

Retraction

Retracted: The Nexus among Good E-Governance Practice, Decentralization, and Public Administration for Sustainable Local Development

Discrete Dynamics in Nature and Society

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

- [1] W. Balisany, H. Özgit, and H. Rjoub, "The Nexus among Good E-Governance Practice, Decentralization, and Public Administration for Sustainable Local Development," *Discrete Dynamics in Nature and Society*, vol. 2022, Article ID 9886372, 11 pages, 2022.

Research Article

The Nexus among Good E-Governance Practice, Decentralization, and Public Administration for Sustainable Local Development

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The formulation and implementation of development-oriented public policies, particularly in a post-conflict state like Iraq, requires empirical investigation. Consequently, this study investigates the effect of effective e-governance practices and decentralization on public administration in the Erbil district of Iraq. The purpose of this study is to determine the role of decentralization as a mediator between good e-governance practices and public administration in relation to the sustainable local development of the Erbil city. The sample of 409 employees of the Erbil municipality who participated in the survey was analyzed using Partial Least Square Structural Equation Modeling (PLS-SEM) with the assistance of WarPLS 7.0. The results of the study revealed a significant correlation between e-governance practices and decentralization and public administration. In addition, it was discovered that decentralization has a significant effect on public administration. The finding of a significant negative relationship between e-governance and decentralization suggests that e-governance has a negative impact on decentralization in Erbil. The implications of the study are discussed, and the study suggests that devolving power and authority to subunits in Iraq would enhance public administration and promote sustainable local development.

1. Introduction

According to some studies, reestablishing electronic governance (e-governance) is the first step toward stabilization, reconstruction, and a significant transition to full socio-economic recovery in a fragile and post-conflict state like Iraq [1, 2]. According to the literature, public administration, e-governance practices, and process participation contribute to sustainable development [3]. These are critical for the state's legitimacy, predicated on its ability to keep political promises and fulfill certain roles. According to Bala [3], "the mechanisms enacted at local levels and the administrators who comprise these systems are the channels through which policy becomes effective and through which the state's functions and services are allocated" (p.

594). As an ongoing case, the researcher has the opportunity for continuous observation and studies to understand whether e-governance practices and decentralization significantly impact local development or may not be sustainable in the long run. Currently, public administration and its departments operate in unstable and complex environments, owing to rapid advancements in knowledge and experience and the effects of economic, social, and cultural changes [4, 5]. This highlights the critical nature of adapting to these obstacles or setbacks. To overcome the obstacles posed by a lack of plans and developments in public affairs, high ability, sound e-governance practices, administrative decentralization, and managerial inventiveness are required to solve problems and achieve sustainable development.

Meanwhile, Brinkerhoff [6] asserts that each state must ensure the effectiveness of e-governance. Effective e-governance is defined as the process by which leaders focus their attention and direct it in the desired direction [7]; the success of public administration is largely dependent on a suitable and sufficient leadership style used by those reporting to him/her [5, 8]. While scholars and experts agree on the importance of good e-governance, personal leadership affects the capabilities of creative public officials. Leaders can help their employees develop their creativity by encouraging them to solve and address problems and then publicly present their solutions. According to El Meehy [4], despite Iraq's having symmetrical federalism since 2005, the state structure remains central. It is assumed that since 2013, authorities endorsed a plan aimed at decentralization reforms to create a functioning federalism [4]. Countries' need to have long-term development and stability [9–13].

This study aims to examine the process of rebuilding e-governance in Iraq, specifically in Erbil city, to shed light on the implications for the city's public administration as it moves toward development via decentralization. First, the research examines the direct consequences of e-governance practices and decentralization on public administration in a fragile post-conflict state such as Erbil. The purpose of this study is to determine the moderating and mediating effects of decentralization on the relationship between good e-governance practices and public administration in Erbil's sustainable local development. According to Grindle [14], "e-governance in developing countries should not aim for a comprehensive idealized vision of good governance, but rather for a limited set of changes sufficient to produce substantial improvements in political and administrative systems." Iraq's case study is informed by comparative examples from several other conflicts and post-conflict states as well as previous research on e-governance, decentralization, and public administration. According to Brinkerhoff and Johnson [1], "balanced attention to e-governance at the central and subnational levels may produce better results than a solely centralized approach" (p. 586). E-governance is defined by the OECD as "the application of modern information and communication technologies to the full spectrum of government functions" [15], (p. 3). E-government is organized in a more horizontal and transparent manner than conventional government. It facilitates the formation of new relationships within the public sector as well as between the government and individuals. It is anticipated that e-government will undermine traditional command and control structures while encouraging a more collaborative and decentralized decision-making style. Despite the significance of these concepts, prior research has been primarily theoretical, particularly in Iraq. As a result, this paper contributes to fill the gap in the literature by demonstrating how e-governance and decentralization can assist public administration in enhancing public services, achieving security, engaging citizens, and providing a mechanism for leadership selection in the pursuit of sustainable development (see Table 1).

2. Literature Review

2.1. Good E-Governance. "Governance" has been widely used in academic literature [20]. For instance, Awortwi [21] observed that it was frequently used in the literature on business studies to describe the relationship between companies' "micro-behaviors." Governance has been defined as "the management of governments and public agencies and private organizations with a social mission" [17, 22]. According to Awortwi [21], governance encompasses government activities; however, it also encompasses nonstate media through which some government policies are targeted and implemented. Additionally, Bawley [23] argued that civil society and the market are significant channels. The definition of governance has been a contentious issue [24], making it difficult to reach an agreement. It can mean various things to different people depending on their expertise. Nonetheless, Nadeem [17] observed that regardless of scholars' areas of expertise, the notion of the western concept of governance being globally applicable is assumed.

Information and communication technology are required for more efficient and transparent operations (ICTs). Electronic government, also known as e-government, is a new path forward in public administration that improves government operations in order to provide better information and services to the public by facilitating the engagement of various groups in governance, such as citizens and corporations, across society [25–27]. E-government is a new technique for most emerging nations to achieve economic improvement. This increases efficiency and transparency in the government and the general population [16]. E-government approaches like e-services, e-administration, and e-procurement have also been promoted to eliminate corruption and enhance public service delivery [28]. Srivastava [29] divided e-government research into three categories: e-government initiatives' growth and development; e-government acceptance and implementation; and e-government's influence on stakeholders.

2.2. Decentralization. El Meehy [4] defined "decentralization" as "a political process that restructures relationships between states, society, and the market, with significant implications for both civil society's role and state power." The term "conceptualization" evolved as some development stakeholders shifted their focus away from local public administration system reforms and toward enabling community-based and market-based stakeholders to participate in the formulation and implementation of policy. The World Bank [30] defines decentralization as "the process by which authority and responsibility for public functions are transferred from the central government to intermediate and local governments, quasi-independent government organizations, and the private sector." The United Nations' efforts, on the other hand, to advocate for decentralization, accountability, local empowerment, and responsiveness constituted significant reforms [4, 9]. Indeed, the UNDP [31] argued for a broad definition of "local governance" to

TABLE 1: Literature sources for the identification of research gap.

Author	Research focus
El Meehy [4]	Focused on the effect of a centralised structure
Al Khatab [9], Khalilzad and Pollack [10], Khedery [11], O'Driscoll [12], and Turan [13]	The need for long-term development and stability in central government
Al-Azar [16]	Efficiency and transparency in the government and the general population; therefore, the need for e-governance
Nadeem [17]	Concentration of authority and governance
Zafarullah and Huque [18]	Public administration and good governance
Nafe and Saeid [19]	Effectiveness of public administration accompanied by good governance, which must ensure equity protection, public welfare, and disclosure and transparency

emphasize the connection between democratic governance, civic value, and human development. According to the UNDP [31]; decentralization is “a collection of institutions, systems, and processes at the subnational level through which local governments interact with and provide services to citizens, groups, and local communities.”

Nadeem [17] distinguished four types of decentralization: privatization, delegation and de-concentration of authority or administrative decentralization, fiscal decentralization, and devolution or democratic decentralization. Conyers [32] notes that some difficulties may arise as the government, aid agencies, and some academics advocate for decentralization. For example, some stakeholders may lose faith in the centralized government system if it fails to meet their expectations. Additionally, it may foster an impression that the system is unjust, unrepresentative, underperforming, and fails to provide equal opportunity. Decentralization is believed to be the “third wave” of democratization, as Huntington puts it [33]. The UNDP echoed this sentiment, arguing that “decentralization” is a critical component of “logic democratization” [32].

2.3. Public Administration. The scope of public administration is not universally defined [34]. Svava [34] asserts that “public administration is easier to explain than define.” Additionally, several arguments have been made in the literature regarding whether or not public administration should be considered a study field [35]. According to Adam et al. [36], public administration is primarily concerned with governmental functions and enacting and interpreting laws and regulations. Thus, government programs are responsible for taxation, legislative activities, immigration services, foreign affairs, and national defense. According to the National Center for Education Statistics (NCES), public administration is “a program that prepares individuals to serve as managers in the executive branch of local, state, and federal government and focuses on the systematic study of executive organization and management.” Nonetheless, some scholars define public administration as the implementation of public policy by policymakers, which establishes the competent authority to provide a solution to certain challenges and an organizational strategy for managing stakeholders [37–39]. The definitions of public administration imply that it is concerned with formulating and implementing public policies aimed at development.

2.4. Linking Good E-Governance, Decentralization, and Public Administration. Numerous studies have been conducted to examine the relationship between good e-governance and public administration on the one hand, and decentralization and public administration on the other. On the other hand, some findings have been inconclusive due to inconsistent findings. For example, Zafarullah and Huque [18] conducted research in Bangladesh on public administration and good governance. They argued that some small countries have relatively high expectations for monitoring a new path away from their country’s traditions and the rigid public administration system they have conquered throughout their existence. Additionally, the study’s findings indicated that certain factors, such as the legacy of Pakistani rules and procedures, harmed public administration progress in Bangladesh, and that post-reform efforts had no effect on fragmenting the administration’s domination. Numerous factors resulted in the collapse of good governance as a result of the argument and dispute over the indicators, including the problem’s poor presentation, high fraud rates, and a lack of administrative guidance and input. In addition, a number of internal and external factors exerted a great deal of pressure on the improving system, resulting in little progress in good governance. As a result, achieving good governance remains a distant dream without an effective and valuable tool for public administration.

Nevertheless, Nafe and Saeid [19] noted the absence of a system or model for evaluating the performance of municipal departments’ public administration. However, Othman and Matarneh [40] demonstrate in their study that public administration can be effective when it is accompanied by good governance, which must ensure equity protection, public welfare, and disclosure and transparency. This view corroborates with Shah’s [41] observation that ad hoc self-standing monitoring and assessment systems are more expensive and ineffective than a tool’s built-in mechanism for government transparency, self-assessment, and citizen-based accountability. Additionally, Garcia-Sanches et al. [42] demonstrated that Spanish municipalities exhibit a high level of information transparency when it comes to environmental, economic, and social issues because they allow administrative proceedings to be conducted online and encourage citizens’ active participation in and promotion of strategic, sustainable, and managerial issues.

For some time, the promotion of good governance in the delivery of public services and the role of decentralization have piqued the interest of policymakers and researchers

[35]. Decentralized governments, it is believed, will be closer to the populace and the people, and services will be more tailored to their specific needs. Meanwhile, Goel et al. [35] argue that decentralization can benefit or detrimentally affect public administration. On the plus side, decentralizing government functions will increase electoral control and competition between competing jurisdictions [43–47]. On the other hand, Adam et al. [36], Galiani et al. [48], and Reinikka and Svenson [49] assert that this results in a smaller economic scale for the provision of government services. Additionally, it increases the likelihood of a misalignment between the location of rewards for public services and political boundaries.

Additionally, Gonçalves [45] discovered that decentralization improved residents' access to public services and overall quality of life in Brazilian municipalities. Nevertheless, a similar study conducted in *Argentina* demonstrates the inequalities in service provision [48]. According to Reinikka and Svenson [49], inequalities arose due to decentralization of public resources, as some local elites appropriated public resources for their personal use. As a result, Olken [50] asserted that it restricts the reach of population monitoring initiatives.

The majority of the literature on the importance of decentralization has concentrated on fiscal decentralization [35, 36, 51, 52]. Nevertheless, limited studies examine alternative or few modes of decentralization [47, 53–55]. Meanwhile, the findings have been inconclusive and sensitive to the data and methodology used, resulting in inconclusive results.

Several studies have lately looked into the relationship between service delivery and e-government. For example, Singh et al. [56] conclude that e-government contributes positively and significantly in improving the public service delivery and administration, while also boosting fairness, efficiency, and effectiveness after conducting empirical studies in Fiji and Papua New Guinea. According to Bhuiyan [57], e-governance was crucial in modernizing Bangladesh's public administration to guarantee more efficient service delivery and the country's capacity to battle corruption and relieve poverty. García-Sánchez et al. [42] investigated the progress of e-government in 102 Spanish municipalities, both in aggregate and in each of Bwalya's three phases (2012). Despite this, the authors argue that Spanish legislation should monitor the evolution of local government e-administration to guarantee that it moves from one-way electronic involvement to two-way feedback and, eventually, to a public-private partnership [58].

A study by Bhuiyan [59], conducted in Kazakhstan, discovered that e-government provides benefits even with limited deployment. According to Bhuiyan's [57] study, the Kazakhstan's government must address a variety of operational challenges to improve service delivery that is more transparent, cost-effective, and accountable. The study identified several challenges, including a lack of qualified human resources, political support, and consensus regarding the management of digital divisions in public services, language barriers, and infrastructure development challenges. In a second study, Monga [60] revealed that

e-government improved the quality of service delivery to citizens in India. This was done by making the government more open, reducing wait times for services, simplifying processes, getting rid of corruption, improving management, and changing the way public servants act.

In their study, Pan and Jang [61] examined the impact of the growth of e-government digital service delivery in the United States. The data suggest that e-government development goals, city population, and the council-manager form of government are all favorably related to service advancement, according to the researchers. Krishnan and Teo [62] investigated how governance impacts the development of information infrastructure and e-government using publicly accessible data from 178 countries. According to the research, political stability, government efficacy, and the rule of law, all aid the link between information infrastructure and e-government growth. On the other hand, voice and responsibility hurt the bond. Finally, Chatfield and Alhujran [25] investigated the efficiency with which 16 Arab nations' e-government websites and portals provide e-government services. Researchers contrasted the level of e-government in Arab countries to a few more developed nations (the United States, Denmark, Sweden, the UK, South Korea, and Australia). Most Arab nations are still in the early phases of e-government development, according to the survey, with information flowing just one way from the government to the people. The survey's results show that Arab countries are far behind the rest of the world when it comes to technology.

According to Asogwa, the aims include better access to government information, lower administrative expenses, improved openness among government entities, and reducing bribery and corruption (2013). However, a lack of bandwidth and Internet penetration, as well as a dearth of ICT infrastructure and personnel, frequent power outages, antiquated equipment, and other issues, make it impossible to harness and squander Nigeria's enormous potential. The expansion of e-government, according to Alaraj and Ibrahim [63], has a favorable and substantial influence on good governance. E-services are important for excellent governance, but e-administration and e-procurement are not. In contrast, Naz [64] performed a study in Fiji to determine the function of e-government in improving service delivery and quality, as well as its impact on customer satisfaction. According to the paper, e-government has the potential to dramatically increase service quality and customer satisfaction. Previously, however, e-government research was restricted to developed countries alone [61, 62, 65]. Because of this, not much is known about how e-government works or how it affects service delivery in countries that are not as well off.

Furthermore, nothing is known about how the rise of e-government influences the relationship between decentralization and public service delivery in developing countries. Based on theoretical and empirical realities, we believe that successful e-governance initiatives and decentralization would increase efficiency in public administration and hence assure long-term local growth. Decentralization may also aid in the bridge between good governance and successful

e-government. As a result, we propose the following hypotheses:

H1: Good e-governance practice has a positive relational effect on the public administration in Erbil Iraq

H2: Good e-governance practice has a positive relationship with decentralization

H3: Decentralization has a positive relational effect on the public administration in Erbil Iraq

H4: Decentralization partially mediates the relationship between good e-governance practice and public administration in Erbil Iraq

The conceptual model of this study as depicts the hypotheses is shown in Figure 1. The model shows the relational impact of good governance practice, decentralization in promoting public administration, and local development.

3. Method and Analysis

3.1. Data. This study uses a cross-sectional survey with a self-administered questionnaire to collect demographic data such as gender, age, experience, education, and employment department. The respondents were members of the Erbil municipality's staff. The Mayor was contacted to obtain permission from the staff to participate in the survey. The researcher was permitted to address the staff regarding the subject matter. Both the university and the municipality of Erbil sought and granted ethical approval. We invited all staff from various office units to participate, but we clarified that participation was voluntary.

Out of the five hundred and fifty questionnaires administered, only four hundred and nine were completed, representing about 74.36%. The demographic analysis reveals that most of the participants are from the finance department (27.8%), information technology (26.3%), and human resources (17.6%). In comparison, 13.9%, 8%, and 6.1% of the respondents are from the law, administrative, and other departments. Moreover, the majority of the respondents (60.2%) are within the ages of 51–60 years old, 61 years and above (19.5%), 45–50 years old (13.7%), 31–40 years old (4.1%), and 21–30 years old (1.7%). The gender analysis shows male participants are dominant (63.2%), while 36.3% are female. As for the educational background of the participants, the statistics reveal that majority are master degree holders (44.4%), bachelors (38.8%), PhD (10.7%), diploma (5.6%), and others (0.2%). Regarding the respondents' working experiences, 44.4% work between 6 and 10 years on their job, 38.4% worked for 11–15 years, while 11.2% had 16–20 years and above 21 years work experience, respectively. Also, as shown in Table 2, there is an absence of high collinearity among the variables. Decentralization, good e-governance, and public administration have a mean value of 3.93, 2.299, and 3.890, respectively, with a standard deviation below 1. This indicates a low variation in the items that measure each construct. Meanwhile, all the constructs were standardized before the path analysis [66].

This study uses preexisting questionnaire items and scales with minor modifications based on feedback from the

supervisor and management during the pilot study. The measurement was conducted using a five-point Likert scale (1 indicating strong disagreement and 5 indicating strong agreement). The five dimensions of effective e-governance were accountability, transparency, participation, equality, the principle of justice, and the rule of law, with 29 items adapted and modified from previous studies [67, 68]. Decentralization was quantified using 18 items adapted from Rady [69]. Twelve items adapted from Dayanandan were used to assess public administration (2013).

3.2. Data Analysis. The WarpPLS 7.0 version was used to examine the model structure in this study [70]. WarpPLS is a partial least-squares regression approach for simultaneously assessing linear and nonlinear relationships [70]. According to Pavlou and Fygenon [71], "Partial Least Square Structural Equation Modeling" (PLS-SEM) is an excellent technique for analyzing big and intricate models that involve mediating or moderating effects. This allows for the modeling and testing of causal relationships across constructs as well as the testing of predictions that reflect real-world complexity. According to Urbach and Ahlemann [72], PLS-SEM is particularly useful when dealing with small samples since it is not dependent on data normality and may be used to model reflective and formative characteristics.

3.3. Assessment of Results of the Measurement Model. Table 3 demonstrates that all items have adequate loading (>0.50), Cronbach's alpha (>0.70), composite reliability (>0.70), and average variance extracted (>0.50) of all constructs are all over the minimal criterion, indicating good internal consistency. Furthermore, the discriminant validity evaluation findings shown in Table 3 support Fornell and Larcker's [73] finding that the square root of average variance retrieved in the diagonal of each construct must be bigger than the correlations between that construct and others. Meanwhile, the Fornell-Larcker criteria were supplemented by a new criterion (heterotrait-monotrait ratio) for measuring discriminant validity [74]. The HTMT ratio (0.9) is satisfactory, indicating that the constructs are discriminately valid. Also, the average total variance inflation for each variable is within acceptable limits, which shows that the constructs do not overlap (see Table 3).

4. Results of Hypothesis Testing

The study framework that depicts the hypotheses tested are shown in Figure 2 with the relevant expected path coefficients. The model fit indices show the data fitness with the following indices: "Average path coefficient (APC)" = 0.201, $P < 0.001$; "Average R-squared (ARS)" = 0.090, $P = 0.016$; "Average block VIF (AVIF)" = 1.068, (ideally ≤ 3.3); "Average full collinearity (AFVIF)" = 1.027, (ideally ≤ 3.3); "Tenenhaus goodness of fit (GOF)" = 0.207 (medium ≥ 0.25); "Simpson's paradox ration (SPR)" = 1.000 (ideally 1); "R-squared contribution ration (RSCR)" = 1.000 (ideally 1); "Statistical suppression ration (SSR)" = 1.000 (acceptable if ≥ 0.7); "Non-linear bivariate causality direction ratio

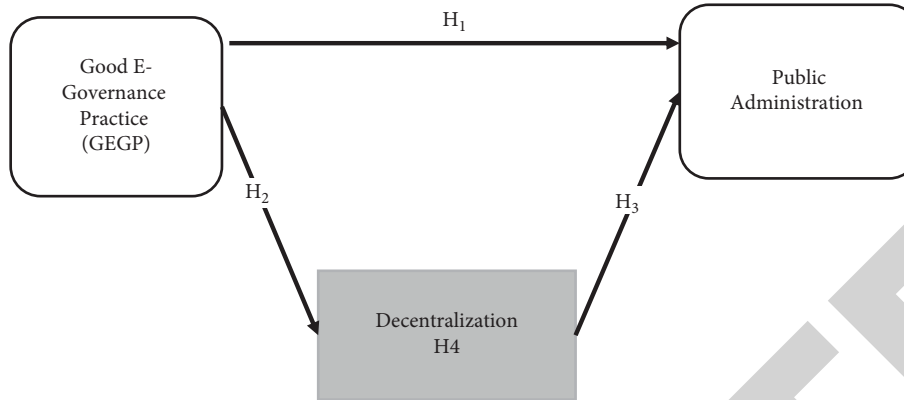


FIGURE 1: Conceptual framework.

TABLE 2: Mean, standard deviation, and correlations among the constructs.

Construct	Mean	Std. Deviation	1	2
1. Decentralization	3.93	0.585		
2. Good E-governance	2.299	0.930	-0.035	
3. Public administration	3.890	0.557	0.240**	-0.083

**Correlation is significant at the 0.01 level (2-tailed).

(NLBCDR) = 1.000 (acceptable if ≥ 0.7), and SRMR = 0.078 (Ideally ≤ 0.08).

The hypotheses' testing are presented in Table 4. The study revealed that good e-governance practices have a significant negative relationship with public administration ($-0.323, P < 0.001$). These findings imply that a change in the e-governance practice reduces public administration in Erbil. Therefore, H1 is supported and concludes that e-governance significantly impacts public administration. The second hypothesis was to test the relationship between e-governance and decentralization. As presented in Table 5, the result indicates a significant negative relationship between e-governance and decentralization ($-0.086, P = 0.039$). Thus, H2 is accepted and concludes that e-governance negatively influences decentralization in Erbil.

Moreover, the relationship between decentralization and public administration was tested in H3. The result shows a significant positive relationship between decentralization and public administration ($0.192, P = 0.001$). Therefore, H3 is supported and we conclude that decentralization of e-governance in Erbil significantly impacts public administration in the region. Meanwhile, the H4 formulated to investigate the mediating role of decentralization in the relationship between good e-governance, and public administration failed to show a significant result ($0.017, P = 0.317$). Therefore, we failed to accept H4 and conclude that decentralization does not mediate the relationship between good e-governance and public administration in Erbil.

5. Discussion

This study aimed to add to the body of knowledge on e-governance and public administration by examining the relationship between effective e-governance practices,

decentralization, and public administration in Erbil, Iraq, to ensure local development. Earlier research examined the causes and consequences of effective e-governance. Nevertheless, some have demonstrated a link between e-governance and public administration. However, prior research on decentralization's role in public administration has been inconsistent and inconclusive. Our model demonstrates a variation of approximately 17% in explaining e-governance and decentralization as determinants of effective public administration capable of adequately responding to the populace's yearnings for public service delivery.

According to our research, e-governance has a significant negative impact on the public administration in Erbil. These results confirm the findings of Zafarullah and Huque [18], who conducted a similar study in Pakistan and concluded that a variety of local factors may explain why governance has a negligible effect on public administration. Similarly, Iraq, which is currently in a post-conflict state, could be in a similar situation, which could explain the negative effect observed in this study. The finding, however, contradicts a number of earlier studies that discovered a significant positive relationship between e-governance and public administration and concluded that citizen participation would promote sustainable development [40, 41, 58]. Examining the relationship between effective e-governance and decentralization yielded similar results. Some researchers believe that a successful e-government should enable decentralization, allowing authority to be delegated to a lower level so that the populace has easier access to it [4, 37].

In spite of these drawbacks, decentralization has a positive impact on public administration. However, Goel et al. [35] determined that the impact of decentralization on public administration could be either positive or negative. Consistent with the findings of several earlier studies, this study demonstrates that decentralization has a positive and significant impact on public administration [43–45, 47]. In contrast, our findings contradict previous research indicating that decentralization and public administration have significant negative effects. In addition, it concludes that decentralization occasionally permits elites to appropriate allocated resources for their own use [36, 48].

TABLE 3: Model measures' assessment.

Construct	Items	Loadings	CR	AVE	CA	FVIF
Good e-governance practice	GGi	0.591	0.969	0.522	0.966	1.010
	GG2	0.588				
	GG3	0.627				
	GG4	0.621				
	GG5	0.582				
	GG6	0.546				
	GG7	0.779				
	GG8	0.749				
	GG9	0.778				
	GG10	0.728				
	GG11	0.774				
	GG12	0.786				
	GG13	0.831				
	GG14	0.772				
	GG15	0.554				
	GG16	0.810				
	GG17	0.763				
	GG18	0.711				
	GG19	0.746				
	GG20	0.690				
	GG21	0.779				
	GG22	0.641				
	GG23	0.717				
	GG24	0.769				
	GG25	0.768				
	GG26	0.785				
	GG27	0.795				
	GG28	0.777				
	GG29	0.762				
Public administration	PUB1	0.599	0.868	0.501	0.829	1.038
	PUB2	0.694				
	PUB3	0.692				
	PUB4	0.693				
	PUB5	0.653				
	PUB6	0.634				
	PUB7	0.614				
	PUB8	0.676				
	PUB9	0.597				
Decentralization	DEC1	0.540	0.935	0.778	0.925	1.033
	DEC2	0.624				
	DEC3	0.654				
	DEC4	0.752				
	DEC5	0.659				
	DEC6	0.749				
	DEC7	0.773				
	DEC8	0.747				
	DEC9	0.793				
	DEC10	0.763				
	DEC11	0.753				
	DEC12	0.815				
	DEC13	0.544				
	DEC14	0.554				
	DEC15	0.647				
	DEC16	0.596				

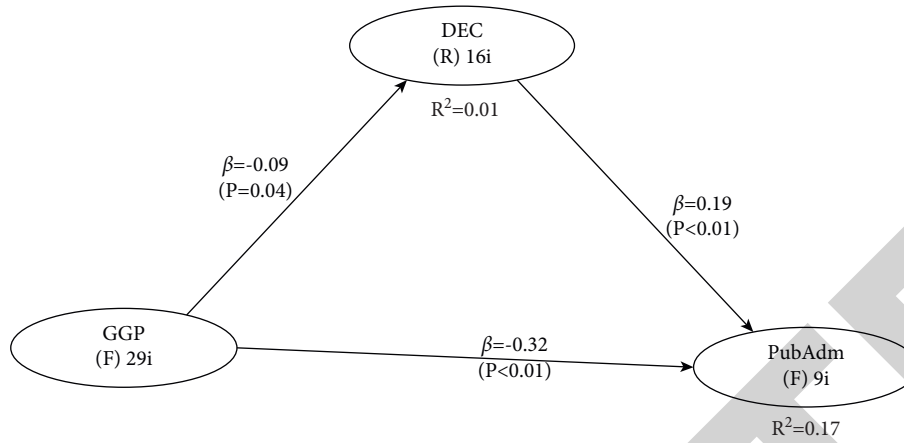


FIGURE 2: Model testing results.

TABLE 4: Discriminant validity.

Constructs	Fornell-larcker criterion			Heterotrait-monotrait ratio		
	E-gov	Decen	PubAdmin	E-gov	Decen	PubAdmin
E-gov	0.723					
Decen	-0.055	0.691		0.099		
PubAdmin	-0.088	0.174	0.651	0.145	0.223	

Square roots of average variance extracted (AVEs) shown on diagonal.

TABLE 5: Model testing.

	Hypothesis	Path coefficient	P value	Decision
H1	E-gov → PubAdmin	-0.323	0.001	Supported
H2	E-gov → decen	-0.086	0.039	Supported
H3	Decen → PubAdmin	0.192	0.001	Supported
H4	E-gov → decen → PubAdmin	0.017	0.317	No mediation

6. Conclusion and Recommendations

The purpose of this study was to determine the role of decentralization as a mediator between good e-governance practices and public administration in Erbil’s sustainable local development. E-governance has forged a solid connection between decentralization and public administration. However, its implementation discourages public administration and may jeopardize local development, jeopardizing the sustainable development of the nation as a whole. Thus, stakeholders should modify their strategies and ensure that an effective e-governance model is effectively implemented. Study results revealed that decentralization has a substantial effect on government administration. Therefore, following remarks are crucial to be taken into account:

- (i) It should not be oversold as a policy prescription for public administration, as it may breed corruption, especially in a developing nation like Iraq.
- (ii) As the roles and responsibilities of central authorities in public services become more complex, as do the challenges they face in public services; it is imperative that information channels and decision-making authority be delegated to subunits.

- (iii) In consideration of the needs of local communities, the central government must carry out these responsibilities in a fair and wholesome manner via efficient e-governance and decentralization. Thus, it aligns with the European Union’s perspective, which seeks efficiency, transparency, accountability, and increased democracy in the delivery of public services, and highlights the parallelism between e-governance and decentralization in the delivery of public services values [13] are significant drivers for good governance.

As mentioned previously, e-governance is the first step toward stabilization, reconstruction, and a significant transition to complete socioeconomic recovery in a fragile and post-conflict state such as Iraq, and it helps to create opportunities for sustainable development. Hence, the challenges posed by a lack of plans and developments in public affairs, high ability, sound e-governance practices, administrative decentralization, and managerial ingenuity must be overcome in order to achieve sustainable development and create solutions for the existing problems. As a result, for the sake of good governance, public administrators should allow their employees develop their

innovativeness by empowering them to solve and address problems and then present their remedies publicly.

This study is limited to the Erbil district in the Kurdistan region of Iraq. Nonetheless, it provides context for the post-conflict status of Iraq. Additional research must be conducted in other regions of Iraq to better comprehend Iraq's e-governance and public administration for sustainable development. Finally, it would be beneficial to compare Iraq to other nations experiencing similar conditions.

Data Availability

The data used to support the findings of this study are available upon reasonable request to the corresponding author.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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