency, e-government, and corruption, emphasizing the importance of addressing challenges to ensure that e-government initiatives are guided by transparency principles for maximum impact on reducing corruption in Ghana.

Moderation Analysis

In the moderation analysis, the researchers investigated the impact of educational level, age, and gender on the relationship between e-government and corruption in Ghana. Quantitative analyses were complemented by qualitative insights from interviews.

For educational level as a moderator, quantitative results showed a significant negative correlation between e-government and corruption, indicating the potential of e-government in reducing corruption ($B = -.118$, $p < .05$). However, the moderation test did not find a significant interaction between educational level and the e-government-corruption relationship ($B = -0.013$, $p = .82$). Qualitative analysis from interviews revealed that education plays a multifaceted role, influencing corruption perception, empowering citizens for e-government adoption, and ensuring inclusivity in the digital age. While challenges such as corruption across educational backgrounds were acknowledged, opportunities included education empowering citizens and bridging the digital gap.

Regarding age as a moderator, quantitative results again indicated a negative correlation between e-government and corruption ($B = -.117$, $p < .05$). However, the moderation test did not find a significant interaction between age and the e-government-corruption relationship ($B = -0.06$, $p = .268$). Qualitative insights emphasized that younger Ghanaians, due to higher digital literacy and adaptability to technology, were more likely to adopt e-government services. The findings underscored age-related trends but highlighted the importance of considering individual variations.

For gender as a moderator, a negative correlation was found between e-government and corruption ($B = -.11$, $p < .05$), but the interaction of gender with the e-government-corruption relationship was not significant ($B = -0.04$, $p = .70$). Interviews suggested that Ghanaian women might be perceived as less likely to engage with e-government initiatives due to unequal access to education and technology, traditional gender roles, and societal norms. The relationship between gender, technology, and corruption was recognized as complex, influenced by factors such as cultural norms and evolving gender dynamics. While quantitative tests did not establish educational level, age, or gender as significant moderators, qualitative insights provided nuanced perspectives on the roles of education, age, and gender in shaping the relationship between e-government and corruption in Ghana.

The findings highlight the need for a comprehensive understanding of these moderating factors for effective anti-corruption initiatives and e-government strategies.

Conclusion

The conclusion of the study brings together the theoretical and policy implications, emphasizing the role of e-government, political will, and accountability in reducing corruption in Ghana. The research is grounded in the principal-agent theory and institutional theory, highlighting how e-government can minimize information asymmetry, improve monitoring, and contribute to anti-corruption efforts.

Theoretical Implications

Principal-Agent Theory

The study aligns with the principal-agent theory, emphasizing the negative relationship between e-government and corruption. Information asymmetry, a key concept in the theory, is addressed through e-government initiatives, providing citizens direct access to government processes and reducing the potential for corrupt practices.

Institutional Theory

In applying institutional theory, the study explores the negative link between political will and corruption. It recognizes corruption as potentially institutionalized and emphasizes the need for anti-corruption measures that consider both formal and informal institutions. The theory underscores the impact of values, beliefs, and standards on behavior, with political will playing a crucial role in resisting corruption.

The study contributes significantly to existing literature on anti-corruption measures in Ghana by providing insights into how these theoretical frameworks can guide effective interventions.

Policy Implications

E-Government Initiatives

The research underscores the effectiveness of e-government in reducing corruption by enhancing transparency, accountability, and efficiency. Policy recommendations include improving infrastructure, ensuring digital inclusion, and prioritizing interoperable standards. The government is advised to invest in ICT infrastructure, prioritize digital literacy, and regularly review and adjust e-government systems.

Transparency and Accountability

Transparency and accountability are identified as crucial elements in reducing corruption. Strengthening audit and monitoring processes, establishing independent oversight organizations, and providing resources to anti-corruption agencies are recommended policy measures. The study advocates for a comprehensive and independent audit of government activities to ensure accountability.

Political Will and Leadership

The study emphasizes the significance of political will and ethical leadership in the fight against corruption. It recommends strengthening the legal framework, enforcing anti-corruption legislation, and establishing anti-corruption courts. Leadership by example is highlighted as a means to enhance political will, fostering trust and collaboration between citizens and the government.

Educational Level, Gender, and Age

The research identifies the roles of education, gender, and age in shaping attitudes toward e-government initiatives and corruption. To bridge disparities, the study suggests comprehensive digital literacy programs, emphasizing the benefits of e-government. Efforts to improve basic and digital literacy, especially in rural areas and among underprivileged groups, are crucial for the success of e-government initiatives.

Research Limitations and Recommendations

The study acknowledges limitations, such as the need for further exploration of moderating factors, the challenge of establishing causation, and potential cultural dynamics influencing perceptions of corruption. Recommendations for future research include considering additional moderating variables, conducting longitudinal studies, and exploring cross-country comparisons to provide a more comprehensive understanding of the factors influencing the relationship between e-government, political will, accountability, and corruption in Ghana.

In conclusion, this study offers valuable insights for policymakers, highlighting the multifaceted approach needed to effectively combat corruption in Ghana. Theoretical frameworks provide a foundation, while practical policy recommendations address the nuances of implementing anti-corruption measures through e-government initiatives, transparency, accountability, and strong political will.

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