

**WEAVING THE TRENDS: URBAN DIGITALIZATION AND ITS
IMPLICATIONS TO LOCAL GOVERNANCE**

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ABSTRACT

Consistent shifts from conventional local governance to digitalization processes has been regarded as one of the major yet critical implications of modernized society. This study described and examined the perceptions of locals and local government units on urban digitalization and its implications to local governance among the selected cities in the province of Nueva Ecija. The study employed mixed method research (quan-quali). It selected the participation of locals and local government leaders through their representatives. Results of the study showed that locals and local government leaders highly perceived that urban digitalization became a significant part of local governance. It was also highly perceived that proper adoption of smart technologies, efficiency for use and accessibility should place at the central focus to expedite government services and improve the quality of government service among communities. Also, it was highly perceived that there was a strong implication of urban digitalization to local governance in line with proper dispensation of decision, policy formulation and efficient delivery of public services. Thus, it was concluded as perceptions on smart technology adoption increase, so do perceptions on the effectiveness of the decision-making process. In addition, it was found out that as perceptions on accessibility improve, the more likely decision-making process was effectively made.

Keywords:

urban, digitalization, local governance, accessibility, delivery of public services

INTRODUCTION

At the onset of modern and highly advanced technology, members of the society abruptly adapts these modern technologies in all societal undertakings from simple communication to government transactions. The prevalence of modern technology is felt within the very fibers of society. The use of modern devices, internet connectivity and highly advanced digital tools enable the members of society including locals in every communities specially those residing in urban areas, to undertake their day-to-day life activities. Digitalization is defined as a digital transformation process which commonly involves the integration of digital technologies into all areas of a personal, business and government transaction leading to fundamental changes in how these entities operate and deliver the values and services needed by the public.

In this regard, the Philippines as a democratic state where its people are accorded freedom to maximize their undertakings, be it personal or business-related. These activities made by the people are presumed to be congruent to the prevailing laws in the country. One of the apparent changes which have been surfaced in the 21st Century is the dominance of highly advanced technology that penetrate into the personal, professional and

governmental functions. In addition, the Philippine government strongly adopts the dominance and necessity in the use of modern technology into diverse government transactions. In fact, the state has regulated and imposed the proper and impactful use of highly advanced technology and tools in the delivery of basic government services including the provision of citizen-centered information and services. The stipulations are effected through the enactment of Republic Act No. 12254 or otherwise known as “E-Governance Act of 2025.” This statute provides that the state adopts a policy to establish, foster and sustain digitally empowered and integrated government through the implementation of a regulated and robust information and communication system aimed at facilitating responsive and transparent online-citizen services thereby optimizing the potential of open data for promoting economic growth while balancing the rights to freedom of information and data privacy of every Filipino. Notably, the spirit of this enacted law underscores the enhancement of government operations coining relevant digital processes to provide effective and efficient services.

Consequently, with the enactment of this law, Local Government Units across the country are also tasked to provide effective, efficient and sound government services through digital platforms. Under the Republic Act No. 7160 or otherwise known as the Local Government Code of the Philippines, they are given primary responsibility and accountability to ensure that locals residing in communities are accorded with accessible and fair government services. As to examine the interplay of E-Government Services and the basic functions of local governments in the country, the researchers find it necessary to describe and examine the perceptions of locals and the implementers on the implementation of digitalization specifically in both urban and rural areas.

In this line, the researchers observed several conditions that ignited their interests to pursue this undertaking. First, local government officials are continually imposing the provisions of E-Governance Act whereby they crafted local rules and regulations that ensure the implementation of the law. Second, there are still number of locals who consistently receive poor local government services despite the fact that digitalization is already regulated and implemented. Third, the researchers observed that there are still extreme delays on the dispensation of basic government services as accorded to local government units even if digitalization is of paramount process that must be initiated. Fourth, there are still numbers of local government units who experience difficulty in properly implementing the provisions of E-Governance Act. Lastly, the general public within particular communities are still less aware on the implementation and potential implications of E-Governance Act surrounding the core concept of Urban and Rural Digitalization.

Consistent shifts from conventional local governance to digitalization processes has been regarded as one of the major yet critical implications of modernized society. Digitalization as a force that bonds locals and policy-makers and implementers, is considered as critical and which, implications have not yet been finally concluded because of the several factors surrounding local governance which include complexities of rules, awareness and acceptance of local government leaders, understanding of locals in relation to the intent and effects of digitalization among others. While, digitalization becomes an impending breakthrough in the corners of public administration specifically in rural and urban development, its deeper and resonating implications to local governance has been only completely assessed by the implementers themselves. This condition also arouse the interests of the researchers to undertake this study.

Along this line, Nueva Ecija as one of the provinces in the Philippines which has large number of population and known for its agricultural rigor, where its people across its communities are still experiencing less impactful implication of digitalized processes and efficient services through E-Governance system. Reasons behind this are failed to comprehensively examine specially based on the locals’ perceptions. So, this paper intends to describe and examine the implications of urban digitalization based from the perceptions of locals in the province. Apparently, this study is significant as it may serve as inputs for policy development in relation to the proper and impactful implementation of E-Governance Act across the province. In addition, the study supports Sustainable Development Goals No. 11 specifically target 11.3 which provides the enhancement of inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.

Results of the study may serve as logical threshold to further the implementation and sound formulation policies relating to urban digitalization so as to ensure that locals are provided with sustainable, efficient and inclusive local governance. Thus, the study adheres to the creation of relevant policies that may forward effective local governance emphasizing digitalization and innovation.

LITERATURE REVIEW

In the study of del Mar Martinez-Bravo and Labella-Fernandez (2024) revealed that urban development gained great traction due to the unprecedented challenges that cities face and digitalization has been signaled as a game-changer against these challenges. Further, similar study showed that positive bidirectional relationship between digitalization levels and cities economic conditions were enhanced.

On one hand, according to the words of Atar et al. (2025), there was a need to emphasize the critical role of adaptive policies, strong digital infrastructure and digital literacy in ensuring the equitable and effective delivery of digital public services. In addition, similar study revealed that the necessity of strategic planning to navigate the complexities of digital transformation in governance was strongly needed.

Further, the study of Bayat and Kawalek (2020) revealed that transition to a digital governance of cities was tied to the strategic utilization of urban data. Similar study also showed that central idea that the smart city was a representation of the way a city institutionalized urban data.

Also, based from the assertions of Esposito et al. (2023), the nature of smart city concept highlighted the diversity of opportunities offered by smart city policies according to municipal policy-makers. Thus, similar study revealed that understanding the varieties of digital governance underpinned the proper of digital governance initiatives.

As substantiated by Nania et al. (2022), digital transformation has emerged as pivotal force reshaping the landscape of governance particularly in the spheres of regional and local development. Thus, similar study showed that digital transformation encompasses a broad spectrum which emphasized the fundamental shifts towards leveraging digital technologies.

According to Vellani (2025), key factors for successful implementation of digitalization in local governance included leadership, institutional capacity, stakeholder engagement and resource allocation. Similar study also showed that despite of the benefits, challenges such as data privacy, technical capacity and resistance to change persisted, still local government units succeeded to digitalized the delivery of public services.

Based from the previous studies cited by the researchers, they examined that there were critical interplay between digitalization and urban governance which emphasized the need for strategic approaches to leverage technology while addressing inherent local governance challenges. In addition, the researchers examined that strong policies were needed to realize the full potential of digital governance in enhancing urban living. In this regard, the researcher found strong knowledge gap where they examined that the studies cited only focused on the effects of digitalization in the spheres of local governance, failing to consider the perceptions and assessment of locals as beneficiaries of digitalized government services. With this, this study filled this gap as it described and examined the perceptions of locals and local government leaders in relation to urban digitalization and its implication to local governance. Also, this study examined the potential relationship of digitalization and its implications to local governance among the selected municipalities in the province of Nueva Ecija.

Theoretical Framework

This study was anchored on Digital Governance Theory as proposed by Hanisch, Curtis, Fabian and Oehmichen (2021) as cited of Tan and Cromptoets (2023). The theory asserted that digital governance emphasized three interrelating factors such as: control, coordination, incentives and trust. Under control, the government institutionalized rules and regulations on the use of digital tools to dispense basic government services while coordination underscored that the government created efforts to disseminate the functions and roles digital tools and mechanisms. On one hand, incentives focused on the recognition to the entities and institutions which used digital tools and mechanisms properly and positively. Lastly, on trust dimension, locals, leaders and stakeholders gained trust and confidence in the use of digital tools and mechanisms to dispense government services.

Research Objectives

This study described and examined the perceptions of locals and local government units on urban digitalization and its implications to local governance among the selected cities in the province of Nueva Ecija. Specifically, it answered the following questions:

1. How may the perceptions of locals and local government leaders on urban digitalization be described in terms of:
 - 1.1 adoption of smart technologies;
 - 1.2 efficiency for use;
 - 1.3 accessibility?
2. How may the perceptions of locals and local government leaders on the implications of urban digitalization to local governance be examined in terms of:
 - 2.1 decision-making process;
 - 2.2 policy formulation;
 - 2.3 delivery of public services?
3. Is there a significant relationship between the perceptions of the respondents on urban digitalization and its perceived implications to local governance?
4. Is there a significant difference on the perceptions of the two groups of respondents on urban digitalization and its implications to local governance?
5. What are the challenges encountered by the respondents on urban digitalization in relation to local governance?
6. Based from the findings, what inputs for policy development may be proposed?
- 7.

Hypothesis

The study hypothesized that:

Ho₁: There is no significant relationship between the perceptions of the respondents on urban digitalization and the perceived implications to local governance.

Ho₂: There is no significant difference on the perceptions of the two groups of respondents on urban digitalization and its implications to governance.

Significance of the Study

The study is of great importance as the results and findings the study may provide a logical data in formulating relevant policies so as to ensure the proper implementation of digitalization process in local governance. Also, the study is beneficial for local government units as it may provide empirical evidences for the formulation of strategic programs to help them advance the effective and efficient implementation of E-Governance Act. Meanwhile, results of the study may also be beneficial for the locals as it may provide insightful meanings to enable them understand and appreciate the positive implication of urban digitalization in their respective communities.

METHODS**Research Design**

This study utilized a mixed method research, a mere combination of quantitative and qualitative aspect. This research method is used in order to describe and examine the perceptions of locals and local government units on urban digitalization and its implications to local governance among the selected municipalities in the province of Nueva Ecija. The quantitative aspect of the study involved the description on the perceptions of locals and local government leaders on urban digitalization and the examination on the perceptions of the respondents on the implications to local governance. Added to this, quantitative aspects of the study also involved the examination if there would be a significant relationship between the perceptions on urban digitalization and its perceived implications to local governance and the examination if there would be a significant difference on the perceptions of the two groups of respondents on urban digitalization and its implications to local governance. Meanwhile, qualitative aspect of the study involved the determination on the challenges encountered by the respondents on urban digitalization in relation to local governance.

Population and Sampling

The study selected the participation of the two groups of respondents involving locals and local government leaders in the selected cities in the province of Nueva Ecija. For the selection of locals, the researchers used simple random sampling technique which extracted the participation of 70 locals who were residing among the two (2) cities in the province of Nueva Ecija. selected as locale in the study. Along this line, these cities were

selected as they strongly advocated the use of smart technologies and digitalization programs in their communities which were based on the collective observations of the researchers. Meanwhile, there were 20 local government leaders as represented by their employees who participated in the study. The selection of local government leaders was made through the use of purposive sampling technique. Apparently, the researchers established inclusion criteria to select the participation of the second group of the respondents which included: (1) those who were tasked to implement digitalization program and mechanisms, (2) those who were inclined in the digitalization program of the national government, (3) those who have first hand implementation of digitalization processes in their respective communities and (4) those who were willing to participate in the study.

Table 1. Distribution of the Respondents

Table 1 presents the distribution of the respondents.

LGU	Respondents	
	Locals	Leaders
LGU 1	35	10
LGU 2	35	10
N=	70	20

Research Instrument

The study used a researcher-made survey-questionnaire as the main research instrument and developed guide questions were used as the secondary research instrument. To quantify the descriptive-quantitative aspect of the study, the researchers used the developed survey-questionnaire. On the other hand, guide questions were used for unstructured interview to meet the qualitative aspect of the study. The developed survey-questionnaire contained two (2) parts. For part 1, it contained items relating to the perceptions of the respondents on urban digitalization while part 2 contained items relating to the perceptions of the respondents on the implication of digitalization to local governance. Thus, researcher-made survey-questionnaire was subjected to validation and internal consistency measure through pilot testing. As for the validation process, the researchers selected the expertise of three (3) professionals who held doctorate degree in public administration and currently, employed as government employees. The validation process focused on the content and face validity of the developed survey-questionnaire. Once validation was completed, the researchers subjected similar instrument to pilot testing which selected 15 non-included respondents. Reliability test was measured through Cronbach Alpha statistics, yielding .817 result which signified that the instrument was acceptable. On the other hand, the researchers used a 4-Likert Scale such as: 4-Strongly Agree, 3-Agree, 2-Disagree and 1-Strongly Disagree. Meanwhile, the developed guide questions were also subjected to validation by the similar roster of expert-validators. Accordingly, guide questions were rated as "good," which implied that the questions which were inductively arranged met the research objective and were aligned to extract significant responses on the challenges encountered by the respondents on urban digitalization in relation to local governance.

Data Gathering Procedure

The researchers created a formal letter for the subject respondents which contained the nature and objective of the study. Upon the receipt of the approval from the concerned offices, the researchers personally floated the questionnaire to the respondents individually. Before the actual data gathering, the researchers conducted short briefing and discussion to the respondents which significantly stated the purpose, nature and potential contributions of the study. Thereafter, the respondents personally answered the printed survey-questionnaires. Thus, verbal consents were provided by the respondents through the distributed informed consents prepared by the researchers. In the administration of unstructured interviews, the researchers prepared printed copies of the guide questions where the respondents wrote their answers on the printed copies. Once all the quantitative and qualitative data were gathered, the researchers encoded the same using MS Excel. Quantitative data were subjected to statistical computations using SPSS while qualitative data were subjected to thematic analysis using NVivo.

Data Analysis

Under the quantitative aspect of the study, the researchers used relevant statistical tools such as:

1. Mean, standard deviation and general weighted mean was employed in order to describe and examine the perceptions of the respondents on urban digitalization and its implications to local governance;
2. Pearson R was utilized in order to examine if there would be significant relationship between the perceptions of the respondents on urban digitalization and its perceived implications to local governance; and
3. ANNOVA was used in order to examine if there would be significant differences on the perceptions of the two groups of respondents on urban digitalization and its implications to local governance.

Ethical Considerations

Informed consents and proper communication letters were sent to the responsible office before the data collection. Hence, the respondents were oriented and directed as to the nature and purpose of the study. In line with the administration of the survey-questionnaire, the researcher allocated sufficient time so that disruption of normal operations and systems of work of the respondents was prevented. As to the storage of data, the researchers encoded and stored the data in the digitally established facility in the form of MS Excel. Thus, destruction of data was made through permanent deletion of the stored data while printed survey-questionnaire were shredded in order to conceal the actual responses of the individual respondents.

RESULTS AND DISCUSSION**1. Perceptions of the Respondents on Urban Digitalization****Table 3. Respondent' perceptions on urban digitalization**

Indicators	M		Verbal Description	
	R1	R2	R1	R2
<i>Adoption of Smart Technologies</i>				
1.Aware that smart technologies as part of digitalization were implemented	2.56	3.81	A	SA
2.Actively promote the adoption of smart technologies	3.28	3.72	SA	SA
3.Smart technologies were effectively communicated to the public	3.56	3.83	SA	SA
4.Sufficient training and campaign to the use and implementation of smart technologies were made	3.61	3.92	SA	SA
5.Improvement to the public services was evident using digital technologies	3.61	3.83	SA	SA
General Weighted Mean	3.32	3.82	SA	SA
<i>Efficiency for Use</i>				
1.Digital technologies develop government transactions	3.62	SA	3.75	SA
2.Increases operation efficiency	3.45	SA	3.91	SA
3.Find it easy to connect to government services	3.78	SA	3.91	SA
4.Consistent access to digital public services	3.65	SA	3.90	SA
5.Digital technologies efficiently improved government form of delivering basic services	3.56	SA	3.89	SA
General Weighted Mean	3.61	SA	3.87	SA
<i>Accessibility</i>				
1.Have equal access to government digital services	3.78	SA	3.92	SA
2.Taken necessary steps to create efficient digital platforms	3.63	SA	3.92	SA
3.Provide adequate resources	3.45	SA	3.89	SA
4.Prioritize accessibility in digital initiatives	3.67	SA	3.81	SA
5.Addressed digital divide communities	3.89	SA	3.94	SA
General Weighted Mean	3.68	SA	3.89	SA

Legend: 4.00-3.25-SA, 3.24-2.50-A, 2.49-1.75-DA, 1.74-1.00-SDA

Perceptions of the Respondents on Urban Digitalization. The results showed that respondents strongly agreed on the adoption of smart technologies as digitalization mechanisms were generally positive for both groups. Notably, higher mean score was obtained for second group of respondents which indicated that they had a more favorable view of the implementation of smart technologies, digitalization surrounding e-governance initiatives of local government units. The results further showed that respondent were aware on the smart technologies being used and implemented by their communities. Thus, both groups agreed that local government actively promoted these technologies and effectively communicated the same for the benefits of the general public. Further, the efficiency of digital technologies in government transactions was perceived positively by both groups with second group of respondents gain showed strong agreement. Surrounding this result, respondents believed that digital technologies have enhanced government operations and made it easier to connect with services. Consistent access to digital public services and improvements were also seen as positive indications of digitalization program. On the other hand, accessibility to digital government services was viewed positively with both groups implying strong agreement. This meant that respondents experienced equal access to digital services and that necessary steps have been taken to create efficient platforms. Thus, there was a strong perception that adequate resources were provided. Apparently, positive perceptions across variables under urban digitalization dimension suggested that both groups believed that urban digitalization was being effectively implemented in their local governance context specifically in terms of accessibility and efficiency. In this line, the results validated Digital Governance Theory where the theory asserted that government institutionalized rules and coordinate concerted efforts for digitalization. Results of the study were supported by the study of Islam (2025) which revealed that degree of digitalization for public governance was examined as an effective move to expedite government services. Similar study also claimed that digital era has changed all sides of government functions and that the delivery of public services were also positively affected.

2. Perceptions on the Implications of Urban Digitalization to Local Governance

Table 4. Respondents' perceptions on the implications of urban digitalization to local governance

Indicators	M		Verbal Description	
	R1	R2	R1	R2
<i>Decision-making Process</i>				
1.Data collected from digital platforms were utilized in local government decision-making processes	3.32	SA	3.71	SA
2.Leaders involved residents in the decision-making process through digital means	3.82	SA	3.90	SA
3.Use of data analytics has improved the quality of decisions rendered by Local Government Units	3.56	SA	3.93	SA
4.Feel that opinions of locals were valued	3.82	SA	3.90	SA
5.Led to a more transparent decision-making	3.87	SA	3.94	SA
General Weighted Mean	3.67	SA	3.87	SA
<i>Policy Formulation</i>				
1.Increased informed data through digital channel	2.56	SA	3.61	SA
2.Impacted policy formulation through digital inputs	3.45	SA	3.89	SA
3.Actively sought residents for policy formulation through digital channels	3.82	SA	3.92	SA
4.Developed policies through digital channels	3.33	SA	3.89	SA
5.Clear communication was used through digital platform to convey policy changes	3.72	SA	3.90	SA
General Weighted Mean	3.37	SA	3.84	SA
<i>Delivery of Public Services</i>				
1.Digital tools helped improved public services	3.47	SA	3.81	SA
2.Satisfied with the quality of public services through digital platforms	3.62	SA	3.89	SA
3.Enhanced service delivery efficiency	3.89	SA	3.92	SA

4.Digital tools helped feedback mechanisms obtained efficiency and transparency	3.78	SA	3.93	SA
5.Consistent access to public services through he use	3.63	SA	3.90	SA
General Weighted Mean	3.67	SA	3.89	SA

Legend: 4.00-3.25-SA, 3.24-2.50-A, 2.49-1.75-DA, 1.74-1.00-SDA

Perceptions on the Implications of Urban Digitalization to Local Governance. The result showed that a strong agreement among the respondents was obtained, suggesting that urban digitalization positively implicated local governance in their respective communities. As to the decision-making process, both groups of respondents strongly agreed hence, highly perceived that data stemming from digital tools and platforms used by the local government enabled them to create sound and effective decisions. Further, the results implied that both groups strongly agreed that local leaders involved residents in the decision making processes through digital means suggesting a more robust commitment to participatory governance. Thus, the use of data analytics was perceived to improve quality of local governance decisions indicating a greater appreciation for data-driven approaches. On one hand, as to policy formulation, respondents' perceptions surrounding the same was generally positive. This implied that skepticism and lack of awareness were defeated since digital channels were effectively implemented. In addition, respondents strongly agreed that digital inputs were perceived to be impactful to local governance as it provided clear communication mechanism and caused proper recognition of residents' sentiments, needs and demands. Lastly, on the delivery of public services, both respondents had a strong perceptions thereby, strongly agreed that digital tools helped improved public services, indicating satisfaction with the quality of services delivered through digital platforms. Further, the results showed that roles of digital tools facilitate effective and consistent access to public services which were viewed congruently positive. The results validated Digital Governance Theory as the theory proposed that digitalization spearheaded the recognition of public services which were delivered through the prevailing needs, concerns and demands of the locals in the communities. Results of the study were supported by the study of Li et al. (2024) which discussed that rapid development of cities and swift transition to effective local governance were significantly brought by the effective use of digital tools, programs and mechanisms.

3. Relationship Between The Perceptions on Urban Digitalization and Its Perceived Implications to Local Governance

Table 5. Relationship between the perceptions on urban digitalization and its perceived implications to local governance

Perceptions on Urban Digitalization	Perceived Implications to Local Governance			
		DesProcess	PolForm	DevPubServ
Adoption of Smart Technologies	r value	.654*	.314	.325
	p value	.011	.264	.274
Efficiency for Use	r value	.265	.321	.325
	p value	.454	.286	.257
Accessibility	r value	.602*	.502	.360
	p value	.023	.067	.274

Legend:

* Correlation is significant at 0.05 level (2-tailed)

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

Relationship Between the Perceptions on Urban Digitalization and Its Perceived Implications to Local Governance. The results showed that there was a strong positive correlation between the adoption of smart technologies and the decision-making process ($r=.654$). Thus, the null hypothesis that there would be no significant relationship between the perceptions on urban digitalization and its perceived implications to local governance was rejected. This indicated that as perceptions on smart technology adoption increase, so do perceptions on the effectiveness of the decision-making process. Also, the study found out that there was a significant positive correlation between accessibility and decision-making process ($r=.602$). Thus, the null hypothesis that there would be no significant relationship between the perceptions on urban digitalization and its perceived implications to local governance was rejected. This suggested that as perceptions of accessibility

improve, the more likely decision-making process was effectively made. The results implied that smart technologies forming urban digitalization emphasized the importance of proper highly advanced technology into governance structures. The study implicated that local government units should prioritize the adoption and implementation of smart technologies to further effective decision-making processes. Along this line, the study also implicated that local governments should also focus on other critical dimensions in the proper implementation of urban digitalization such as transparency mechanisms and consistent community engagement. Apparently, results of the study were supported by the study of Torfs and Danneels (2025) which asserted that accessibility in digital technologies used by local governments helped increased the imposition of relevant rules, sound decisions and efficient governance which led to the attainment of more responsible and ethical public administration.

4. Difference on the Perceptions of the Two Groups of Respondents on Urban Digitalization and Its Perceived Implications to Local Governance

Table 6. Difference on the perceptions of the two groups of respondents on urban digitalization and its perceived implications to local governance

Variables	Respondents		Decision
	R1	R2	
Perceptions on Urban Digitalization	0.0289	0.0121	Failed to Reject Ho
Perceived Implications of Urban Digitalization to Local Governance	0.0284	0.0311	Failed to Reject Ho

* = highly significant ($p \leq 0.05$)

** = highly significant ($p \leq 0.01$)

Difference on the Perceptions of the Two Groups of Respondents on Urban Digitalization and Its Perceived Implications to Local Governance. The mean values for perceptions on urban digitalization indicated that there was no significant difference between the perceptions of the two groups of respondents. This meant that both groups perceived urban digitalization similarly. On one hand, there was also no significant difference on the perceptions of the two groups of respondents pertaining to the implications of urban digitalization to local governance. This meant that both groups held similar views on the implications of urban digitalization to local governance. Notably, there were consensus between the two groups on their perceptions on urban digitalization and its implications to local governance. The study implicated that similar perceptions suggested that local government units as selected in this paper, have effectively communicated the goals and benefits of urban digitalization to both groups thereby indicating a successful engagement and strategies that resonate across different dimensions. Results of the study negated the study of Setyawan et al. (2024) which revealed that locals and government leaders had different assessment on the effectiveness of digitalization to public administration and governance.

5. Challenges Encountered by the Respondents on Urban Digitalization in relation to Local Governance

Table 7. Major themes and subthemes showing the challenges encountered by the respondents on urban digitalization in relation to local governance

Major Themes	Subthemes
Digital Divide Community	<ul style="list-style-type: none"> Lack of Digital Literacy Cybersecurity Concerns

Resource Constraints	<ul style="list-style-type: none"> • Incapability to provide highly advanced digital tools • Fragmented Digital Solutions
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Challenges Encountered by the Respondents on Urban Digitalization in relation to Local Governance.

First major theme emerged was digitally-divide community which subthemes: lack of digital awareness and cybersecurity concerns. The respondents were confronted with less awareness and understanding on the different digital platforms used on urban digitalization. This led to the exclusion from important services and participation opportunities in local governance. This implicated that local government should prioritize digital literacy programs to educate citizens in using digital technology. On one hand, the respondents were also confronted with cybersecurity risks where fear of data breaches and identity theft could deter locals and stakeholders from using online government services. This implicated that local governments should manage to create a more robust cybersecurity measures and transparent communication platforms for the locals. Meanwhile, another theme was extracted, resource constraints was emerged as the second major theme with subthemes: incapability to provide highly advanced digital tools and fragmented digital solutions. This meant that respondents perceived that local government faced lack of financial resources to invest in advanced digital tools and technologies which resulted to outdated systems failing to provide their other important needs within the context of local governance. This implicated that the local government should establish partnerships among large-scale private corporations focusing on digital innovation. In addition, fragmentation also posed challenge on urban digitalization where different local government sections used various digital platforms that led to inefficiencies and confusion among the locals and stakeholders. This implicated that local government units should also strive for more rigorous and integrated digital solutions so as to facilitate seamless public services. Results of the study were supported by the study of Kutsenko (2024) which showed that financial resources and lack of awareness of general public were the common challenges encountered in digitalization.

6. Inputs for Policy Development*Table 8. Inputs for Policy Development*

Challenges Encountered	Inputs for Policy Development	Program
Digital Divide Community	1. Enhanced Digital Literacy Policy 2. Partnership with Educational Institutions	Community Training
Resource Constraints	1. Private-Public Partnerships 2. Inter-Agency Collaboration	User-Centric Design Innovation

CONCLUSIONS

The study concluded that locals and local government leaders highly perceived that urban digitalization became a significant part of local governance. It was also highly perceived that proper adoption of smart technologies, efficiency for use and accessibility should place at the central focus to expedite government services and improve the quality of government service among communities. Also, it was highly perceived that there was a strong implication of urban digitalization to local governance in line with proper dispensation of decision, policy formulation and efficient delivery of public services. Thus, it was concluded as perceptions on smart technology adoption increase, so do perceptions on the effectiveness of the decision-making process. In addition, it was found out that as perceptions on accessibility improve, the more likely decision-making process was effectively made.

RECOMMENDATION

The study recommended that actual and formal formulation of policies where developed inputs as an output of this paper should be made. Thus, further studies relating to the examination, exploration and evaluation of digitalization within local governance system should be made extending the scope and nature of such.

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