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Research Article

Enhancing Public Service Delivery and Citizen Participation: The Synergistic Effects of E- Governance and Social Media

Ma. Francicsa A. Asadon^{1*}, Alyssa P. Brucal¹, Pia Sarah L. Claveria¹, Jan Tracey N. Lacson¹, Bernardino P. Malang², Jocelyn DS. Malang¹

¹World Citi Colleges, Cubao, Quezon City, Philippines

²Bulacan State University, Philippines

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*Corresponding author:

E-mail:

chescaasadon@gmail.com

ABSTRACT

This study investigates the effects of social media and e-governance on public service delivery and citizen engagement in the Philippines. It is based on the idea that digital technology can enhance the efficiency, transparency, and trustworthiness of government, thus using the Unified Theory of Acceptance and Use of Technology (UTAUT2) to identify key factors driving adoption among citizens and government bodies. E-governance decreases the costs, errors, and delay in service delivery among Laguna residents, according to data from a survey. Public participation is enhanced by social media with more satisfaction and trust than other traditional media. Together, these tools improve the responsiveness of public policy and effectiveness to the public. Challenges such as infrastructural limitation, digital resistance, and privacy concerns have however been facing full adoption. Policymakers should remove the above barriers to ensure a totally realized benefit of digital governance for a more transparent, efficient, and participatory government.

Keywords: *E-governance, Social Media Utilization, Public Service Delivery, Citizen Participation, Government Accountability, Digital Transparency, ICT in Governance, Service Efficiency, Civic Engagement, Policy Implementation*

Introduction

The research examines the potential for e-governance and social media to transform public service delivery by making it more effective, responsive, and accountable. The focus shifts from merely understanding how these technologies operate to exploring how they can

improve public service provision, participation, and policy implementation. Previous studies, such as those by Islam et al. (2020), have demonstrated the effectiveness of e-governance and social media in bridging the gap between government and citizens, promoting transparency and trust in public institutions.

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This study contributes to the ongoing discourse by offering new insights into how the combination of these technologies enhances service delivery and public participation. It is especially relevant for decision-makers and technology practitioners seeking to apply digital solutions for more open governance beyond a "citizen-centered" approach.

One of the key contributions of this research is its examination of the synergy between e-governance and social media, which has not been thoroughly explored in prior studies. While past research has tended to analyze these technologies independently, this study investigates their combined potential to address obstacles in public service delivery. By assessing both the advantages and drawbacks of relying heavily on these technologies, the research aims to offer a balanced evaluation of their applications in the public sector. Studies like Gil et al. (2019) emphasize the importance of digital systems in enhancing service delivery, increasing transparency, and reducing corruption. These findings support the current research's objective to explore how e-governance and social media promote accountability in government services.

The study draws on existing literature to underscore the role of e-governance and social media in improving citizen engagement and trust in government. For example, Tullah (2014) highlights how social media facilitates greater public participation in political processes, enhancing perceptions of government institutions. This research builds on these insights by exploring how social media shapes citizen involvement and satisfaction with government services. Moreover, the study examines how these technologies contribute to social inclusion and accountability, as Şahin (2021) notes, encouraging civic engagement and holding governments accountable. By integrating these perspectives, the research offers a comprehensive analysis of the impact of e-governance and social media on public service delivery.

However, while previous studies have successfully established the individual benefits of e-governance and social media in promoting transparency, trust, and citizen engagement, they have done so by treating these

technologies in isolation, overlooking the synergistic impact of their combined implementation on public service delivery. Most of the studies are conducted on single case studies or specific platforms without analyzing how these technologies complement each other to address larger governance challenges, such as responsiveness and policy effectiveness. Furthermore, previous studies hardly consider the barriers unique to developing countries like the Philippines, such as infrastructure constraints, digital literacy, and privacy issues. This study aims to fill in these gaps by exploring how the combined use of e-governance and social media could facilitate the improvement of public service outcomes while taking into account contextual challenges that may hinder its complete adoption.

The theoretical framework of the study is grounded in the Unified Theory of Acceptance and Use of Technology (UTAUT2), which helps explain the factors influencing the adoption of e-governance and social media. The theory's constructs, such as performance expectancy, social influence, and facilitating conditions, are crucial for understanding how citizens and public institutions embrace these technologies. Recent studies, like those by Akpan-Obong et al. (2023) and Ly (2019), have demonstrated the relevance of these constructs in explaining the adoption of e-governance platforms and the role of social media in enhancing civic engagement. The UTAUT2 framework thus provides a robust foundation for investigating the relationship between technology, public service delivery, and citizen participation.

The research methodology is based on a combination of quantitative and qualitative data collection methods, including surveys, interviews, document reviews, and observations. The study employs UTAUT2 to analyze the relative importance of different variables influencing the adoption of e-governance and social media. The use of thematic analysis (Braun & Clarke, 2019) helps interpret trends and themes in the data, providing deeper insights into the impact of these technologies on public service efficiency and citizen engagement. By integrating both theoretical and empirical approaches, the study offers a more comprehensive understanding of how e-governance and

social media influence public service delivery and participation.

The study's anticipated outcomes include increased public sector productivity, enhanced public engagement, improved policy results, and greater government transparency. As Prakash (2016) notes, e-governance practices can improve service availability and reduce pressure on public institutions. By implementing these technologies, governments can foster innovation in service delivery, making public services more efficient and accessible. Moreover, Shirazi and Hajli (2021) highlight the potential of social media to overcome the digital divide and increase citizen participation in governance processes. The findings of this study will be valuable for policymakers and public administrators seeking to leverage these technologies to improve public service delivery and citizen engagement.

Alternatively, this study hypothesizes that the combined use of e-governance and social media enhances public service delivery by increasing efficiency, promoting transparency, and fostering greater citizen engagement, with the identification of potential barriers to their full adoption and effectiveness.

In conclusion, this research contributes to the growing body of literature on e-governance and social media by examining their combined impact on public service delivery and citizen participation. The study provides evidence-based insights that can inform policy development, improve the management of e-governance platforms, and enhance the effectiveness of public services. By exploring the potential of these technologies to transform public administration, the research offers practical solutions for addressing the challenges of digital governance in the Philippines and beyond.

Methodology

Research Design

This study employed a descriptive research design to examine the impacts of e-governance and social media on public service delivery and citizen engagement in the Philippines. This involved documenting the current state of e-governance adoption and social media utilization and analyzing their perceived effects on various aspects of public service delivery and

citizen engagement. The study aimed to provide a comprehensive overview of how these digital technologies are being perceived by citizens in terms of their influence on service delivery time, cost reduction, error rates, participation, satisfaction, trust, and government accountability.

A descriptive research design was deemed appropriate because the primary goal of the study was to describe and document the current practices and perceptions regarding the use of e-governance and social media in the public sector of the Philippines. This design allowed for a systematic examination of the variables without manipulating the environment, which is crucial when studying phenomena in their natural context. By collecting and analyzing quantitative data through surveys and interviews, the study was able to highlight key trends and patterns that can provide valuable insights for policymakers and public administrators seeking to enhance public service delivery and citizen engagement through digital technologies.

The descriptive nature of this study facilitated an in-depth exploration of various aspects related to e-governance and social media utilization in the public sector. For example, the study documented the prevalence of specific e-governance platforms and social media channels being used by citizens to access public services and engage with government agencies. It also examined the perceived impact of e-governance on service delivery time, cost reduction, and error rates, providing insights into citizens' satisfaction with these aspects. Furthermore, the study investigated the role of social media in facilitating citizen participation, satisfaction, and trust in government institutions.

By employing a descriptive research design, the study provided a comprehensive and detailed account of the current landscape of e-governance and social media utilization in the Philippines and their perceived impacts on public service delivery and citizen engagement. The findings from this descriptive analysis can serve as a valuable foundation for future research and inform policy decisions aimed at leveraging digital technologies to enhance public service efficiency and citizen participation.

Participants of the study

The participants of this study are citizens residing in the provinces of Laguna who have had experiences with e-governance platforms or utilized social media for public service interactions. The study focuses solely on these two regions to obtain insights on how digital technologies, particularly e-governance and social media, influence public service delivery and citizen engagement. To ensure the study includes a broad range of perspectives, participants from both urban and rural areas within Laguna will be selected. The target population for this study is limited to residents of these provinces to reflect the local context and usage of these technologies in public service.

This study employs simple random sampling to select respondents from the target population. This method ensures that each resident of Laguna has an equal chance of being selected, minimizing bias and increasing the generalizability of the findings. Simple random sampling will be applied to create a diverse sample of respondents who have engaged with e-governance platforms or interacted with public services through social media. This approach supports the study's goal of collecting representative data on public service delivery and citizen engagement within the specified regions.

Data Gathering Instrument

The primary data gathering instrument utilized in this study is a survey questionnaire. The questionnaire is designed to measure key variables of the study, such as e-governance adoption, social media utilization, and their impact on public service delivery efficiency (including service delivery time, cost reduction, and error rates), citizen engagement (participation, satisfaction, and trust), and government accountability. The instrument consists of structured questions using a 4-point Likert scale, where respondents can express their level of agreement or disagreement with statements related to these key variables. This scale provides a standardized approach to capturing respondents' perceptions and experiences, facilitating quantitative analysis.

To ensure the validity of the instrument, a thorough validation process was conducted by

the research adviser. The adviser reviewed the questionnaire for content validity, ensuring that the items accurately reflected the research variables and were appropriate for the context of the study. The adviser evaluated the relevance of the questions on government efficiency, accountability, e-governance adoption, technology challenges, citizen participation, and trust. The statistical analysis for the study will be performed using SPSS software, which will ensure the accuracy and reliability of the data analysis.

The survey questionnaire was adapted from established instruments used in previous studies related to e-governance and social media integration. Specifically, items that addressed technology adoption and citizen engagement were adapted from Venkatesh et al. (2016), who used the Unified Theory of Acceptance and Use of Technology (UTAUT2) model to explore the factors influencing the acceptance of technology in public services. Additionally, questions measuring public service delivery efficiency were adapted from Prakash (2016), a study that focused on improving service delivery through e-governance at the grassroots level.

These adaptations were made to suit the specific context of the Philippines, where the research investigates the combined effects of e-governance and social media on public service delivery and citizen participation. By incorporating localized concerns and adapting established frameworks, the instrument is tailored to capture the nuances of how digital tools impact governance in the country.

Data Gathering Procedure

The data gathering process for this study will follow a structured and systematic approach to ensure that accurate and reliable data are collected on the effects of e-governance adoption and social media utilization on public service delivery and citizen engagement. The first step in the process involves the preparation of the survey questionnaire, which was developed based on the identified variables of interest: e-governance adoption, social media utilization, public service delivery efficiency, citizen participation, and government accountability. The questionnaire was adapted from

previously validated instruments used in similar studies, including works by Venkatesh et al. (2016) and Prakash (2016).

Following the validation process, respondents were selected using a simple random sampling technique to ensure a diverse representation in terms of experience with e-governance services. The survey was distributed solely through online platforms, including email and social media, without any paper-based distribution. A consent form accompanied the online survey, explaining the study's purpose, the voluntary nature of participation, and the confidentiality of the data collected.

The collection of responses took place over a 3-day period, during which follow-up reminders were sent to maximize response rates, particularly in rural or underserved areas. Data from the online platform was automatically compiled into a secure database. Once all responses were collected, the data were cleaned and coded to prepare for statistical analysis.

Throughout the data gathering process, strict adherence to research ethics was observed to protect the rights and well-being of all respondents. Informed consent was obtained from all participants, ensuring that they fully understood the study's objectives and their role in the research. Respondents were informed that their participation was entirely voluntary and that they could withdraw from the study at any time without facing any penalties. In addition, the study emphasized confidentiality, with no personally identifiable information being collected unless expressly permitted by the respondent. All data were handled confidentially and stored securely, accessible only to the research team.

To ensure that the questionnaire in the survey would be both reliable and clear, it was tested through a small, representative pilot sample before deployment. There were about 15 participants involved in the pre-test process who closely resembled the demographic and experiential features of the target population. It

helped identify some problems regarding wording, length, and the overall structure of the questions. The clarity of some questions was enhanced, and the flow of the survey was improved to minimize the possibility of

response errors and enhance respondent understanding. The results of the pilot indicated that the survey instrument was effective in capturing relevant data on e-governance and social media's impact on public service delivery and citizen engagement and contributed to a more refined and reliable data collection tool.

To further protect respondents, the principle of non-maleficence was followed, ensuring that no harm would come to participants during the study. The questions in the survey were carefully designed to be neutral and non-invasive, avoiding any potential discomfort for the respondents. Moreover, in compliance with the Data Privacy Act of 2012 in the Philippines, the study implemented stringent data privacy measures. Respondents were assured that their data would be used solely for research purposes and that their personal information would be securely stored and destroyed after the research was completed. These ethical considerations align with the guidelines provided by the American Psychological Association (APA) and the Data Privacy Act to ensure the integrity of the research and the protection of respondents' rights

Statistical Treatment of Data

The data collected through the survey questionnaire will be analyzed using descriptive statistics to summarize and interpret the results. Descriptive statistics are appropriate for this study, as the goal is to examine the current state of e-governance adoption, social media utilization, and their impacts on public service delivery efficiency and citizen engagement. This section outlines the specific statistical tools employed and how they will be used in the analysis.

For items measured using a Likert scale (1 = Strongly Disagree, 4 = Strongly Agree), mean and standard deviation will be calculated. The mean will provide the average response to each question, offering insights into the overall perception of the respondents. For instance, the mean score for questions related to public service delivery efficiency will indicate the average level of satisfaction with service delivery times, cost reductions, or error rates facilitated by e-governance. The standard deviation will measure the variability in the responses,

indicating whether the respondents' opinions are widely dispersed or closely clustered around the mean.

The weighted mean will be used to give importance to specific factors or groups in the survey responses. This method is particularly useful for analyzing responses to questions that differ in significance, such as the degree of impact that social media has on different aspects of citizen engagement. The weighted mean allows the study to assign more weight to questions or categories that are considered more influential in the context of public service delivery.

Additionally, a weighted mean calculation will emphasize questions deemed more critical to assessing the impact of social media and e-governance. To test for statistically significant differences in responses among demographic groups or categories, a series of t-tests and one-way ANOVA analyses will be conducted.

Once the data has been summarized using the above statistical tools, the results will be interpreted to provide insights into the

research questions. For example, the frequency and percentage distribution of responses will highlight how many respondents perceive improvements in public service delivery through e-governance. Similarly, the mean and standard deviation scores will help to determine the average level of satisfaction or dissatisfaction with the current e-governance systems. These statistics will be used to draw conclusions about the general trends and perceptions among the respondents, without exploring deeper relationships or correlations between variables, as this study solely focuses on survey-based data.

By using descriptive statistics—frequency, percentage, mean, standard deviation, and weighted mean—the study will provide a clear and comprehensive summary of the data collected from the survey questionnaires. These methods are sufficient to address the research objectives, focusing on respondents' perceptions of e-governance and social media's impact on public service delivery and citizen engagement.

Result and Discussions

Table 1. Impact of E-Governance Adoption on Public Service Efficiency.

Indicators	Mean	SD	Interpretation
Delivery Time	3.19	0.60	Agree
Cost Reduction	3.22	0.60	Agree
Error Rates	3.10	0.61	Agree
OVERALL	3.17	0.55	Agree

Legend: 1.00-1.74 (Strongly Disagree), 1.75-2.49 (Disagree), 2.50-3.24 (Agree), 3.24-4.00 (Strongly Agree)

Table 1 shows that respondents generally agree that e-governance adoption positively impacts public service efficiency, with mean scores for delivery time, cost reduction, and error rates all above 3, indicating agreement. Cost reduction (3.22) is perceived as the most impactful area of improvement. This implies that e-governance initiatives can enhance public service efficiency by reducing delivery times, lowering costs, and minimizing errors, leading to increased citizen satisfaction and trust in government. These findings align with Bwalya

et al. (2014), who found that e-governance initiatives in Zambia led to increased service delivery efficiency by improving the speed, accuracy, and cost-effectiveness of government services.

The study's findings align with the Unified Theory of Acceptance and Use of Technology (UTAUT2), particularly the constructs of *performance expectancy* and *effort expectancy*, in understanding how e-governance adoption enhances public service efficiency.

Table 1.1. Impact of E-Governance Adoption on Public Service Efficiency in terms of Delivery Time.

Items	Mean	SD	Interpretation
When applying for government services online (e.g., permits, licenses), I found that e-governance platforms significantly reduced the time compared to doing it in person.	3.19	0.65	Agree
The last time I used an online platform to apply for a government service (e.g., documentation or certification), the process was much faster than going to a government office.	3.18	0.68	Agree
When accessing government services through e-governance, I noticed a significant reduction in waiting time compared to previous experiences with traditional methods.	3.19	0.65	Agree
OVERALL	3.19	0.60	Agree

Legend: 1.00-1.74 (Strongly Disagree), 1.75-2.49 (Disagree), 2.50-3.24 (Agree), 3.24-4.00 (Strongly Agree)

Table 1.1 shows that respondents generally agree that e-governance adoption positively impacts public service efficiency in terms of delivery time, with all individual item means and the overall mean (3.19) exceeding 3, indicating agreement. This implies that e-governance initiatives can enhance public service efficiency by reducing delivery times for citizens

accessing government services. These findings are consistent with Dunleavy et al. (2006), who demonstrated that digital government initiatives in the UK significantly reduced waiting times for accessing public services, streamlining administrative processes and improving the overall speed of service delivery.

Table 1.2. Impact of E-Governance Adoption on Public Service Efficiency in terms of Cost Reduction.

Items	Mean	SD	Interpretation
In my experience, using e-governance has saved me money on things like transportation and document processing, compared to visiting government offices.	3.25	0.67	Strongly Agree
The last time I completed a government transaction online (e.g., submitting forms, paying fees), it was more cost-effective than traditional in-person methods.	3.17	0.67	Agree
I found that e-governance services eliminated the need for multiple trips to different government offices, which helped reduce my overall expenses.	3.23	0.65	Agree
OVERALL	3.22	0.60	Agree

Legend: 1.00-1.74 (Strongly Disagree), 1.75-2.49 (Disagree), 2.50-3.24 (Agree), 3.24-4.00 (Strongly Agree)

Table 1.2 shows that respondents strongly agree that e-governance adoption positively impacts public service efficiency in terms of cost reduction. With an overall mean of 3.22 and individual item means ranging from 3.17 to 3.25, the data clearly indicates agreement, with one item even reaching strong agreement (3.25). This suggests that e-governance

initiatives are perceived to significantly reduce the costs associated with delivering public services. This finding aligns with Sharma (2004), who found that the implementation of e-government in developing countries resulted in substantial cost savings through reduced paperwork, automation of services, and improved efficiency.

These perceptions can further be articulated in the framework of Unified Theory of Acceptance and Use of Technology (UTAUT2). In this particular case, the performance expectancy construct comes into play; it refers to the extent to which using a particular technology is perceived to increase job performance. The very high agreement on cost reduction implies that respondents feel that e-governance enormously improves the efficiency of the delivery of public services so as to fulfill this construct. Another construct that can play a role in the im-

plementation of effective e-governance initiatives is the facilitating conditions construct, which measures resources and support available for use of the technology. Therefore, where the infrastructure and resources exist to support the technologies, they are used effectively to produce the noted cost efficiencies. Overall, this integration of the key constructs of UTAUT2 has been very effective in enlightening the discussion on how certain factors influence perception about efficiency in public service delivery brought about by e-governance.

Table 1.3. Impact of E-Governance Adoption on Public Service Efficiency in terms of Error Rates.

Items	Mean	SD	Interpretation
When submitting applications or forms through e-governance platforms, I experienced fewer errors in processing compared to submitting them manually	3.08	0.64	Agree
The last time I used an e-governance platform for a government service (e.g., filing or registration), the system made fewer mistakes with my information compared to traditional methods.	3.09	0.69	Agree
Compared to my past experiences with paper-based transactions, I've encountered fewer issues (e.g., lost or incorrect documents) when using e-governance systems.	3.12	0.66	Agree
OVERALL	3.10	0.61	Agree

Legend: 1.00-1.74 (Strongly Disagree), 1.75-2.49 (Disagree), 2.50-3.24 (Agree), 3.24-4.00 (Strongly Agree)

Table 1.3 shows that respondents generally agree that e-governance adoption has a positive impact on public service efficiency in terms of reducing error rates. All item means are above 3, indicating agreement, with the overall mean at 3.10. This suggests that e-governance initiatives are perceived to improve the accuracy and reliability of public services by minimizing errors. This finding is consistent with Bertot et al. (2010), who demonstrated that the use of ICTs in public service delivery reduces human error by automating manual processes, enhancing data management, and improving overall service reliability.

Facilitating conditions, which are the resources and support to use the technology, would also influence the respondents' perceptions. Properly implemented e-governance initiatives with adequate training and resources would result in improved user experience and satisfaction levels with public services. Thus, the UTAUT2 constructs are relevant while assessing not only the adoption of e-governance but also the perceived benefits that increase public trust and engagement in government services.

Table 2. Social Media Utilization Influence on Citizen Engagement with the Government.

Indicators	Mean	SD	Interpretation
Participation	2.83	0.65	Agree
Satisfaction	2.93	0.70	Agree
Trust	2.82	0.66	Agree
OVERALL	2.86	0.63	Agree

Legend: 1.00-1.74 (Strongly Disagree), 1.75-2.49 (Disagree), 2.50-3.24 (Agree), 3.24-4.00 (Strongly Agree)

Table 2 shows that respondents generally agree that social media utilization positively influences citizen engagement with the government, with mean scores for participation, satisfaction, and trust all exceeding 2.50, indicating agreement. Satisfaction received the highest mean score (2.93), suggesting citizens feel more positively about their interactions with the government through social media. This implies that governments can leverage social

media platforms to foster greater citizen engagement by facilitating participation, improving satisfaction, and building trust. These findings align with Bertot et al. (2012), who found that social media's use by government agencies increased transparency, participation, and trust among citizens by providing real-time information and interactive communication channels.

Table 2.1. Social Media Utilization Influence on Citizen Engagement with the Government in terms of Participation.

Items	Mean	SD	Interpretation
When I see posts on social media about government events (like community meetings or local projects), I feel excited to participate and get involved.	2.80	0.68	Agree
After learning about government programs through social media, I am more likely to join in or share my thoughts on those programs.	2.86	0.74	Agree
When discussions about government policies happen on social media, I feel motivated to share my opinions and concerns directly with government officials.	2.82	0.68	Agree
OVERALL	2.83	0.65	Agree

Legend: 1.00-1.74 (Strongly Disagree), 1.75-2.49 (Disagree), 2.50-3.24 (Agree), 3.24-4.00 (Strongly Agree)

Table 2.1 shows that respondents generally agree that social media utilization positively influences citizen engagement with the government in terms of participation, with all item means and the overall mean (2.83) exceeding 2.50, indicating agreement. This implies that social media platforms can effectively facilitate citizen participation in government activities and decision-making processes. This

finding aligns with Effing et al. (2011), who conducted a meta-analysis that demonstrated a significant positive relationship between social media use and political participation, indicating that online platforms enhance citizens' involvement in civic and political activities, including policy discussions, voting, and community engagement.

Table 2.2. Social Media Utilization Influence on Citizen Engagement with the Government in terms of Satisfaction.

Items	Mean	SD	Interpretation
I'm happy with how the government uses social media to keep us informed about important news and updates.	2.96	0.77	Agree
Because of the government's presence on social media, I feel more aware and included in decisions that affect my community.	2.98	0.74	Agree
My satisfaction with how the government handles public issues has improved because they actively engage with us on social media.	2.85	0.77	Agree
OVERALL	2.93	0.70	Agree

Legend: 1.00-1.74 (Strongly Disagree), 1.75-2.49 (Disagree), 2.50-3.24 (Agree), 3.24-4.00 (Strongly Agree)

Table 2.2 shows that respondents generally agree that social media utilization positively influences citizen engagement with the government in terms of satisfaction, with all item means and the overall mean (2.93) exceeding 2.50, indicating agreement. This implies that utilizing social media platforms can enhance citizen satisfaction with government services

and communication. This finding is consistent with Linders (2012), who explored how social media can foster a more interactive relationship between governments and citizens, highlighting the role of two-way communication in increasing satisfaction with government services.

Table 2.3. Social Media Utilization Influence on Citizen Engagement with the Government in terms of Trust.

Items	Mean	SD	Interpretation
Seeing how the government interacts with citizens on social media makes me feel more confident in their actions and decisions.	2.83	0.69	Agree
The transparency the government shows on social media helps me trust them more and believe they are accountable for their actions.	2.80	0.75	Agree
The way the government connects with people on social media boosts my trust in their dedication to serving the public.	2.83	0.70	Agree
OVERALL	2.82	0.66	Agree

Legend: 1.00-1.74 (Strongly Disagree), 1.75-2.49 (Disagree), 2.50-3.24 (Agree), 3.24-4.00 (Strongly Agree)

Table 2.3 shows that respondents generally agree that social media utilization positively influences citizen engagement with the government in terms of trust, with all item means and the overall mean (2.82) exceeding 2.50, indicating agreement. This implies that governments can utilize social media to build

and strengthen trust with citizens. This finding is in line with Warren et al. (2014), who demonstrated that government agencies' use of social media tools enhances transparency, encourages participation, and fosters trust through increased accessibility and real-time communication with the public.

Table 3. Integration of E-Governance and Social Media Impact.

Indicators	Mean	SD	Interpretation
Relevance	2.58	0.71	Often
Responsiveness	2.50	0.72	Often
Effectiveness	2.65	0.74	Often
OVERALL	2.57	0.67	Often

Legend: 1.00-1.74 (Never), 1.75-2.49 (Sometimes), 2.50-3.24 (Often), 3.24-4.00 (Always)

Table 3 shows that respondents generally perceive that the integration of e-governance and social media often impacts the relevance, responsiveness, and effectiveness of public policy outcomes, with all indicator means exceeding 2.50, indicating that these outcomes are frequently influenced. Effectiveness received the highest mean score (2.65), suggesting that this area is most positively impacted by the integration. This implies that governments can frequently leverage the combined power of e-

governance and social media to develop and implement public policies that are more relevant to citizens' needs, responsive to their feedback, and ultimately more effective in addressing societal challenges. This finding aligns with Criado et al. (2013), who found that social media engagement in government led to more effective policy making processes by incorporating citizen feedback and fostering collaborative governance.

Table 3.1. Integration of E-Governance and Social Media Impact in terms of Relevance.

Items	Mean	SD	Interpretation
How often do you see government decisions that match what people discuss on social media?	2.53	0.76	Often
How often do you turn to social media to learn about new policies or services from the government?	2.65	0.82	Often
How often do you notice the government updating its policies after issues are raised on social media?	2.56	0.81	Often
OVERALL	2.58	0.71	Often

Legend: 1.00-1.74 (Never), 1.75-2.49 (Sometimes), 2.50-3.24 (Often), 3.24-4.00 (Always)

Table 3.1 shows that respondents generally perceive that the integration of e-governance and social media often enhances the relevance of public policy outcomes, with an overall mean of 2.58. This suggests that by utilizing both e-governance tools and social media platforms, governments can frequently develop policies that are more aligned with the needs and

priorities of their citizens. This finding is consistent with Nam (2012), who examined the role of social media in policy making and found that it helped bridge the gap between citizens and policymakers by increasing opportunities for public input, making policies more relevant to citizens' needs.

Table 3.2. Integration of E-Governance and Social Media Impact in terms of Responsiveness.

Items	Mean	SD	Interpretation
How often do you get a response from the government when you contact them through social media or e-governance platforms?	2.44	0.80	Sometimes

Items	Mean	SD	Interpretation
How often do you feel the government acts faster on public issues because of social media feedback?	2.56	0.79	Often
How often do you think your concerns are addressed when you engage with the government online or through social media?	2.49	0.80	Sometimes
OVERALL	2.50	0.72	Often
Legend: 1.00-1.74 (Never), 1.75-2.49 (Sometimes), 2.50-3.24 (Often), 3.24-4.00 (Always)			

Table 3.2 presents a slightly more nuanced picture. While the overall mean (2.50) indicates general agreement that integrating e-governance and social media often impacts the responsiveness of public policy outcomes, individual item means show some disagreement. Items I1 and I3 fall below 2.50, suggesting that respondents don't perceive a strong impact on responsiveness in those specific areas. This could indicate that certain aspects of policy responsiveness, such as the speed or efficiency of government responses to citizen feedback, might not be fully realized through the current

integration of e-governance and social media. This finding highlights the need for further research to identify specific areas where improvements can be made to enhance the responsiveness of public policy outcomes in the context of e-governance and social media integration. It might be beneficial to investigate best practices and strategies employed by governments that have successfully leveraged these tools to improve responsiveness and address citizen concerns effectively, as discussed by Bertot et al. (2010).

3.3. Integration of E-Governance and Social Media Impact in terms of Effectiveness.

Items	Mean	SD	Interpretation
How often do you use government websites or apps to successfully access services or information?	2.68	0.82	Sometimes
How often do you trust that the information the government shares on social media is accurate and helpful?	2.62	0.81	Often
How often do you believe policies that involve online public feedback work better than traditional methods?	2.65	0.83	Sometimes
OVERALL	2.65	0.74	Often
Legend: 1.00-1.74 (Never), 1.75-2.49 (Sometimes), 2.50-3.24 (Often), 3.24-4.00 (Always)			

Table 3.3 presents a mixed view on the impact of integrating e-governance and social media on the effectiveness of public policy outcomes. While the overall mean (2.65) suggests general agreement, with respondents indicating that this integration often influences effectiveness, individual item means reveal a more nuanced picture. Items I1 and I3 fall below 2.50, indicating sometimes in those specific areas, suggesting that certain aspects of policy effectiveness may not be perceived as strongly influenced by this integration. This could indicate that factors beyond simply integrating these technologies, such as the specific design

and implementation of e-governance initiatives or the quality of social media engagement, play a crucial role in determining the effectiveness of public policy outcomes.

Performance expectancy is about perceived benefits of e-governance and social media; citizens without any apparent benefit with regards to policy outcome after putting such facilities into design are expected to have lesser points of engagement. Resource facilities and support or the facilitating conditions in a general sense will probably decide the effectiveness that citizens as well as policymakers have towards integration and use of such technology, which

supports enhancement of public policies. For instance, an inadequate infrastructure to support the e-governance programs or poor

management of social media engagement could also hamper the overall policy outcomes.

Table 4. Barriers and Challenges to Effective Implementation of E-Governance and Social Media in Public Service.

Barriers and Challenges	Frequency	Percentage
Limited IT infrastructure and connectivity hinder effective implementation.	214	55.58
Resistance to digital change among staff slows adoption.	120	31.17
Lack of training reduces system efficiency.	163	42.34
Public mistrust in online services impacts usage.	152	39.48
Privacy and security concerns deter participation.	148	38.44
Budget constraints limit expansion.	111	28.83
Outdated government systems cannot fully support new technologies.	162	42.08
Lack of cross-agency coordination creates implementation gaps.	96	24.94
Cultural resistance to technology adoption persists in rural areas.	118	30.65
Data privacy laws are insufficient to protect user information.	143	37.14
Inconsistent government funding disrupts long-term digital projects.	128	33.25

Table 4 highlights the significant barriers and challenges hindering the effective implementation of e-governance and social media in public service. Limited IT infrastructure and connectivity emerge as the most prominent obstacle (55.58%), followed by lack of training (42.34%) and outdated government systems (42.08%). This suggests that infrastructural limitations, inadequate staff training, and legacy systems pose considerable challenges to successful digital transformation in the public sector. These findings underscore the need for governments to prioritize investments in robust IT infrastructure, comprehensive training programs, and modernization of existing systems to effectively leverage e-governance and social media for enhanced public service delivery. This aligns with Saleh et al. (2021), who emphasized the critical role of infrastructure development and capacity-building in overcoming the barriers to e-governance adoption

in developing countries. Their study highlighted the need for modern IT systems and workforce training to ensure the success of e-government initiatives.

With the inclusion of these UTAUT2 constructs, the relevance in explaining the existence of such barriers will become more apparent. For instance, facilitation conditions relate directly to a low IT infrastructure and connectivity as well, stating no hope for successful e-governance and social media adoptions in the face of an absence of pertinent technical resources. In this regard, public sector employees' lack of training relates to the performance expectancy construct; when employees are not trained adequately on these technologies, they lack understanding about the benefits and functionalities, which results in a low overall performance level and low user satisfaction levels.

Table 5. Social Media Usage in Facilitating Citizen Participation in Policymaking and Decision-Making.

Social Media sage	Frequency	Percentage
Social media platforms facilitate public feedback and discussion.	245	63.64
Online surveys and polls gather public opinions efficiently.	195	50.65
Live streams of consultations increase transparency.	156	40.52
Crowdsourcing ideas strengthen policy development.	111	28.83
Direct communication fosters better citizen-official engagement.	129	33.51
Social media increases public awareness of government initiatives.	178	46.23
Online petitions amplify collective public voices.	118	30.65
Government-hosted Q&A sessions foster citizen engagement.	118	30.65
Social media campaigns encourage community-driven policy support.	159	41.30
Hashtag activism on platforms mobilizes public opinion on policies.	120	31.17

Table 5 illustrates how social media can be effectively used to facilitate citizen participation in policymaking and decision-making. The most frequently cited usage (63.64%) is facilitating public feedback and discussion, followed by increasing public awareness of government initiatives (46.23%) and gathering public opinions through online surveys and polls (50.65%). This suggests that social media platforms are primarily seen as valuable tools for enabling communication and information shar-

ing between governments and citizens, fostering a more inclusive and participatory approach to policy development. These findings are consistent with Mergel (2013), who explored the role of social media in enhancing government-citizen interaction. Her study demonstrated how social media platforms could act as bridges between citizens and government, encouraging more active participation in policy discussions and decision-making processes.

Table 6. Potential Risks and Unintended Consequences of Relying Heavily on E-Governance and Social Media in Public Service Delivery.

Potential Risks and Unintended Consequences	Frequency	Percentage
Cybersecurity threats endanger sensitive data.	226	58.70
Exclusion of tech-challenged groups creates digital divides.	121	31.43
Misinformation spreads easily online.	221	57.40
Over-reliance reduces face-to-face engagement.	103	26.75
Privacy concerns escalate with increased surveillance.	135	35.06
Overload of digital platforms may lead to slower service delivery.	126	32.73
Misuse of social media can spread government propaganda.	162	42.08
Lack of clear guidelines can result in inconsistent digital services.	139	36.10
Vulnerability to hacking could compromise government systems.	154	40.00
Automated responses may reduce personalized public service.	123	31.95

Table 6 reveals significant concerns regarding the potential risks and unintended consequences of over-reliance on e-governance and social media in public service delivery. Cybersecurity threats endangering sensitive data (58.70%) and the spread of misinformation online (57.40%) are identified as the most pressing concerns. This highlights the critical need for governments to prioritize data security and implement robust measures to combat misinformation and maintain public trust in

digital service delivery. These findings echo the concerns raised in Bannister and Connolly (2014), who examined the risks associated with digital governance, particularly issues of cybersecurity, privacy, and misinformation. Their study highlighted the importance of proactive risk management and the implementation of strict data protection protocols to ensure secure and trustworthy public service delivery.

Table 7. E-Governance and Social Media Usage in Improving Government Transparency and Accountability.

E-Governance and Social Media Usage	Frequency	Percentage
Public access to data fosters transparency.	194	50.39
Real-time updates ensure timely information on government actions.	207	53.77
Tracking tools allow citizens to monitor project progress.	193	50.13
Open communication builds trust in governance.	170	44.16
Complaint reporting systems ensure accountability.	176	45.71
Public access to e-government archives promotes historical transparency.	132	34.29
Digital dashboards provide a clear view of government spending.	129	33.51
Open data initiatives allow third parties to analyze government performance.	90	23.38
Public forums on social media enable real-time feedback on policy changes.	143	37.14
Transparent timelines for project completion increase government accountability.	127	32.99

Table 7 demonstrates how e-governance and social media can be instrumental in improving government transparency and accountability. Real-time updates ensuring timely information on government actions (53.77%) and tracking tools allowing citizens to monitor project progress (50.13%) are identified as key applications. This suggests a strong emphasis on utilizing digital tools to provide citizens with readily accessible information and enhance oversight of government activities. These findings align with Bertot et al. (2010), who highlighted the role of ICTs in fostering transparency and accountability in government. Their study demonstrated how e-governance tools could provide citizens with real-time access to government data, enhancing oversight and increasing public trust in government institutions.

Conclusion

As discovered from the findings of this study, it will deliver some important conclusions that revolve around the effect on the provision of public services and engagement with citizens in the Philippines regarding e-governance and social media applications. This confirms that e-governance enhances efficiency in service delivery through reduction of service delivery times, minimization of errors and decline in service delivery costs. As such, the automation of government business processes has tremendously helped in improving the adequacy and precision of service delivery. Therefore, the hypothesis of the study, stating that e-governance adoption improves public service efficiency, has been held and not dismissed.

With regard to citizens' participation, the study arrives at the position that Social Media utilization enhances the levels of participation, satisfaction and trust of citizens. Although the level of influence is moderate, the increased interaction between the government and the citizens via social media encourages the purpose of government transparency as well as the two-way communication and therefore leads to higher levels of citizens' satisfaction. Thus, the hypothesis that Social Media utilization enhances citizens' engagement has been upheld and not rejected.

In addition, the use of social media with participatory e-governance was found to enhance the suitability, accountability, and impact of public policies. Data so indicate, this enables governance where citizens are at the centre, which leads to better policies. However, even though the integration often results in improved policy effectiveness, there is still room for improvement in making sure that there is always a relevant and timely response to what citizens provide at any such moment. So, the thesis about e-governance along with social media improves the relevance and efficiency of public policy.

Finally, the other finding of the study indicates that a number of shortcomings that present most of the factors that hinder the successful integration of e-governance and social media have also been outlined above. For example, poor IT networks, insufficient learning, and non-modernized governmental institutions, etc. prevent one from having these kinds of technologies and, so one cannot maximize their full potential. Many nations still have doubts regarding simply shifting from traditional governance to electronic governance. Although the benefits of e-Governance alongside social media harassment are clearly beneficial in apparent circumstances, combating these hindrances is key. Hence, the thesis that there are obstacles to the effective use of these technologies follows a high nonsense expectation and is not nullified.

Limitations and emerging questions identified in this study, future research could focus on the following areas:

1. **Impact of Digital Literacy on E-Governance and Social Media Use:** While this study brought forth the potential of e-governance and social media to increase citizen engagement and public service efficiency, there is a possibility that differences in digital literacy among citizens may influence these outcomes. Future research could focus on how differences in levels of digital literacy affect citizens' ability to use and leverage these technologies, perhaps pointing to customized training programs that might fill the knowledge gap.
2. **Longitudinal Impact of E-Governance and Social Media on Policy Responsiveness:** This research also revealed that though e-governance and social media do enhance policy responsiveness, the gap remains regarding responses being relevant and close to real-time to the views of citizens. A long-term study would thus seek to find out if regular usage of these technologies, in turn, resulted in permanent improvement in relevance and effectiveness of policies with regard to time, especially with rapid changes in social and economic situations.
3. **Addressing Infrastructure and Privacy Issues in Implementing E-Governance:** Both inadequacies in IT infrastructure and privacy issues remain strong barriers to acceptance of e-governance and social media. As such, research studies would need to be done on what works and what does not, including specific policies or technology interventions that might be considered in addressing these problems. Case studies might also involve investigating successful examples of how a country or region managed to upgrade its infrastructure or ensure proper privacy measures were taken, acting in some way as role models to deal with such issues.

Overall, the study affirms the transformative role of e-governance and social media in enhancing public service delivery and citizen participation but also underscores the need for comprehensive strategies to overcome the existing challenges.

Recommendation

Several recommendations have been put forth in this study that are aimed toward improving the effects of the adoption of e-governance and the utilization of social media in public service delivery and citizen's participation in the Philippines in light of what this research has found and its conclusions.

Firstly, it is suggested that additional resources be allocated for the establishment or expansion of new or existing technology for more effective communication and service delivery. Results demonstrated that a poor IT environment is still a very limiting factor in the prevalence of e-governance systems within organizations. Improving the capability of such platforms through better technologies and increased availability of the web, particularly in the hinterlands will guarantee more people achieving the expeditious and cheaper advantages of these services.

Secondly, such programs should be identified and implemented in the workplace to solve the subordinate dissatisfaction problem and the inadequate level of computer literacy. The issue of insufficient training adequacy was identified as an impediment to efficiency and therefore full training programs targeting the government institutions should be developed for the smooth operation of electronic governance systems and the use of social media for citizen inclusion by government workers. This will facilitate smoother transitions to digital processes and improve overall service delivery.

Third, the government should step up its cybersecurity measures and enhance data privacy settings to answer the public's concerns regarding online security and privacy. Realistic as they may sound, in combating data breaches and misinformation, it is necessary to work on introducing more stringent measures that will ensure that sensitive information is protected and the public has confidence in e-governance. This can be done by implementing stricter data management policies and developing high-quality and non-hacking safe e-governance.

Furthermore, in order to ensure that social media is exclusively used as an informative and an engaging tool to keep the citizens involved, it is advisable that government agencies enhance the interactive capabilities within their

agencies by using features such as live streaming, online consultations, and feedback on a real time basis. These approaches can enhance the degree of transparency and responsiveness of government and its agencies thereby making citizens feel more involved in policy formulation and implementation. Awareness and participation campaigns directed towards the population and the approach in amassing exodus in the platforms-which is targeted towards making the populace most active in any engagement in the community- should be done.

Finally, additional studies should be carried out to understand how this issue may be resolved and/or the better interaction of e-governance with social media. In the case of the Philippines, these future studies should look for existing know-how in other countries with successful digital governance that would help out policymakers apply evidence and take actions to solve the problems and improve the quality of public service and community engagement.

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