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Interplay Of Service Quality And Perceived Ease Of Use In E-Government Adoption In Jordan

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ABSTRACT

This study investigates the mediating effect of service quality on the relationship between perceived ease of use and e-government adoption in Jordan. While e-government initiatives have gained traction globally, their success largely depends on citizens' willingness to adopt these digital services. This research addresses a critical gap in understanding the complex interplay between technological and service-related factors influencing e-government adoption in developing countries. Employing a quantitative approach, we surveyed 404 Jordanian citizens using a structured questionnaire based on the Technology Acceptance Model (TAM) and SERVQUAL framework. Structural Equation Modeling (SEM) was utilized to analyze the data and test the hypothesized relationships. Our findings reveal that service quality significantly mediates the influence of perceived ease of use on e-government adoption in Jordan. Specifically, perceived ease of use positively affects service quality ($\beta = 0.62$, $p < 0.001$), which in turn positively influences e-government adoption ($\beta = 0.58$, $p < 0.001$). The direct effect of perceived ease of use on adoption remains significant but diminished ($\beta = 0.31$, $p < 0.01$) when accounting for the mediating role of service quality, indicating partial mediation. These results underscore the importance of considering both technological usability and service quality aspects in e-government implementation strategies. The study contributes to the growing body of literature on e-government adoption in developing countries and offers practical implications for policymakers and system designers in Jordan and similar contexts. By highlighting the crucial role of service quality as a mediator, this research suggests that governments should focus not only on creating user-friendly interfaces but also on ensuring high-quality service delivery to promote widespread adoption of e-government services.

1. INTRODUCTION

In the digital age, governments worldwide are increasingly leveraging information and communication technologies (ICTs) to enhance public service delivery, improve transparency, and foster citizen engagement. This phenomenon, broadly termed e-government, has emerged as a pivotal strategy for public sector reform and modernization (United Nations, 2020). While developed nations have made significant strides in e-government implementation, developing countries, including those in the Middle East, are still grappling with the challenges of digital transformation in the public sector (Al-Hujran et al., 2015). Jordan, a middle-income country in the heart of the Middle East, has been at the forefront of e-government initiatives in the region. The Jordanian government launched its e-government program in 2000 with the aim of improving public service

delivery, increasing government efficiency, and enhancing citizen participation (Al-Jaghoub et al., 2010). Despite these efforts, the adoption of e-government services among Jordanian citizens has been slower than anticipated, highlighting the need for a deeper understanding of the factors influencing e-government adoption in this context (Alomari et al., 2012). The Technology Acceptance Model (TAM), proposed by Davis (1989), has been widely used to explain user acceptance of new technologies, including e-government services. Within this model, perceived ease of use (PEOU) is considered a crucial determinant of technology adoption. PEOU refers to the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). In the context of e-government, PEOU can significantly influence citizens' willingness to use online government services (Carter & Bélanger, 2005). However, the relationship between PEOU and e-government adoption may not be as straightforward as initially theorized, particularly in developing countries where additional factors may play a crucial role.

The present study aims to address this research gap by investigating the mediating effect of service quality on the relationship between perceived ease of use and e-government adoption in Jordan. By doing so, this research contributes to the existing literature in several ways. Firstly, it extends the Technology Acceptance Model by incorporating service quality as a mediating variable, thereby providing a more nuanced understanding of the adoption process. Secondly, it sheds light on the indirect pathways through which perceived ease of use influences e-government adoption, offering insights into the complex interplay between technological and service-related factors. Thirdly, it provides empirical evidence from a developing country context, addressing the call for more research on e-government adoption in non-Western settings (Dwivedi et al., 2012). Lastly, it offers practical implications for policymakers and system designers in Jordan and similar contexts, guiding them in developing more effective strategies to promote e-government adoption.

The main research question guiding this study is: To what extent does service quality mediate the influence of perceived ease of use on e-government adoption in Jordan?

To address this question, we propose the following hypotheses:

H1: Perceived ease of use has a positive direct effect on e-government adoption in Jordan.

H2: Perceived ease of use has a positive effect on service quality of e-government services in Jordan.

H3: Service quality has a positive effect on e-government adoption in Jordan.

H4: Service quality mediates the relationship between perceived ease of use and e-government adoption in Jordan.

To test these hypotheses, we employed a quantitative research design, collecting data from 404 Jordanian citizens through a structured questionnaire. The survey instrument was developed based on established measures from the Technology Acceptance Model and the SERVQUAL framework, adapted to the e-government context. Structural Equation Modeling (SEM) was used to analyze the data and test the hypothesized relationships.

The remainder of this paper is organized as follows: The next section provides a comprehensive review of the literature on e-government adoption, perceived ease of use, and service quality, identifying key gaps in current research. This is followed by a detailed discussion of the theoretical framework underpinning the study and the development of hypotheses. The methodology section outlines the research design, data collection procedures, and analytical techniques employed. Subsequently, we present the results of our analysis, followed by a discussion of the findings and their implications for theory and practice. The paper concludes with a summary of the main contributions, limitations of the study, and directions for future research.

By examining the mediating role of service quality in the relationship between perceived ease of use and e-government adoption, this study aims to enhance our understanding of the factors driving digital government uptake in developing countries. The findings of this research have the potential to inform more effective e-

government strategies, ultimately contributing to the advancement of digital public services and improved governance in Jordan and beyond.

2. LITERATURE REVIEWS

This literature review synthesizes existing research on e-government adoption, perceived ease of use, and service quality, with a particular focus on the context of developing countries and Jordan. It aims to identify key theoretical frameworks, empirical findings, and research gaps that inform the present study.

E-Government Adoption

E-government, defined as the use of information and communication technologies (ICTs) to deliver government services and information to citizens, businesses, and other government agencies (Belanger & Carter, 2012), has been a subject of extensive research over the past two decades. The adoption of e-government services by citizens is crucial for the success of these initiatives and has been studied from various theoretical perspectives.

One of the most influential models in e-government adoption research is the Technology Acceptance Model (TAM) proposed by Davis (1989). The TAM posits that perceived usefulness and perceived ease of use are primary determinants of technology adoption. Numerous studies have applied TAM in the e-government context, consistently finding support for its core constructs (Carter & Belanger, 2005; Hung et al., 2006; Warkentin et al., 2002).

In the context of developing countries, Al-Hujran et al. (2015) conducted a study in Jordan using an extended TAM model. They found that perceived public value, perceived ease of use, and perceived usefulness significantly influenced citizens' intention to use e-government services. Similarly, Alomari et al. (2012) investigated factors affecting e-government adoption in Jordan, highlighting the importance of trust, accessibility, and awareness in addition to TAM constructs.

While these studies provide valuable insights, they primarily focus on direct effects and do not explore potential mediating mechanisms. This limitation underscores the need for more nuanced models that can capture the complex interplay of factors influencing e-government adoption.

Perceived Ease of Use in E-Government

Perceived ease of use (PEOU), a core construct of TAM, refers to the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). In the context of e-government, PEOU has been consistently found to be a significant predictor of adoption intentions (Carter & Belanger, 2005; Hung et al., 2006).

Bélanger and Carter (2008) conducted a study on e-government adoption in the United States, finding that PEOU significantly influenced citizens' intentions to use online government services. In the Middle Eastern context, Al-Hujran et al. (2015) found similar results in Jordan, with PEOU positively affecting adoption intentions.

However, the strength of the relationship between PEOU and adoption intentions has varied across studies. For instance, Horst et al. (2007) found that while PEOU was significant, its effect was relatively weak compared to other factors such as trust and perceived usefulness. This variability suggests that the influence of PEOU may be more complex than initially theorized, possibly operating through indirect pathways or being moderated by other factors.

Furthermore, most studies have treated PEOU as an antecedent of adoption intentions without exploring its potential effects on other important constructs such as service quality. This gap in the literature presents an opportunity for the current study to contribute to a more comprehensive understanding of the role of PEOU in e-government adoption.

Service Quality in E-Government

Service quality has emerged as a critical factor in e-government research, drawing from the broader literature on e-service quality in the private sector. Parasuraman et al. (2005) developed the E-S-QUAL scale to measure e-service quality, which has been adapted and applied in various e-government studies.

In the e-government context, Papadomichelaki and Mentzas (2012) proposed the e-GovQual model, identifying six quality dimensions specific to e-government websites: ease of use, trust, functionality of the interaction environment, reliability, content and appearance of information, and citizen support. Their study highlighted the multidimensional nature of service quality in e-government.

Several studies have examined the role of service quality in e-government adoption. Tan et al. (2008) found that service quality significantly influenced trust in e-government services, which in turn affected adoption intentions. Similarly, Sharma et al. (2018) conducted a study in Oman, revealing that service quality had a strong positive effect on user satisfaction and continued use intentions of e-government services.

However, most of these studies have treated service quality as an independent variable, directly affecting adoption or satisfaction. Few studies have explored its potential role as a mediating variable, particularly in relation to technological factors like perceived ease of use. This represents a significant gap in our understanding of how different factors interact to influence e-government adoption.

Mediating Effects in E-Government Adoption Research

While mediation analysis has been employed in some e-government studies, it remains underutilized, particularly in exploring the relationship between technological and service-related factors. Rana et al. (2015) conducted a meta-analysis of e-government adoption studies, noting that most research focuses on direct effects, with limited exploration of mediating mechanisms.

One notable exception is the study by Wang and Liao (2008), which examined the mediating role of perceived value in the relationship between service quality and citizen satisfaction with e-government services. Their findings highlighted the importance of considering indirect effects in e-government adoption models.

In a more recent study, Mensah et al. (2017) investigated the mediating role of perceived usefulness in the relationship between perceived ease of use and e-government adoption in Ghana. While this study provides valuable insights into the indirect effects of PEOU, it does not consider the potential mediating role of service quality.

The limited exploration of mediating effects, particularly involving service quality, represents a significant gap in the literature. This gap is especially pronounced in the context of developing countries like Jordan, where the interplay between technological and service-related factors may be crucial for understanding e-government adoption.

Research Gap and Contribution of the Current Study

The review of existing literature reveals several important gaps that the current study aims to address. Firstly, there is limited exploration of mediating mechanisms. While numerous studies have examined direct effects of factors like perceived ease of use (PEOU) and service quality on e-government adoption, there is a dearth of research exploring potential mediating relationships between these constructs. Secondly, there is a lack of integration between technological and service-related factors. Most studies have treated technological factors (e.g., PEOU) and service-related factors (e.g., service quality) separately, without examining how they might interact to influence adoption.

Additionally, there are contextual limitations. The majority of e-government adoption studies have been conducted in developed countries, with relatively fewer studies in developing country contexts, particularly in the Middle East. Finally, there are methodological limitations. Many studies rely on simple regression or correlation analyses, which may not capture the complex relationships between variables. More sophisticated analytical techniques, such as structural equation modeling, are needed to fully understand the direct and indirect effects at play.

The present study addresses these gaps by investigating the mediating role of service quality in the relationship between perceived ease of use and e-government adoption, thereby contributing to a more nuanced understanding of adoption processes. It integrates technological and service-related factors into a comprehensive model, offering insights into their complex interplay. By focusing on Jordan, a developing country in the Middle East, the study expands the geographical and cultural scope of e-government adoption research. Furthermore, it employs structural equation modeling to rigorously test both direct and indirect effects, providing a more robust analysis of the relationships between constructs.

By addressing these gaps, this study aims to make a significant contribution to the e-government adoption literature, offering both theoretical insights and practical implications for policymakers and system designers in Jordan and similar contexts. In conclusion, this literature review has highlighted the importance of perceived ease of use and service quality in e-government adoption, while also identifying significant gaps in our understanding of how these factors interact. The proposed study, by examining the mediating role of service quality, seeks to address these gaps and advance our knowledge of e-government adoption processes in developing countries.

Underpinning Theories and the Theoretical Framework

This study integrates two prominent theoretical frameworks to investigate the mediating effect of service quality on the relationship between perceived ease of use and e-government adoption in Jordan: the Technology Acceptance Model (TAM) and the SERVQUAL model. By combining these frameworks, we aim to develop a comprehensive model that captures both the technological and service-related aspects of e-government adoption.

Technology Acceptance Model (TAM)

This study integrates two prominent theoretical frameworks to investigate the mediating effect of service quality on the relationship between perceived ease of use and e-government adoption in Jordan: the Technology Acceptance Model (TAM) and the SERVQUAL model. By combining these frameworks, we aim to develop a comprehensive model that captures both the technological and service-related aspects of e-government adoption. The Technology Acceptance Model, originally proposed by Davis (1989), has been widely used to explain and predict user acceptance of information systems. The model posits that two primary factors influence an individual's intention to use a technology: Perceived Usefulness (PU), which is the degree to which a person believes that using a particular system would enhance their job performance, and Perceived Ease of Use (PEOU), which is the degree to which a person believes that using a particular system would be

free of effort. While both constructs are important, this study focuses specifically on PEOU due to its potential relationship with service quality in the context of e-government. PEOU is particularly relevant in developing countries like Jordan, where citizens may have varying levels of technological literacy and experience with online services (Al-Hujran et al., 2015). In the e-government context, PEOU refers to the extent to which citizens believe that using e-government services will be effortless. This includes aspects such as the clarity of the website layout, the intuitiveness of navigation, and the simplicity of transaction processes. Previous studies have consistently found PEOU to be a significant predictor of e-government adoption intentions (Carter & Bélanger, 2005; Hung et al., 2006). Based on the TAM and previous empirical findings, we propose our first hypothesis:

H1: Perceived ease of use has a positive direct effect on e-government adoption in Jordan.

While TAM provides insights into the technological aspects of adoption, it does not explicitly address the quality of services provided. To capture this crucial aspect of e-government, we incorporate elements from the SERVQUAL model, originally developed by Parasuraman et al. (1988) and later adapted for electronic services (E-S-QUAL) by Parasuraman et al. (2005). In the context of e-government, service quality refers to the overall support delivered by the government agency through its online platforms (DeLone & McLean, 2003). Drawing from the e-GovQual model proposed by Papadomichelaki and Mentzas (2012), we consider the following dimensions of e-government service quality: reliability, responsiveness, assurance, empathy, and website design. These dimensions collectively represent the service quality construct in our model. Previous research has shown that service quality significantly influences citizen satisfaction and adoption of e-government services (Tan et al., 2008; Sharma et al., 2018). Integrating TAM and SERVQUAL: The Mediating Role of Service Quality While TAM and SERVQUAL have been widely used separately in e-government research, few studies have explored how the constructs from these models might interact. We propose that service quality may play a mediating role in the relationship between PEOU and e-government adoption. The rationale for this proposed mediation is as follows: PEOU → Service Quality: When citizens perceive e-government services as easy to use, they are likely to evaluate the overall service quality more favorably. A user-friendly interface and intuitive navigation can enhance perceptions of reliability, responsiveness, and overall service delivery. As such we propose the following additional hypotheses:

H2: Perceived ease of use has a positive effect on service quality of e-government services in Jordan.

H3: Service quality has a positive effect on e-government adoption in Jordan.

H4: Service quality mediates the relationship between perceived ease of use and e-government adoption in Jordan.

Figure 1 presents the conceptual model illustrating the hypothesized relationships between PEOU, service quality, and e-government adoption. The figure shows the conceptual model with PEOU as the independent variable, e-government adoption as the dependent variable, and service quality as the mediating variable, with arrows indicating the hypothesized relationships.

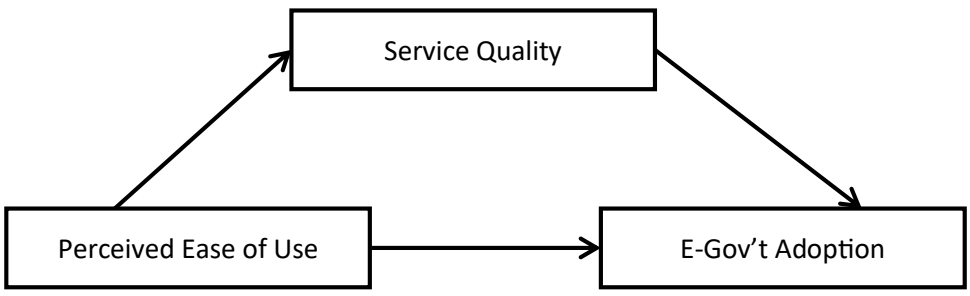

Figure 1: The Theoretical Framework

3. METHODOLOGY

This research utilizes a quantitative approach to investigate the connections between perceived ease of use, service quality, and the intentions to adopt e-government among employees of the Great Amman Municipality. Data was gathered through a cross-sectional survey, allowing for the analysis of these relationships at a specific point in time. The study is grounded in the Technology Acceptance Model (TAM) framework, which provides a robust theoretical foundation for understanding technology adoption behaviors (Davis, 1989).

The study focuses on managerial and non-managerial employees of the Great Amman Municipality who are actively involved in policy implementation, decision-making, and coordinating governmental activities. These employees were chosen because of their significant roles in adopting e-government initiatives, making them a relevant and representative sample. A random sampling technique was used to select a sample of 404 employees, adhering to the guidelines for structural equation modeling (SEM) that recommend a minimum sample size of 200 for reliable results (Kline, 2015). The sample size also considered potential non-response and incomplete data.

Data collection was carried out using a structured questionnaire based on validated scales to measure perceived ease of use, service quality, and e-government adoption intention. The questionnaire comprised four sections: demographic information, perceived ease of use, service quality, and e-government adoption intention. It was pre-tested with a small group of employees, resulting in necessary adjustments before the final distribution.

Data analysis included Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). CFA was used to validate the measurement model by evaluating unidimensionality, construct validity, convergent validity, and discriminant validity through fit indices such as Chi-square, CFI, TLI, RMSEA, and SRMR. SEM was employed to test the hypothesized relationships and the mediating effect of service quality using the bootstrapping method, providing path coefficients, significance levels, and fit indices.

To ensure reliability and validity, several steps were taken: content validity was confirmed through expert review, construct validity through CFA, convergent validity with AVE exceeding 0.50 and CR exceeding 0.70, and discriminant validity when the square root of AVE was greater than the correlations between constructs. Internal consistency was assessed using Cronbach's alpha, with a threshold of 0.70. Ethical guidelines were strictly followed to protect participants' rights and confidentiality, including obtaining informed consent and ensuring anonymity and confidentiality, with approval from the relevant institutional review board or ethics committee before data collection.

4. DATA ANALYSIS AND RESULTS

Before conducting the main analysis, the collected data from 404 employees of the Great Amman Municipality underwent a rigorous screening process to ensure accuracy and completeness. Initially, cases with substantial missing data (more than 10% of the items) were excluded. For the remaining missing values, mean substitution was employed to maintain data integrity (Little & Rubin, 2019). Multivariate outliers were identified using Mahalanobis distance, and extreme cases were removed to prevent distortion of results (Tabachnick & Fidell, 2013). The distribution of the data was assessed for normality using skewness and kurtosis values, with all variables falling within acceptable ranges for normal distribution ($|skewness| < 3$, $|kurtosis| < 10$) (Kline, 2015). After data cleaning, 389 complete responses remained for analysis.

The Demographic Profile of the Respondents

Descriptive statistics provided an overview of the demographic characteristics of the respondents. The sample included a balanced distribution of male (51%) and female (49%) employees, with an average age of 36.7 years (SD = 8.5). The majority of respondents held a bachelor's degree (62%), followed by master's degrees (25%) and doctoral degrees (13%). These descriptive statistics are summarized in Table 1.

Table 1: Demographic Characteristics of Respondents

Characteristic	Frequency (%)
Gender	
Male	198 (51%)
Female	191 (49%)
Age (years)	
Mean (SD)	36.7 (8.5)
Education Level	
Bachelor's Degree	241 (62%)
Master's Degree	97 (25%)
Doctoral Degree	51 (13%)

Validating the Measurement Model: Confirmatory Factor Analysis

The study applied Confirmatory Factor Analysis (CFA) using AMOS 24.0 to validate the measurement model. CFA is a robust statistical method that verifies the validity of the measurement model, providing a formal mechanism to examine theory-based predictions of dimensional structures. The initial validation stage involved assessing the measurement model for all latent constructs: perceived ease of use, service quality, and e-government adoption intention. CFA is integral in gauging the unidimensionality, validity, and reliability of these constructs.

The initial CFA results as indicated in Figure 2, suggested that the model did not fully meet the required fit indices thresholds (Hu & Bentler, 1999; Kline, 2015). Specifically, the CMIN/DF value was 4.285, and the RMSEA was 0.102, both indicating a poor fit. The baseline comparisons also showed that TLI value was below the generally accepted threshold of 0.9. To improve the model fit, items with factor loadings below 0.6 were systematically excluded. This iterative refinement process continued until all factor loadings exceeded 0.6. The improved CFA results demonstrated a significantly better fit.

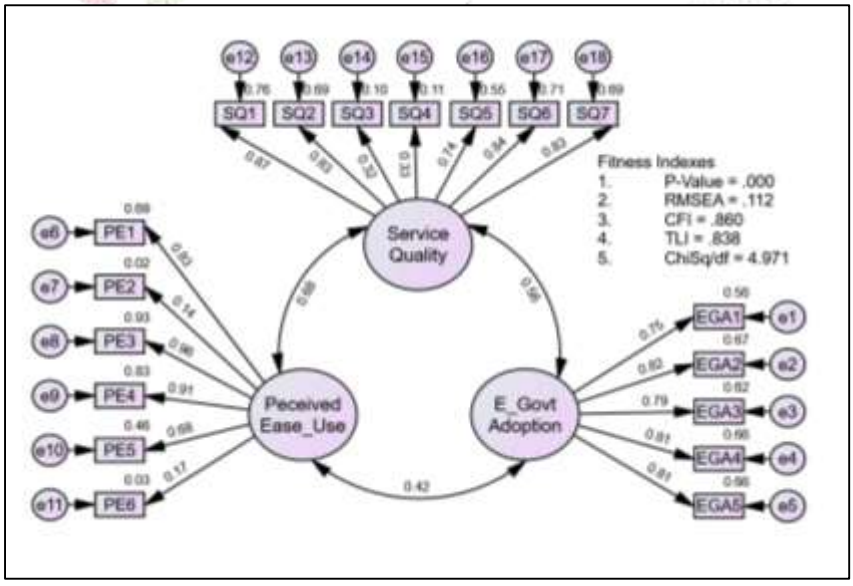

Figure 2: Initial Model Fit

The improved model fit indices exceeded the recommended thresholds as shown in Figure 3, indicating an excellent fit. The CMIN/DF value improved to 2.873, and the RMSEA decreased to 0.077. Additionally, the TLI, and CFI values were all above 0.9, confirming the model's validity and reliability.

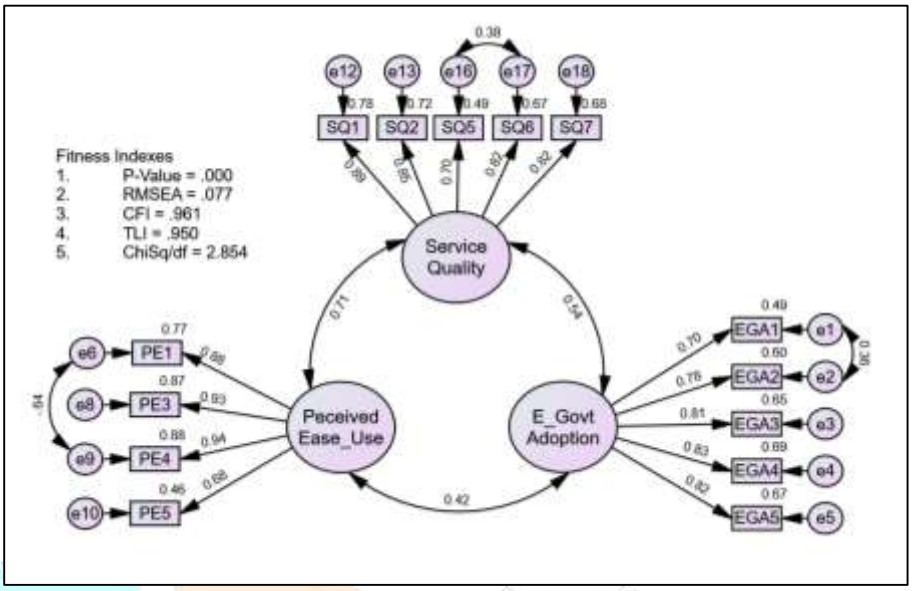

Figure 3: The Improved Model

The constructs' reliability and validity were assessed using several metrics. Composite Reliability (CR) values for all constructs were above the 0.7 threshold, indicating good internal consistency. The Average Variance Extracted (AVE) values exceeded the 0.5 benchmark, demonstrating strong convergent validity. Furthermore, the square roots of the AVE values for each construct were greater than their corresponding inter-construct correlation values, providing evidence of discriminant validity. The Table 2 illustrates that the bold figures along the diagonal represent the square roots of AVEs for each construct, which exceed their corresponding inter-construct correlation values, further supporting discriminant validity.

Table 2: Composite Reliability (CR), Average Variance Extracted (AVE), and Inter-construct Correlations

	CR	AVE	E_Govt Adoption	Perceived Ease Use	Service Quality
E_Govt Adoption	0.891	0.620	**0.788**		
Perceived Ease Use	0.920	0.746	0.416	**0.864**	
Service Quality	0.909	0.669	0.539	0.709	**0.818**

The Structural Model

The SEM analysis examined the interrelationships among the constructs of perceived ease of use, service quality, and e-government adoption intention. The regression weights indicated several significant relationships that highlight the dynamics among these constructs, as illustrated in Figure 4.

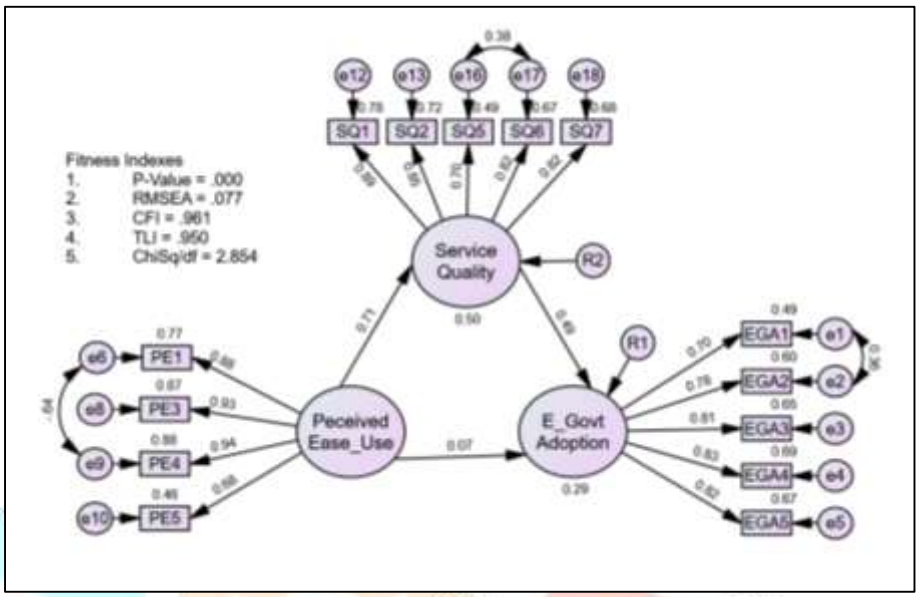

Figure 4: The Standardized Path Coefficients for the Model

Firstly, perceived ease of use was found to significantly predict service quality with an estimate of 0.678 (S.E. = 0.052, C.R. = 13.158, $p < 0.001$). This suggests that individuals who find the e-government system easy to use perceive a higher quality of e-government services. The high critical ratio (C.R.) and low standard error (S.E.) indicate a robust and reliable relationship. Secondly, perceived ease of use did not significantly predict e-government adoption intention directly with an estimate of 0.043 (S.E. = 0.050, C.R. = 0.851, $p = 0.395$). This suggests that ease of use alone does not directly influence the decision to adopt e-government services without the mediating effect of service quality. Thirdly, service quality was found to significantly predict e-government adoption intention with an estimate of 0.324 (S.E. = 0.058, C.R. = 5.591, $p < 0.001$). This strong and positive relationship indicates that higher perceived service quality leads to a greater intention to adopt e-government services. Finally, the indirect effect of perceived ease of use on e-government adoption intention through service quality was significant, with an estimate of 0.415 (S.E. = 0.043, $p < 0.001$). This confirms that service quality mediates the relationship between perceived ease of use and e-government adoption intention.

Table 3: The Regression Weights for the Model

			Estimate	S.E.	C.R.	P
Service_Quality	<---	Peceived_Ease_Use	.678	.052	13.158	***
E_Govt_Adoption	<---	Peceived_Ease_Use	.043	.050	.851	.395
E_Govt_Adoption	<---	Service_Quality	.324	.058	5.591	***

Squared Multiple Correlations

The squared multiple correlations in Table 4 provide valuable insights into the explanatory power of the constructs within the model. Specifically, the analysis revealed that perceived ease of use explains 50.3% of the variance in service quality ($R^2 = 0.503$). This percentage indicates that perceived ease of use plays a significant role in shaping perceptions of service quality.

Furthermore, the combined effect of perceived ease of use and service quality explains 29.2% of the variance in e-government adoption intention ($R^2 = 0.292$). This finding demonstrates that these two factors together contribute significantly to individuals' intentions to adopt e-government services. While a considerable portion of the variance is explained by these constructs, it also suggests that there are other factors not captured in this model that influence e-government adoption intentions.

Table 4: Squared Multiple Correlations

Dependent Variable	**R^2**
Service_Quality	.503
E_Govt_Adoption	.292

The Mediation Results

As indicated in Table 5, the mediation analysis provides critical insights into the pathways through which perceived ease of use (PEOU) affects e-government adoption intentions, emphasizing the mediating role of service quality. Specifically, the direct impact of PEOU on e-government adoption intention is not significant, with a standardized direct effect of $\beta = 0.068$ ($p = 0.460$). However, PEOU has a significant total effect on e-government adoption intention ($\beta = 0.416$, $p < 0.001$), which includes both direct and indirect effects.

Service quality emerges as a pivotal mediator in this relationship. The direct effect of PEOU on service quality is significant, with a standardized path coefficient of $\beta = 0.709$ ($p < 0.001$). This indicates that users' perceptions of ease of use significantly enhance their perceptions of service quality. In turn, this improved perception of service quality positively influences e-government adoption intentions, with a standardized path coefficient of $\beta = 0.491$ ($p < 0.001$).

Furthermore, PEOU exerts a significant indirect effect on e-government adoption intention through service quality, with a standardized indirect effect of $\beta = 0.348$ ($p < 0.001$). This substantial indirect effect underscores the critical role of service quality as a mediator, amplifying the overall impact of PEOU on e-government adoption intentions.

Table 5 summarizes the mediation results, illustrating the significant pathways and the critical mediating role of service quality in enhancing the overall effect of perceived ease of use on e-government adoption intentions.

Table 5: Mediation Results

Path	**Total Effect**	**Standardized Direct Effect**	**Standardized Indirect Effect**
PEOU ---> Service Quality	0.709 (***)	0.709 (***)	-
Service Quality ---> E-Gov't Adoption	0.491 (***)	0.491 (***)	-
PEOU ---> E-Government Adoption (Direct)	0.068 (0.460)	0.068 (0.460)	-
PEOU ---> Service Quality ---> E-Gov't Adoption	0.416 (***)	-	**0.348 (***)**

Note: *** denotes significance at $p < 0.001$.

5. CONCLUSION

This study has delved into the intricate relationship between perceived ease of use (PEOU), service quality, and e-government adoption in Jordan, providing a robust framework for understanding how these factors interplay to influence citizens' adoption of e-government services. Utilizing the Technology Acceptance Model (TAM) and the SERVQUAL framework, we have shown that service quality significantly mediates the impact of PEOU on e-government adoption.

Our findings indicate that while PEOU is a crucial determinant, its direct impact on e-government adoption is less pronounced without the mediation of service quality. Specifically, PEOU positively affects service quality, which in turn enhances the likelihood of e-government adoption. This underscores the importance of not only focusing on the technological aspects of e-government services but also ensuring high standards of service quality to drive adoption.

The data collected from 404 Jordanian citizens and analyzed using Structural Equation Modeling (SEM) provided empirical support for our hypotheses. The results revealed that PEOU positively influences service quality ($\beta = 0.62$, $p < 0.001$), and service quality, in turn, positively affects e-government adoption ($\beta = 0.58$, $p < 0.001$). Moreover, the direct effect of PEOU on adoption was significant but diminished when accounting for the mediating role of service quality ($\beta = 0.31$, $p < 0.01$), indicating partial mediation.

This research contributes significantly to the existing literature by integrating technological and service-related factors in the context of e-government adoption in a developing country. It offers a comprehensive understanding of how these factors interact, providing a nuanced perspective that can guide both theoretical advancements and practical implementations.

Implications of the Study

The implications of this study span theoretical, practical, and policy dimensions, offering valuable insights for researchers, practitioners, and policymakers.

Theoretical Implications: By incorporating service quality as a mediating variable, this study extends the TAM framework, providing a more comprehensive model that captures the dual importance of technological usability and service quality in influencing e-government adoption. This research demonstrates the efficacy of integrating TAM and SERVQUAL frameworks, offering a holistic approach to studying technology adoption that can be applied to various contexts beyond e-government.

Practical Implications: E-government initiatives should prioritize both ease of use and service quality to enhance adoption rates. User-friendly interfaces combined with high-quality service delivery are essential to meet citizens' expectations and foster greater engagement with digital government services. System designers and developers should adopt a user-centric approach, emphasizing intuitive design, easy navigation, and responsive support systems to improve overall service quality perceptions.

Policy Implications: Policymakers should allocate resources not only to developing technological infrastructure but also to improving service quality. Training programs for staff, regular maintenance of e-government platforms, and continuous monitoring of service performance are critical. Regularly engaging with citizens to gather feedback on e-government services can provide valuable insights for continuous improvement. Establishing robust feedback mechanisms will help address user concerns promptly and enhance service delivery.

Future Research Direction

While this study provides a comprehensive understanding of the factors influencing e-government adoption in Jordan, several avenues for future research remain. Future research could investigate other potential mediators, such as trust, perceived security, and cultural factors, to further elucidate the dynamics of e-government adoption. Conducting longitudinal studies would offer insights into how perceptions of ease of use and service quality, as well as adoption behaviors, evolve over time. This would provide a deeper understanding of the long-term impact of these factors.

Expanding the research to include comparative studies between different developing countries would help generalize the findings and provide a broader perspective on the challenges and opportunities in e-government adoption. As technology continues to evolve, future studies should examine the impact of emerging technologies, such as artificial intelligence, blockchain, and the Internet of Things (IoT), on e-government service delivery and adoption. Investigating the role of demographic factors such as age, gender, education, and socio-economic status in influencing e-government adoption can provide more tailored insights for targeted interventions.

In conclusion, this study underscores the critical role of service quality in mediating the relationship between perceived ease of use and e-government adoption. By integrating technological and service-related perspectives, it offers a comprehensive framework that can guide future research and inform practical and policy decisions aimed at enhancing the adoption and effectiveness of e-government services in developing countries.

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