Constructs of E-Governance Satisfaction in Government-Owned and Controlled Corporations: A Factor Analysis

Ilecar G. Millan, Glenne B. Lagura, DPA

University of Mindanao, Philippines

DOI: https://doi.org/10.47772/IJRISS.2026.10100293

Received: 15 November 2025; Accepted: 21 November 2025; Published: 04 February 2026

ABSTRACT

The increasing adoption of digital technologies in public administration emphasizes the role of e-governance in enhancing service delivery, transparency, and citizens' trust. This study examines the constructs of e-governance satisfaction among e-users of government-owned and controlled corporations (GOCCs), with a focus on agencies providing social services, specifically the Government Service Insurance System (GSIS), Social Security System (SSS), Home Development Mutual Fund (HDMF), and Philippine Health Insurance Corporation (PhilHealth). Anchored on the Technology Acceptance Model (TAM) and Public Value Theory, the research employed an exploratory sequential mixed-method design. Qualitative interviews with GOCC representatives informed the development of a validated survey instrument, which was then administered to e-users. Using exploratory factor analysis (EFA), five key constructs of e-governance satisfaction were identified: transparency and real-time updates, user experience and interface, integration and multi-platform support, accessibility and convenience, and privacy and security. These dimensions collectively explain a substantial proportion of user satisfaction and highlight the critical role of secure, transparent, and citizen-centered digital platforms. Findings suggest that strengthening these constructs can enhance trust and confidence in GOCC e-services, contributing to improved governance and public value creation. The study offers a framework for GOCCs and policymakers to refine digital strategies and guide future innovations in service delivery. Moreover, it provides an empirical basis for further comparative studies across different agencies and sectors to advance sustainable e-governance implementation.

Keywords: e-governance, e-user satisfaction, government-owned and controlled corporations, technology acceptance model, public value theory, Philippines

INTRODUCTION

The digitization of government transactions has practically transformed citizens' lives today. When everything can be completed online through countless digital platforms, it is also a call for the government to equip itself and leverage the influence of information and communications technology to improve its performance and fulfil its purpose, and to bring the government closer to the public. With the integration of ICT (Kumar, Praveen, & Rahma, 2023), e-governance was introduced, allowing the government to create an easy-access portal that enhances accessibility, transparency in public administration, and the integration of administrative and social services for the public (Arabadzhyiev et al., 2021). E-governance has developed and become an imperative means for governments across the globe to engage with citizens. Consequently, Bajar (2020) agreed that research is highly consistent in showing the positive effects of e-Governance, particularly in increasing administrative efficiency, transparency, accountability, and public trust. These factors have also been indicators of user satisfaction, which is the primary focus and purpose of e-Governance.

The e-governance model of every nation is designed to meet the needs of citizens and other stakeholders, who are the principal recipients of service digitization (Singh, 2023). Myint (2022) also suggests that the users' satisfaction with e-Government services remains a key research theme. Hence, as the recipient's needs evolve along with the various concepts of digital advancements, there is also still a need for the concept of e-governance to develop and progress, especially when it is implemented in various agencies and departments that serve and address concerns through the services they provide to citizens and stakeholders.

Meanwhile, along with the implementation of e-governance, there is satisfaction among its e-users, the citizens. The development of e-governance is still constrained by impediments, as stipulated in the Five Categories Classification (FCC) Model recognized by Alassaf, Zaien, and Oláh (2020), including political, social, technological, organizational, and financial factors. Initially, despite developing countries capitalizing more on e-governance resolutions, political uncertainty and several leadership issues hinder its success (Gu et al., 2021). Second is social factors, including the service quality of e-governance implementation, which concerns the country's varied population, inadequate digital infrastructure in rural areas, limited digital knowledge, and weak data protection principles (Kala et al., 2024). Meanwhile, Baeuo, Rahim, and Alaraibi (2017) believed that the majority of failures in former e-government initiatives can be attributed to technological factors, including security, infrastructure, technical problems, hard and soft gaps, the digital divide, internet usage, and skills. Organizational factors also affect e-governance implementation due to resistance or risk-avoidance cultures to change among public institutions and agencies, or the so-called institutional resistance, as referred to by Toots (2019). Lastly, there are the financial factors that make it difficult to secure and maintain funding for e-governance projects, along with their long-term timelines, which put high pressure on the public sector to allocate its expenditure and resources (Kovacova et al., 2019).

In South Africa, the government leveraged ICT integration to enhance the delivery of goods and services. However, Blom and Uwizeyimana (2020) found that the government failed to achieve its objective of establishing an inclusive ICT infrastructure in South Africa due to the prevalence of poverty and discrimination, which remain significant challenges in rural areas. In addition, there is the citizens' lack of internet access and smart devices (Khan & Khan, 2018), and of electricity (Blom & Uwizeyimana, 2020). To alleviate the barriers of e-governance implementation among urban municipalities in South Africa, Masengu, Muridzi, and Meyer (2021) revealed that they make use of the presence of a website, uptake and usage of ICT, interventions in speeding online services, an e-governance framework to advance online service delivery for urban municipalities, and a whole ecosystem.

Meanwhile, Lu (2018) identified challenges in the implementation of e-government in China, including government-related factors, technological factors, and institutional and organizational factors, as well as citizens' acceptance. Regarding the Chinese Social Credit System (SCS), Chen and Grossklags (2023) state that accessibility challenges occur extensively on SCS websites, complicating navigation and use for specific user groups. To address these challenges, Zongpu and Samsu (2023) identified factors that have prompted the development and implementation of e-government services in China. These include citizen trust, policy coherence in e-services, service effectiveness and usefulness, and user satisfaction.

In a study by Khalid and Lavilles (2019) that assessed the maturity of local e-government websites in the Philippines, the researchers found that 49 of 150 assessed LGU websites were inaccessible. The findings implied that all accessible local e-government websites were still in the early stages of development, and many towns and cities do not yet have independent websites. Bajar (2020) added that, in assessing 21 government websites, it was observed that there is no fundamental system of checks and reviews, making these digital websites vulnerable to politicization. To address the identified barriers in local government websites, De Castro and De Castro (2022) reported that their initiatives include partnerships with National Government Agencies (NGAs), technological advancements, human resource development, and linkages with other concerned agencies.

The literature above identifies various weaknesses and coping mechanisms across the dimensions of e-governance implementation. As specified, the e-governance model differs accordingly depending on the needs of citizens and stakeholders. Hence, the study identified a gap in the literature and suggested delving deeper and placing greater emphasis on the constructs of e-governance and e-user satisfaction, particularly in GOCCs, which are responsible for meeting public needs and providing services. As the study explores the factors implementing e-governance among GOCCs delivering social services to the public, the researcher adheres to the conceptual framework for exploratory factor analysis (EFA) presented in Figure 1.

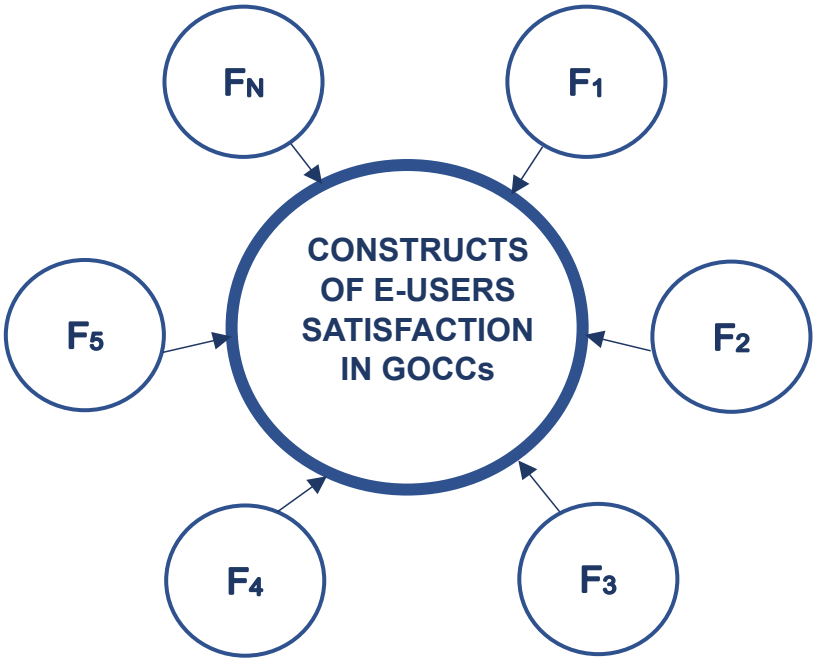

Figure 1. Conceptual Framework of the Study

Moreover, the study is anchored to the Technology Acceptance Model (TAM) introduced by Davis (1989). The model is designed to demonstrate how users come to take and utilize a technology. This model has three factors, including perceived usefulness (PU), perceived ease of use (PEOU), and attitude towards usage (ATU) (Davis, 1989). This model applies to the concept of government-to-citizen (G2C), as presented by Sebetci (2015), to provide e-government services that regulate the implementation of student loan services for Turkish university students. Along with TAM is the public value theory, first introduced by Mark Moore in 1995, which implies citizens' collective expectations regarding government and public services. The implications of public value theory in e-governance include constructs such as information quality, service limitations, user orientation, efficiency, openness, and awareness, as well as direct influence on the communicative intention to adopt e-government services (Mensah, Zeng, & Mwakapesa, 2022).

The contextual terms used in this study include GOCCs, e-governance, and constructs. Government-owned and controlled corporations (GOCCs) according to Presidential Decree No. 2029 are " the stock or a non-stock corporation, either executing governmental or exclusive functions, which is straightly chartered by special law or, if prepared under the general corporation law, is owned or controlled by the government directly or indirectly over a primary or subsidiary corporation, the degree of at least a mainstream of its outstanding capital stock or of its outstanding voting capital stock." E-governance refers to the use of ICT by governments to deliver services to citizens more effectively and efficiently. At the same time, constructs refer to the ideas and concepts identified in the satisfaction of e-users in the implementation of e-governance among GOCCs.

Furthermore, the study focuses on the identification and exploration of the constructs and ideas of e-user satisfaction in the implementation of e-governance in government-owned and controlled corporations (GOCCs), particularly to provide an e-governance framework for the implementation of their e-services. Thus, it is significant to conduct the study to address the identified gap between the constructs of e-users' satisfaction with the implementation of e-governance and the extent to which these are accepted or approved by its end users – the citizens. In this study, an exploratory factor analysis (EFA) will be employed to uncover the specific constructs of the social-services-offering GOCCs' e-user satisfaction in the implementation of e-governance on their end, as they hold a different perspective from various departments, particularly in providing social services to the public.

The study seeks to explore the constructs of e-user satisfaction with the implementation of e-governance among government-owned and controlled corporations (GOCCs) that deliver social benefits to citizens. Moreover, the research objectives can be outlined as follows: (1) to discover the experiences of the GOCCs in implementing e-governance; (2) to categorize the implementing e-governance factors among GOCCs; and (3) to propose an implementing e-governance framework for GOCCs.

Globally, the study's results can contribute to SDG 9, which aims to develop a robust infrastructure, encourage inclusive and sustainable industrialization, and advance innovation by exploring the implementation factors of e-governance from the perspective of GOCCs. The conduct of the study also involves GOCCs, citizens, end users, policymakers, and future researchers. For GOCCs, they will be able to share their constructs of e-user satisfaction with the implementation of e-governance from their own viewpoints, as these agencies provide social services to the public. For the citizens and end-users, the study will determine if the identified constructs are acceptable and meet their satisfaction. For policymakers, the study will provide a basis for policy modifications and interventions to enhance and develop the existing policies. For future researchers, the research can be expanded or applied across various departments and agencies to assess their e-governance implementation using the identified constructs.

Nonetheless, the study's conduct is limited to the constructs of e-user satisfaction in the implementation of e-governance among GOCCs. The design of the study is exploratory factor analysis (EFA), which caters to both qualitative and quantitative data. Qualitative data were initially collected from the identified GOCC representatives, who shared possible constructs of e-user satisfaction in implementing e-governance in their respective offices. After the constructs were categorized, end-users of the e-governance services conferred whether the identified constructs are acceptable and meet their satisfaction. The GOCCs participating in the study include only those that provide social services to citizens, particularly the Government Service Insurance System (GSIS), Home Development Mutual Fund (HDMF), Philippine Health Insurance Corporation (PhilHealth), and Social Security System (SSS) in Davao del Norte. Thus, other GOCCs not mentioned were not included.

METHODS

This chapter presents the research methods and procedures used to conduct the study. It describes the research design, locale, respondents, sampling techniques, research instrument, data-gathering procedures, and the statistical treatment used. The methods were carefully selected to ensure that the data collected accurately address the objectives of the study and provide valid and reliable findings on the constructs of e-governance satisfaction among GOCCs' digital platform e-users.

Study Participants

To explore the constructs of e-governance satisfaction among GOCCs in Davao del Norte, the researcher gathered data from the identified respondents in the GOCCs' government financial institutions sector, particularly the social security institutions. These institutions include the Government Service Insurance System (GSIS), the Home Development Mutual Fund (HDMF), the Philippine Health Insurance Corporation (PhilHealth), and the Social Security System (SSS).

For the qualitative phase of the study, a total of twelve (12) participants were selected from various Government-Owned and Controlled Corporations (GOCCs) within the province of Davao del Norte. Specifically, three (3) key informants were selected from each of the four participating GOCC offices: PhilHealth and GSIS in Tagum City, and SSS and HDMF in Panabo City. The participants share their experiences as end-users of the system and its applications, particularly in implementing e-governance in their institution. Participants were chosen based on the following criteria: regular employees who have been employed in the office for more than three years; regular employees holding a supervisory position in the organization; currently using and implementing e-governance systems in their office; and who have agreed to participate in the study. Non-regular employees are excluded from the research participants.

For the collection of quantitative data, 400 respondents participated in the study, with 100 from each of the four identified GOCC offices. Quantitative data were collected using structured survey questionnaires. The construction of the questionnaire was based on the findings from the qualitative data analysis. Specifically, the dimensions identified in the qualitative data analysis served as the basis for designing the questionnaire. The questionnaire included questions designed to capture the key aspects and dimensions derived from the qualitative analysis. These dimensions served as the foundation for outlining the questionnaire's content. This questionnaire has also undergone validation by experts before its actual implementation. Furthermore, the participants of the quantitative phase of the study were the e-users of the e-governance services of each identified GOCC. E-users must have the following inclusive criteria: member and/or contributor of the GOCC for more than 1 year; using

the e-governance services of the organization not later than 1 month; and have agreed to participate in the study. E-users who were not using the actual application and/or website of a particular GOCC were not considered respondents in the study.

Materials and Instruments

In the qualitative phase, the researcher utilized an interview guide questionnaire to collect primary data from selected respondents. This tool aims to explore the constructs of e-user satisfaction in e-governance implementation among GOCCs in Davao del Norte through open-ended questions that allow detailed responses. Before the interviews, experts reviewed and validated the questionnaire to ensure its relevance and reliability. The guide includes a main question to guide the discussion, followed by related questions that explore specific factors of e-user satisfaction. Probing questions were also used to encourage more comprehensive responses.

Once data from the primary interview is gathered and categorized, the quantitative phase of the research is employed. Quantitative data for this study were collected through a survey questionnaire. A 5-point Likert scale labeled from 5 “Strongly Agree” to 1 “Strongly Disagree”. The construction of the questionnaire, particularly the constructs of e-users' satisfaction with e-governance implementation in GOCCs, was informed by findings from the qualitative data analysis—the categorized constructs served as the foundation for outlining the questionnaire's content. Furthermore, the survey questionnaire underwent a comprehensive validation process, including review and investigation by qualified professionals. This thorough evaluation aims to establish the appropriateness of the survey items for inclusion in the research instrument.

Design and Procedure

The design of this study was focused on an exploratory sequential mixed-methods research design. Mixed-methods research combines qualitative and quantitative data collection and analysis within a single study (Creswell & Clark, 2017). This research approach involves combining qualitative and quantitative results to deliver a more thorough and comprehensive response to the research inquiry.

An exploratory sequential mixed-methods design is a process characterized by an initial qualitative phase of data collection and analysis, followed by a quantitative phase, and a concluding stage of integrating data from the two distinct aspects. This research design allows researchers to first explore the phenomena of interest qualitatively before quantifying and analyzing the gathered data.

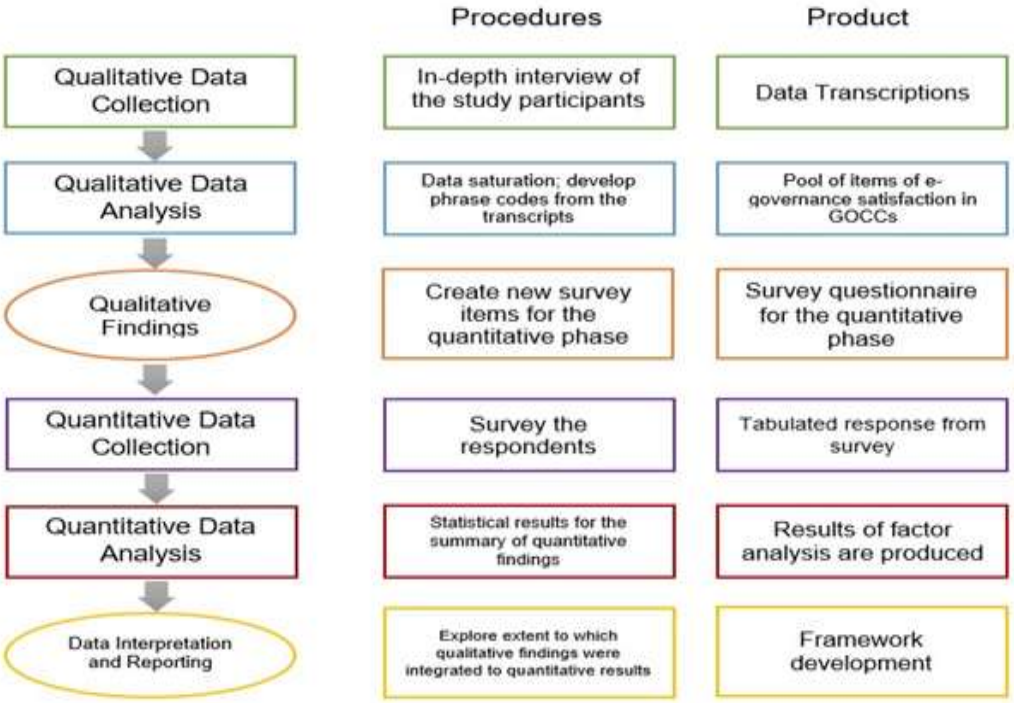

Figure 2. The Exploratory Sequential Mixed-methods Process (Patel & Moitra, 2021)

Figure 2 shows the exploratory sequential mixed-methods procedure for the underlying constructs influencing e-user satisfaction in e-governance implementation in GOCCs in Davao del Norte. It shows the step-by-step process of the study, including the procedures and products of each phase.

Initially, the researcher conducted a Key Informant Interview with experts and authorities to generate themes that informed the development of the research instrument, along with the factors identified in the literature review. Through this discussion, the researcher was able to augment the list of variables that affect the e-governance satisfaction in GOCCs. Afterward, the researcher finalized the gathered themes from the literature and the interviews to develop the research instrument.

Second, the questionnaire underwent expert and validator review and correction. After the survey questionnaire is reviewed, checked, and graded by the panel of internal and external evaluators, the researcher immediately secured an endorsement letter from the Dean of the Graduate Education of the University, signaling approval to conduct the study. After complying with the UMERC requirements, the researcher obtained a UMERC certificate confirming that the study had been thoroughly reviewed and was ready to be administered.

Third, the researcher informed and adequately directed the participants about the study and discussed with them the filling out of digital informed consent. After they agreed to participate of their own volition, they were encouraged to sign the informed consent form. The acquisition of an informed process in research is essential, as it signifies that participants were provided with the necessary information and the freedom to decide whether to participate in this undertaking.

Fourth, after the researcher administered the survey questionnaire to the target respondents, the collected data were tabulated, analyzed, and statistically interpreted. As to the collected data, the responses' information was handled with the highest confidentiality and total anonymity. The specific identities of the respondents used were not reported in any reports, presentations, or publications resulting from the research project. All study information was stored in a password-protected folder. The only person who can view the files is the principal investigator. The acquired data will be stored on file for three (3) years after the research project is finished, after which it will be securely deleted to prevent further use, disclosure, or access by unauthorized parties unless otherwise required by law.

After the collected quantitative data were analyzed, this integration enabled the study to develop a robust framework that captured the key constructs of e-governance satisfaction in GOCCs, ensuring both depth and generalizability of the findings.

Furthermore, the following statistical tools were used to interpret the collected data. Kaiser-Meyer-Olkin (KMO) measures how suited the data is for factor analysis. The test evaluates the model's overall sampling efficiency and the sampling efficiency for each variable. The statistical method quantifies how much of each variable's variance may be common variance. The more readily the data lent themselves to factor analysis, the lower the fraction.

Another tool used was the Initial eigenvalue (1.0 above). It is a particular scalar used in matrix multiplication. According to the Kaiser Criterion, Eigenvalues help choose or determine a factor. It is a measure of the number of factors. It should only be considered a factor if eigenvalues are more significant than one; otherwise, it should not be considered a factor.

VARIMAX rotation was also used as a statistical tool in the study. It is an essential second step in Factor Analysis and Principal Component Analysis. There are infinite initial or provisional factors in the first step of the factor analysis. Varimax rotation is a type of factor rotation that transforms the original factors into new, more interpretable ones. Varimax rotation, also known as Kaiser-Varimax rotation, optimizes the variance of the squared loadings, where "loadings" refers to correlations between variables and factors. It often results in high factor loadings for a smaller subset of the variables and low factor loadings for the remaining variables. All remaining components have eigenvalues greater than 1 (Stevens, 1994, p. 10). Simply put, the outcome is that a few key factors are highlighted, making the findings easier to understand.

Another statistical used in the study was the Scree plot, the graphical presentation used in factor analysis. The eigenvalues are plotted on the axis of a scree plot, and the number of components is plotted on the x-axis. It

consistently shows a declining curve. The number of components the analysis should produce is indicated by the "elbow," where the curve's slope visibly levels off.

Thematic analysis was also used to analyze qualitative data. It is typically used to describe a collection of texts, such as transcripts or interviews. The researcher carefully analyzes the data to find common themes, concepts, topics, and patterns of meaning.

Lastly, Bartlett's test of sphericity was also used as it compares the correlation matrix (a matrix of Pearson correlation) to the identity matrix. It checks whether any variables can be summarized by factors that overlap.

On the other hand, the researcher also adhered to all ethical standards in handling the study participants and data obtained following the guidelines established by the University of Mindanao Ethics Review Committee (UMERC). The researcher ensured that the study site was secured and that permission was obtained from the relevant authorities/organizations. The personal and professional information of the respondents required for the study was kept private, and their data confidentiality was maintained. After complying with all the requirements set by the Ethics Review Committee, the researcher received the UMERC Certificate with UMERC Protocol No. UMERC-2025-110, which certified the implementation of the protocols and submission of related documents set by the office.

RESULTS AND DISCUSSION

This chapter presents the results of the data analysis, identifying the factors affecting the constructs of e-governance satisfaction in GOCCs. Data were collected through direct surveys, using an officially validated questionnaire and an exploratory factor analysis. Data reduction analysis shows statistical details.

The data analysis from interviews conducted across four government-owned and controlled corporations (GOCCs) in Davao del Norte served as the foundation for developing the survey questionnaire. Through the qualitative phase, key themes and recurring patterns related to e-user satisfaction in e-governance implementation were identified. These insights guided the formulation of an initial 100-item survey, ensuring that each item reflected the actual experiences, perceptions, and concerns of e-governance users within the participating GOCCs. The complete list of the 100-item survey is presented in Table 1.

Furthermore, to ensure that the questionnaire accurately captures the intended constructs and maintains both content validity and reliability, the 100-item instrument underwent expert and validator review. These experts evaluated each item based on its clarity, relevance, and alignment with the study's objectives. Their feedback was used to refine and improve the questionnaire, eliminating redundant or unclear statements and retaining only those that effectively measure the components of e-user satisfaction. As a result, the validated 81-item questionnaire now represents a more concise, coherent, and comprehensive tool for assessing e-user satisfaction. The retained items provide a balanced coverage of all major indicators related to e-governance service quality and user experience.

Table 1. 100-Item Survey Statements from Qualitative Phase

Item No.	Survey Item
1	I can easily access e-governance platforms on various devices (web, mobile app, SMS).
2	E-governance services are available 24/7, making it easier to access services anytime.
3	The mobile app allows me to access all the necessary information easily.
4	The app/platform is responsive and functions well on all devices.
5	The platform is optimized for use on mobile devices, ensuring accessibility on the go.

6	I can access the e-governance platform through multiple devices such as smartphones, tablets, and computers.
7	The platform provides a seamless experience across various devices (iOS, Android, web).
8	I find it convenient that the platform works across different operating systems (Windows, Android, iOS).
9	I can access and use all of the platform's features without experiencing compatibility issues.
10	The platform's design allows for easy switching between tasks (e.g., checking benefits, making payments).
11	I find the online registration process to be quick and convenient.
12	I do not need to visit a physical office because I can complete transactions online.
13	I am able to make transactions from home, which saves me time and effort.
14	The digital services offered save me from long queues at the office.
15	I can make payments, check records, and apply for services without going to the office.
16	The process of getting a loan or other services online is more convenient than before.
17	I can apply for services and pay fees directly through the platform without visiting a branch.
18	I can complete transactions through the platform without needing to visit multiple sites or platforms.
19	I find it efficient that the platform includes all the features required to complete various government transactions.
20	I am pleased with how the platform integrates my personal, payment, and transaction details in a single account.
21	The online payment system is user-friendly and efficient.
22	The platform allows for easy tracking of my service requests and records.
23	I am satisfied with the speed of service delivery through e-governance platforms.
24	I can view and verify all relevant records and transactions via the e-governance platform.
25	I am able to access all relevant government services in one place.
26	The platform integrates various services, making transactions more straightforward and faster.
27	The platform integrates various services into a single, cohesive interface.
28	The e-governance platform integrates all the essential services in one place.
29	The platform links my records across all services, allowing me to access everything I need in one account.

30	The platform offers an intuitive integration with payment gateways, making transactions easier.
31	The e-governance platform has an easy-to-use interface, even for non-tech-savvy users.
32	I find the platform's navigation intuitive and straightforward.
33	The platform's layout and design are clear, making it easy to find the information I need.
34	The website/app loads quickly without unnecessary delays.
35	I can easily navigate the system to complete any transaction or task.
36	The platform includes helpful instructions or tutorials to guide me through the process.
37	I appreciate the user-friendly interface, which makes the system easy to understand.
38	The app is simple to navigate, even for older users or people with limited technical skills.
39	The system provides a clear step-by-step process for completing tasks or applications.
40	I am satisfied with the visual design of the e-governance platform, as it is both functional and appealing.
41	I feel confident that my personal information is protected on the e-governance platform.
42	The platform uses secure methods, such as biometric authentication or facial recognition, for verifying users.
43	I trust the system's security features to protect my data from unauthorized access.
44	The platform uses encryption to ensure the privacy of my personal and financial information.
45	I feel that my online transactions are secure and protected from fraud.
46	I am reassured that my information is stored safely on the platform.
47	I appreciate the secure login methods, such as OTP (One-Time Password) or two-factor authentication.
48	The system provides clear information on how my personal data is handled and protected.
49	I am notified immediately if there is unusual activity on my account.
50	The platform's security features are easy to understand and reassure me of my privacy.
51	I am satisfied with the protection of my financial data during online transactions.
52	The platform offers regular updates on the security measures in place.
53	I trust that my personal data will not be shared without my consent.
54	I feel safe making payments and transactions online through the platform.
55	I am confident that the platform uses the latest technology to protect my information.

56	The platform alerts me if there are any security concerns related to my account.
57	I feel secure using the platform for sensitive transactions, like loan applications or payments.
58	The platform's security measures make me feel comfortable using it regularly.
59	I trust the platform's security to prevent any data breaches or unauthorized access.
60	I am confident that my records will remain confidential and not be exposed.
61	The platform offers quick updates on my transactions and services in real time.
62	The platform provides clear and timely updates about my transactions.
63	I can view real-time updates on the status of my applications and requests.
64	The system notifies me immediately if any issues arise during my transactions.
65	I can track the progress of my claims or applications through the platform.
66	I am always informed of any changes or updates to the policies via the platform.
67	The system provides transparent communication about any delays or problems with my requests.
68	I appreciate receiving timely and accurate notifications about my transactions.
69	I trust that the system will update me immediately on important events or changes.
70	I find the real-time updates on my payments and claims to be helpful and informative.
71	I can access help and support if I have difficulty using the platform.
72	The system provides sufficient feedback when actions are taken (e.g., successful payment, registration).
73	The platform provides helpful notifications to guide users through the process.
74	I receive prompt and clear responses when I ask questions or seek assistance through the platform.
75	The platform provides real-time error notifications if something goes wrong with my transaction.
76	I am satisfied with how the platform keeps me informed about the services I use.
77	The platform allows me to access detailed information about my claims or benefits.
78	I receive notifications for important deadlines or necessary actions that I must take.
79	I am pleased with how the platform provides timely feedback and status updates on all my transactions.
80	I appreciate the platform's ability to support multi-channel communication (SMS, email, social media).
81	I can easily check the status of my applications through the platform.

82	The e-governance system provides a clear overview of all my activities.
83	The user interface is customized to meet the needs of different user groups (e.g., senior citizens).
84	The platform allows me to complete all necessary tasks without switching to other websites or platforms.
85	The platform's services are well-integrated with third-party services such as payment gateways and other government platforms.
86	I can seamlessly switch between devices while using the platform without losing any data or progress.
87	The platform integrates my personal and transaction details across multiple government services.
88	The system ensures that all services are available in one place, preventing users from navigating between different systems.
89	I can view and download all necessary documents in one place without navigating through multiple systems.
90	The integration of various government services into one platform improves my overall experience.
91	I feel confident using the e-governance platform, knowing that all functionalities are clearly labeled.
92	I am satisfied with the organization of the platform's content and services.
93	The platform makes it easy to update personal information or make adjustments to transactions.
94	I feel that the design of the platform enhances my overall satisfaction with the service.
95	The platform gives me access to view the history of my previous interactions or transactions.
96	I can easily track the status of my payments and know when they are processed.
97	The system provides transparency in how my data is used and processed.
98	I feel that the platform communicates with me clearly regarding the status of my application or claim.
99	The platform ensures that any changes in government policies or services are communicated efficiently.
100	The platform's multi-language support ensures accessibility for diverse users across the nation.

Using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity, Table 2 presents the results of the assessment to determine the adequacy and appropriateness of the sample for exploratory factor analysis (EFA). The Kaiser-Meyer-Olkin (KMO) measure, gauging sampling adequacy, yielded a robust value of 0.97. This figure surpasses the widely acknowledged threshold of 0.5, affirming the data's high suitability for EFA. Per Kaiser's (1974) standards, such a high KMO value indicates the dataset's aptness for identifying distinct factors. Furthermore, Bartlett's test of sphericity yields a value of an approximate chi-square of 34376.63 and a degree of freedom of 3403.00. The findings of this examination also revealed a statistical significance of 0.00,

indicating that the variables in the dataset are interrelated and exhibit patterned associations. Simply put, the presence of identified factors that influence e-governance satisfaction among GOCCs supports the assumption.

Table 2. Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.97
Bartlett's Test of Sphericity	Approx. Chi-Square	34376.63
	df	3403.00
	Sig.	0.00

Table 3 shows the results of the factor analysis, including the initial eigenvalues, the percentage of variance, and the cumulative percentage of variance explained by each factor. Specifically, Factor 1 has an eigenvalue of 46.795 and accounts for 56.38% of the total variance, indicating that more than half of the dataset's variability can be explained by a single dominant factor. Factor 2 has an eigenvalue of 2.591 and explains 3.12% of the variance, raising the cumulative variance explained to 59.50%. Factor 3 contributes an additional 1.97% (eigenvalue = 1.637), Factor 4 contributes 1.57% (eigenvalue = 1.307), Factor 5 contributes 1.47% (eigenvalue = 1.219), and Factor 6 contributes 1.26% (eigenvalue = 1.042). Altogether, these six factors explain 65.77% of the total variance. Since all six have eigenvalues greater than 1, Kaiser's criterion suggests retaining them. However, given that Factor 1 alone accounts for the majority of the variance, it is clear that the dataset is strongly influenced by a single underlying construct, while the other five factors provide only modest additional explanatory power.

Table 3. Total Variance Explained

Factor	**Initial Eigenvalues**		
	Total	**% of Variance**	**Cumulative %**
1	46.795	56.379	56.379
2	2.591	3.122	59.501
3	1.637	1.972	61.473
4	1.307	1.574	63.047
5	1.219	1.469	64.516
6	1.042	1.255	65.771

Figure 3 shows the graphical representation of the total variance explained and the eigenvalues for all factors. The Scree Plot displays the gradual trailing of the eigenvalues and also identifies the relative fit of each component based on its relative importance. This graph is handy for determining how many factors should be reasonably retained. The point of interest is where the curve begins to flatten. In the context of the presented scree plot, the conspicuous decline in the plotted line after the fourth factor substantiates this observation.

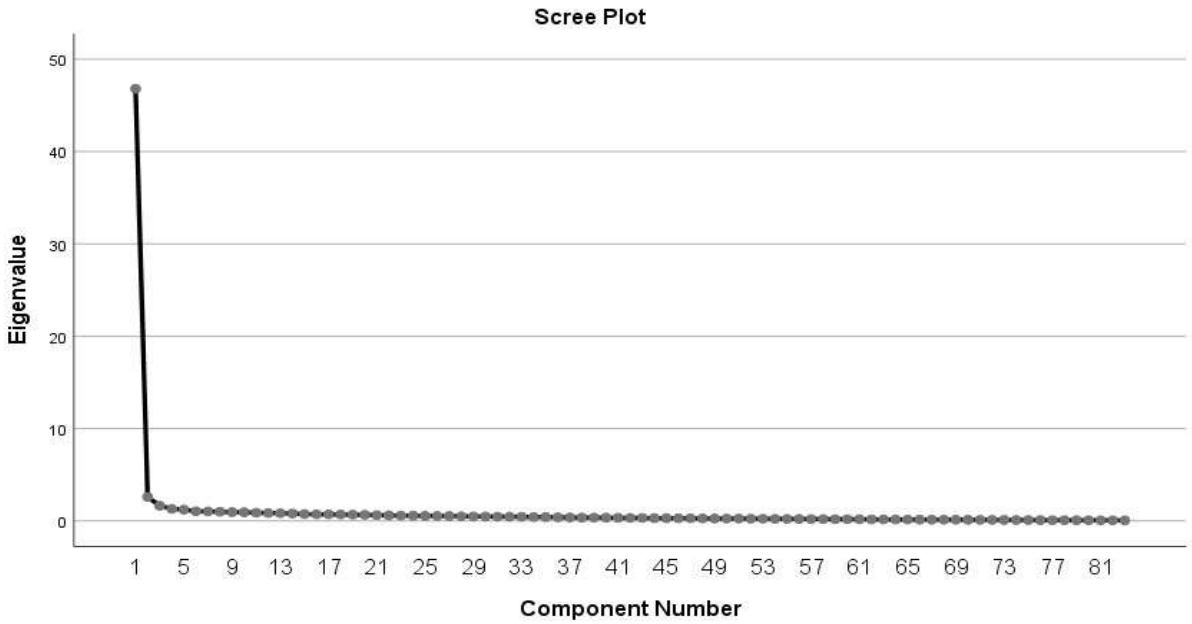

Figure 3. Scree Plot

Table 4 presents the rotated component matrix, showing how the items group into six extracted factors after Varimax rotation. Factor 1 is the strongest, with a large cluster of items that have high loadings ranging from 0.713 to 0.40. This suggests that Factor 1 represents the primary underlying dimension in the dataset, as it captures the most strongly associated items. Factor 2 also emerges as a meaningful dimension, loading between 0.60 and 0.44, indicating a secondary but distinct construct. Factor 3 appears to be the most cohesive, with very strong and consistent loadings above 0.70, suggesting that this factor represents a clearly defined concept. Factor 4 shows moderate loadings between 0.57 and 0.45, reflecting a supporting sub-dimension of the overall structure. Factor 5 is also identifiable, loading strongly at 0.673 and 0.650, though it involves fewer items compared to the dominant factors. Finally, Factor 6 is weak, as it contains only one item (31) with a relatively low loading of 0.41, which makes it unstable and unlikely to represent a meaningful construct.

Table 4. Rotated Component Matrix

Item Number	**Factor Loading**					
	1	**2**	**3**	**4**	**5**	**6**
66	0.713					
61	0.705					
79	0.671					
42	0.664					
78	0.663					
73	0.604					
49	0.599					
62	0.585					
67	0.576					

86	0.566					
82	0.557					
90	0.555					
84	0.552					
75	0.546					
89	0.543					
64	0.539					
70	0.529					
50	0.519					
39	0.517					
77	0.517					
88	0.509					
99	0.496					
58	0.468					
46	0.462					
74	0.449					
72	0.448					
51	0.447					
69	0.444					
48	0.437					
19	0.423					
56	0.402					
76		0.6				
94		0.593				
95		0.593				
98		0.562				
60		0.532				
47		0.531				

57		0.528				
59		0.528				
96		0.501				
80		0.485				
55		0.478				
37		0.467				
91		0.466				
54		0.453				
71		0.448				
97		0.442				
5			0.735			
4			0.717			
3			0.715			
2			0.714			
9			0.641			
7			0.618			
1			0.571			
11			0.553			
8			0.545			
6			0.544			
10			0.476			
13			0.476			
14			0.474			
25			0.468			
38			0.454			
23			0.451			
16				0.571		
22				0.571		

26				0.568		
28				0.545		
24				0.529		
17				0.519		
30				0.496		
18				0.494		
33				0.475		
21				0.454		
45					0.673	
43					0.65	
41					0.565	
44					0.496	
63					0.49	
53					0.439	
36					0.438	
40					0.418	
31						0.41

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

A Rotation converged in 13 iterations.

Furthermore, researcher present the factor loadings and thematic analysis findings concerning the construct of e-governance satisfaction in government-owned and controlled corporations. Following the exploratory factor analysis, the researchers identified a set of 81 items, which were then grouped into five distinct factors or dimensions reflecting the different attitudes of e-users' satisfaction in government-owned and controlled corporations, namely system reliability and transparency, platform security and user assurance, accessibility and service efficiency, integrated service delivery, and privacy and confidence.

In Table 5.1, transparency and real-time update are presented as the first factor or construct. Transparency and real-time updates are considered vital constructs in shaping e-governance satisfaction among e-users of GOCCs. Since these GOCCs' e-governance platforms involve members' contribution, transparency, and real-time updates, it is being considered as it warrants that those processes, documentary requirements, status feedback, and results are communicated clearly. Transparency is essential in promoting accountability and trust in government activities, as it involves open access to information and decision-making processes (Haque & Rattan, 2020). The information quality of the e-governance platform is essential for providing timely, accurate, comprehensive, concise, and relevant information in line with e-users' needs (Li & Shang, 2020). This suggests that enhancing

digital governance and transparency can lead to increased public trust and effective government operations (Jopang, Aryatama, Muazzinah, Qamal, & Ansar, 2024). Hence, this construct imitates the current expectations of openness, responsiveness, and trustworthiness in digital governance, making them essential indicators of how effectively GOCCs deliver citizen-centered services.

Table 5.1 Factor 1: Transparency and Real-Time Update

Item	Item Statement	r-value
66	I am always informed of any changes or updates to the policies via the platform.	0.713
61	The platform offers quick updates on my transactions and services in real time.	0.705
79	I am pleased with how the platform provides timely feedback and status updates on all my transactions.	0.671
42	The platform uses secure methods, such as biometric authentication or facial recognition, for verifying users.	0.664
78	I receive notifications for important deadlines or necessary actions that I must take.	0.663
73	The platform provides helpful notifications to guide users through the process.	0.604
49	I am notified immediately if there's an unusual activity on my account.	0.599
62	The platform provides clear and timely updates about my transactions.	0.585
67	The system provides transparent communication about any delays or problems with my requests.	0.576
86	I can seamlessly switch between devices while using the platform without losing any data or progress.	0.566
82	The e-governance system provides a clear overview of all my activities.	0.557
90	The integration of various government services into one platform improves my overall experience.	0.555
84	The platform allows me to complete all necessary tasks without switching to other websites or platforms.	0.552
75	The platform provides real-time error notifications if something goes wrong with my transaction.	0.546
89	I can view and download all necessary documents in one place without navigating through multiple systems.	0.543
64	The system notifies me immediately if any issues arise during my transactions.	0.539
70	I find the real-time updates on my payments and claims to be helpful and informative.	0.529
50	The platform's security features are easy to understand and reassure me of my privacy.	0.519
39	The system provides a clear step-by-step process for completing tasks or applications.	0.517

77	The platform allows me to access detailed information about my claims or benefits.	0.517
88	The system ensures that all services are available in one place, preventing users from navigating between different systems.	0.509
99	The platform ensures that any changes in government policies or services are communicated efficiently.	0.496
58	The platform's security measures make me feel comfortable using it regularly.	0.468
46	I am reassured that my information is stored safely on the platform.	0.462
74	I receive prompt and clear responses when I ask questions or seek assistance through the platform.	0.449
72	The system provides sufficient feedback when actions are taken (e.g., successful payment, registration).	0.448
51	I am satisfied with the protection of my financial data during online transactions.	0.447
69	I trust that the system will update me immediately on important events or changes.	0.444
48	The system provides clear information on how my personal data is handled and protected.	0.437
19	I find it efficient that the platform includes all features required to complete various government transactions.	0.423
56	The platform alerts me if there are any security concerns related to my account.	0.402

Table 5.2 presents the second factor or construct of e-governance satisfaction among e-users in GOCCs. The second construct emphasizes the relevance of e-user experience and interface with the digital platform of GOCCs. This construct determines how easily e-users can navigate digital platforms. A positive e-user experience reflects user-friendliness, responsiveness, and simplicity in completing transactions. At the same time, a well-designed interface with simple design and instinctive features improves usability and confidence in the system. According to Jane (2024), by analyzing various e-government services, the researcher identified key user experience factors such as usability, information architecture, and visual design that significantly impact user satisfaction. Sarahneh (2024) also suggests that a digital interface must imitate the user's needs, as a poorly designed interface can confuse and may complicate the user who uses the site. Together, they ensure that GOCC platforms deliver citizen-centered services that are efficient, user-friendly, and trustworthy. Hence, in the context of GOCCs' digital platform, where facilities such as payments, applications, and inquiries are progressively delivered online, a well-structured and user-friendly interface decreases errors, saves time, and reassures continued use of digital platforms.

Table 5.2. Factor 2: E-User Experience and Interface

Item	**Item Statement**	**r-value**
76	I am satisfied with how the platform keeps me informed about the services I use.	0.6
94	I feel that the design of the platform enhances my overall satisfaction with the service.	0.593
95	The platform gives me access to view the history of my previous interactions or transactions.	0.593

98	I feel that the platform communicates with me clearly regarding the status of my application or claim.	0.562
60	I am confident that my records will remain confidential and not be exposed.	0.532
47	I appreciate the secure login methods, such as OTP (One-Time Password) or two-factor authentication.	0.531
57	I feel secure using the platform for sensitive transactions, like loan applications or payments.	0.528
59	I trust the platform's security to prevent any data breaches or unauthorized access.	0.528
96	I can easily track the status of my payments and know when they are processed.	0.501
80	I appreciate the platform's ability to support multi-channel communication (SMS, email, social media).	0.485
55	I am confident that the platform uses the latest technology to protect my information.	0.478
37	I appreciate the user-friendly interface which makes the system easy to understand.	0.467
91	I feel confident using the e-governance platform, knowing that all functionalities are clearly labeled.	0.466
54	I feel safe making payments and transactions online through the platform.	0.453
71	I can access help and support if I have difficulty using the platform.	0.448
97	The system provides transparency in how my data is used and processed.	0.442

In Table 5.3, integration and multi-platform support are presented as the third factor or construct of e-governance satisfaction among e-users of GOCCs. Integration and multi-platform support serve as a single construct of e-governance satisfaction that reflects the continuous delivery of digital services through transversely interconnected systems and accessible devices. In the context of GOCCs, this means that e-users can complete transactions efficiently without repetition or duplication, while enjoying reliable access on computers, tablets, or mobile phones. By merging system connectivity with cross-platform availability, this paradigm ensures a smooth, inclusive, and reliable user experience that enables citizen trust and satisfaction with e-governance platforms. This satisfaction level will not be attained without integrating all services into an application accessible to GOCCs' stakeholders (Arief, Sensuse, Latif, & Abbas, 2021). Furthermore, an integrated multidimensional standpoint helps in understanding the digital platform, particularly with respect to government initiatives promoting digitalization within society (Upadhyay, Kumar, Dwivedi, & Adlakha, 2022). Thus, this construct highlights the importance of delivering unified, accessible, and user-centered services that enhance overall satisfaction with e-governance in GOCCs.

Table 5.3 Factor 3: Integration and Multi-Platform Support

Item	**Item Statement**	**r-value**
5	The platform is optimized for use on mobile devices, ensuring accessibility on the go.	0.735
4	The app/platform is responsive and functions well on all devices.	0.717
3	The mobile app allows me to access all the necessary information easily.	0.715
2	E-governance services are available 24/7, making it easier to access services anytime.	0.714

9	I can access and use all of the platform's features without experiencing compatibility issues.	0.641
7	The platform provides a seamless experience across various devices (iOS, Android, web).	0.618
1	I can access e-governance platforms easily through various devices (web, mobile app, SMS).	0.571
11	I find the online registration process to be quick and convenient.	0.553
8	I find it convenient that the platform works across different operating systems (Windows, Android, iOS).	0.545
6	I can access the e-governance platform through multiple devices such as smartphones, tablets, and computers.	0.544
10	The platform's design allows for easy switching between tasks (e.g., checking benefits, making payments).	0.476
13	I am able to make transactions from home, which saves me time and effort.	0.476
14	The digital services offered save me from long queues at the office.	0.474
25	I am able to access all relevant government services in one place.	0.468
38	The app is simple to navigate, even for older users or people with limited technical skills.	0.454
23	I am satisfied with the speed of service delivery through e-governance platforms.	0.451

Table 5.4 presents e-governance accessibility and convenience as the fourth factor or construct of e-governance satisfaction among e-users in GOCCs. Accessibility and convenience are vital constructs of e-governance satisfaction as they regulate how simply citizens can use GOCC digital platforms anytime and anywhere. Accessibility decreases barriers by ensuring services are inclusive and accessible across devices, while convenience highlights the comfort and efficiency of completing transactions online. Accessibility and convenience also reflect how GOCCs provide inclusive, time-saving, and citizen-friendly digital services, which significantly shape user satisfaction with e-governance platforms. According to Mohammad (2020), website accessibility positively impacts end-user satisfaction with government website designs in Jordan, thereby affecting the efficiency and effectiveness of website use. Moreover, digital platforms aim to make interactions more convenient, responsive, clear, and accessible among various stakeholders (Solinthone & Rumyantseva, 2016). Hence, it shapes user trust and satisfaction by making government services more citizen-centered and time-saving.

Table 5.4. Factor 4: E-Governance Accessibility and Convenience

Item	**Item Statement**	**r-value**
16	The process of getting a loan or other services online is more convenient than before.	0.571
22	The platform allows for easy tracking of my service requests and records.	0.571
26	The platform integrates various services, making transactions simpler and faster.	0.568
28	The e-governance platform integrates all the essential services in one place.	0.545
24	I can view and verify all relevant records and transactions via the e-governance platform.	0.529

17	I can apply for services and pay fees directly through the platform without visiting a branch.	0.519
30	The platform offers an intuitive integration with payment gateways, making transactions easier.	0.496
18	I can complete transactions through the platform without needing to visit multiple sites or platforms.	0.494
33	The online payment system is user-friendly and efficient.	0.475
21	The platform's layout and design are clear, making it easy to find the information I need.	0.454

In Table 5.5, the last factor or construct of e-governance satisfaction is presented. E-users' consideration of privacy and security has become a fundamental construct of e-governance satisfaction, as it safeguards citizens' personal and financial data and information on GOCCs' digital platforms. Ensuring that systems are free from unauthorized access, scams, and data breaches builds trust and confidence among e-users. When digital platforms assure the confidentiality of e-user data and deliver secure transactions, e-users are more likely to accept or adopt and rely on e-governance services. Privacy and security are two distinct aspects (Munyoka, 2020) that represent the level to which an individual feels safe sharing personal and financial information through digital platforms and the assurance that the information will not be misused. According to Munyoka and Maharaj (2019), the main reasons for an e-user's shortfall in trust include fear of mismanagement of confidential financial and personal information shared on e-governance services and the potential security deficiencies in online transactions. Thus, privacy and security play a crucial role in strengthening user satisfaction and sustaining confidence in GOCC digital initiatives.

Table 4.5. Factor 5: Privacy and Security

Item	**Item Statement**	**r-value**
45	I feel that my online transactions are secure and protected from fraud.	0.673
43	I trust the system's security features to protect my data from unauthorized access.	0.65
41	I feel confident that my personal information is protected on the e-governance platform.	0.565
44	The platform uses encryption to ensure the privacy of my personal and financial information.	0.496
63	I can view real-time updates on the status of my applications and requests.	0.49
53	I trust that my personal data will not be shared without my consent.	0.439
36	The platform includes helpful instructions or tutorials to guide me through the process.	0.438
40	I am satisfied with the visual design of the e-governance platform, as it is both functional and appealing.	0.418

Furthermore, presented in Figure 4 is the generated framework for the constructs of e-governance satisfaction in government-owned and controlled corporations. These constructs include transparency and real-time update, user experience and interface, integration and multi-platform support, e-governance accessibility and convenience, and privacy and security. These five factors or constructs significantly affect e-users' satisfaction in e-governance in GOCCs. The framework provides a schematic illustration of the measurement tool being developed.

Figure 4. Multidimensional Framework on E-user's Satisfaction in the GOCCs

The constructs extracted reflect the features of digital platforms of e-governance in GOCCs that are required to meet e-users' satisfaction. Following the key dimensions of the Digital Governance Divide Framework of Lagura (2025) in assessing the Local Government Units (LGUs) websites, among the five constructs, privacy and security matched with the existing dimensions. However, in the case of the GOCCs' e-governance platform, four new constructs were identified. These are transparency and real-time update, user experience and interface, e-governance accessibility and convenience, and integration and multi-platform support.

CONCLUSION AND RECOMMENDATION

Conclusion

The shift to the digital world has been continuously adapted by the Philippine government. In particular, government-owned and controlled corporations that present social services to the citizens have also tagged along with this development, following their mandate in providing independence, transparency, accountability, and fairness. As part of this digital advancement, it is both a challenge and an opportunity for the GOCCs to identify what more they can do to satisfy the citizens, their e-users. With this, the study was conducted to identify the constructs of e-governance satisfaction among GOCCs' digital platform e-users. The five constructs of e-governance satisfaction among GOCCs developed using the exploratory factor analysis are transparency and real-time update, user experience and interface, e-governance accessibility and convenience, integration and multi-platform support, and privacy and security. The generated constructs concurred with the Technology Acceptance Model (TAM) by Davis (1989), which is believed to demonstrate how users come to take and utilize a technology. This implies that the identified constructs align with recognized theory, strengthening their significance in explaining user satisfaction and acceptance of e-governance platforms.

Recommendation

From the results of the study, it is recommended that GOCCs strengthen these areas by enhancing system responsiveness, ensuring secure platforms, and designing citizen-centered interfaces to advance trust and satisfaction among e-users. Distinct consideration should be given to providing seamless multi-platform access and real-time feedback, as these are directly linked to efficiency and user confidence in public digital services.

For future research, it is recommended to scrutinize how these constructs interrelate and influence long-term adoption of e-governance platforms across different sectors and service types. Comparative studies between various GOCCs, or between GOCCs and other government institutions, may offer profound insights into satisfaction drivers. Additionally, future studies could deliberate moderating factors such as demographic profiles, digital literacy, and internet accessibility, which may outline how users perceive and value these constructs. Such investigations would further validate the framework and guide both policy development and system innovation in e-governance.

Lastly, future studies are also encouraged to conduct a Confirmatory Factor Analysis (CFA) to validate the five identified constructs of e-governance satisfaction. This will confirm the reliability and structural validity of the factors derived from the exploratory phase and strengthen the generalizability of the proposed model across different GOCC digital platforms.

REFERENCES

1. Alassaf, P., Zai, S., & Olah, J. (2020). Factors affecting e-government implementation: Developing countries e-opportunities. Acta Oeconomica Universitatis Selye, 9(1).
2. Arabadzhyiev, D., Popovych, Y., Lytvynchuk, I., Bakbergen, K., & Kyrychenko, Y. (2021). Digital society: Regulatory and institutional support of electronic governance in modern realities. SHS Web of Conferences, 100, p. 03008. EDP Sciences. http://doi.org/10.1051/shsconf/202110003008.
3. Arief, A., Sensuse, D. I., Latif, L. A., & Abbas, M. Y. (2021). Study on e-government integration: a theoretical and empirical review. In IOP Conference Series: Materials Science and Engineering (Vol. 1125, No. 1, p. 012028). IOP Publishing.
4. Baeuo, M.O.M., Rahim, N.Z.B.A. & Alaraibi, A.A.M., 2017. Technology factors influencing egovernment readiness. Journal of Theoretical & Applied Information Technology, 95(8).
5. Bajar, J. T. (2020). E-government in the Philippines: An assessment. Ciencia: Humanities, Education, Arts, Languages, and Social Sciences (HEALS), 1(1), 26-50.
6. Berman, E. (2017). An exploratory sequential mixed methods approach to understanding researchers' data management practices at UVM: Integrated findings to develop research data services. Journal of eScience Librarianship 6(1): e1104. https://doi.org/10.7191/jeslib.2017.1104.
7. Blom, P.P. & Uwizeyimana, D.E. (2020). Assessing the effectiveness of e-government and e-governance in South Africa: During national lockdown 2020. Research in World Economy, 11(5), pp.208-219.
8. Chen, M., & Grossklags, J. (2023). E-government HCI in China: How does the government communicate a new regulation system to the public? In Proceedings of the Asian HCI Symposium 2023 (pp. 7-14).
9. Creswell, J.W. & Clark, V.L.P. (2017). Designing and conducting mixed methods research. Sage Publications.
10. Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS quarterly, pp.319-340.
11. De Castro, C.A. & De Castro, E.G. (2022). E-government initiatives of local governments in the Philippines. Journal of Community Development Research (Humanities and Social Sciences), 15(3), pp.55-70.
12. Gu, D., Khan, S., Khan, I.U., Khan, S.U., Xie, Y., Li, X., & Zhang, G. (2021). Assessing the adoption of e-health technology in a developing country: An extension of the UTAUT model. Sage Open, 11(3), p.21582440211027565.
13. Haque, M. S. & Rattan, A. (2020). Transparency in e-government services: A literature review. Information Systems Frontiers, 22(3), 659-676.
14. Jane, K. (2024). Role of user experience in e-government service satisfaction. Accessed at https://tinyurl.com/yc63dhhh.
15. Jopang, J., Aryatama, S., Muazzinah, M., Qamal, Q., & Ansar, A. (2024). Exploring the relationship between e-government, transparency, and citizen trust in government services. Global International Journal of Innovative Research, 2(6), 1354-1363.
16. Kaiser, H. F. (1974). An index of factorial simplicity. Psychometrika, 39, 31–36.
17. Kala, D., Chaubey, D.S., Meet, R.K., & Al-Adwan, A.S. (2024). Impact of user satisfaction with egovernment services on continuance use intention and citizen trust using TAM-ISSM framework. Interdisciplinary Journal of Information, Knowledge, and Management, 19, p.001.
18. Khalid, S. A. & Lavilles, R. Q. (2019). Maturity assessment of local e-Government websites in the Philippines. Procedia Computer Science, 161, 99-106. http://dx.doi.org/10.1016/j.procs.2019.11.104.
19. Khan, H.A. & Khan, H.A. (2018). The challenges of e-governance in public administration. Globalization and the Challenges of Public Administration: Governance, Human Resources Management, Leadership, Ethics, E-Governance and Sustainability in the 21st Century, pp.135-160.
20. Kovacova, M., Kliestik, T., Valaskova, K., Durana, P., & Juhaszova, Z. (2019). Systematic review of variables applied in bankruptcy prediction models of Visegrad group countries. Oeconomia Copernicana, 10(4), pp.743-772.

21. Kumar, K. R., Praveen, C., & Rahma, A. (2023). Digital governance and its impact on society. International Conference on Education, Humanities, Social Science (ICEHoS 2022) (pp. 209213). Atlantis Press. http://dx.doi.org/10.2991/978-2-38476-088-6_24.
22. Lagura, G. B. (2025). Towards digital governance divide index development: Evaluating city government websites in the Philippines. Journal of Community Development Research (Humanities and Social Sciences), 18(1), 1-17.
23. Li, Y. & Shang, H. (2020). Service quality, perceived value, and citizens' continuous-use intention regarding e-government: Empirical evidence from China. Information & Management, 57(3), 103197.
24. Lu, W. (2018). The research of e-government on big data in China. In 2018 International Conference on Management, Economics, Education, Arts and Humanities (MEEAH 2018) (pp. 40-43). Atlantis Press.
25. Masengu, R., Muridzi, G., & Meyer, J. (2021). Governance in Africa - A perspective of e-governance in South Africa urban municipalities. Global Journal of Scientific and Research Publications, 1(10), pp. 618.
26. Mensah, I.K., Zeng, G., & Mwakapesa, D.S. (2022). Understanding the drivers of the public value of egovernment: Validation of a public value e-government adoption model. Frontiers in Psychology, 13, p.962615.
27. Mohammad, A. H. (2020). The effects of usability and accessibility for e-government services on the enduser satisfaction. International Journal of Interactive Mobile Technologies (iJIM), 14(13), pp. 78–90. https://doi.org/10.3991/ijim.v14i13.14659
28. Munyoka, W. (2020). Electronic government adoption in voluntary environments–a case study of Zimbabwe. Information Development, 36(3), 414-437.
29. Munyoka, W. & Maharaj, M. S. (2019). Privacy, security, trust, risk and optimism bias in e-government use: The case of two Southern African Development Community countries. South African Journal of Information Management, 21(1), 1-9.
30. Myint, A.A. (2022). Users' satisfaction with e-government services: Case study on Myanmar companies online (MyCO) system. International Journal of Research in Business and Social Science (2147-4478), 11(3), pp.73-81.
31. Patel, P. & Moitra, M. (2021). Impact of COVID-19 pandemic on mental health in India: A call for research. Asian Journal of Psychiatry, 58, 102600.
32. Sarahneh, M. (2024). Effect of empathy maps on analyzing first year student's experience with the university's website in 2023\2024: The case of Palestine Polytechnic University Website. doi: 10.13140/RG.2.2.26293.49128.
33. Sebetci, Ö. (2015). A TAM-based model for e-government: A case for Turkey. International Journal of Electronic Governance, 7(2), pp.113-135.
34. Singh, A. (2023). E-governance: Moving towards digital governance. VIDYA-A Journal of Gujarat University, 2(1), pp.204-215.
35. Singh, U. (2019). e-Governance implementation–A literature review analysis. IJRAR-International Journal of Research and Analytical Reviews (IJRAR), E-ISSN, pp.2348-1269.
36. Solinthone, P. & Rumyantseva, T. (2016). E-government implementation. MATEC Web of Conferences.79. https://doi.org/10.1051/matecconf/201679010 2016.
37. Stevens, J. (1994). Applied multivariate statistics for the social sciences (2nd ed.). Mahwah, NJ: Lawrence erlbaum associates.
38. Toots, M. (2019). Why e-participation systems fail: The case of Estonia's Osale. ee. Government Information Quarterly, 36(3), pp.546-559.
39. Upadhyay, P., Kumar, A., Dwivedi, Y. K., & Adlakha, A. (2022). Continual usage intention of platformbased governance services: A study from an emerging economy. Government Information Quarterly, 39(1), 101651.
40. Zongpu, Y. & Samsu, K.H.K. (2023). Factors influencing the development and implementation of egovernment services in China. International Journal of Academic Research in Business and Social Sciences, 13(18). doi:10.6007/IJARBSS/v13-i18/19950.