Jurnal EVOLUSI

Please cite this article as: Aminuddin A.H, Abu Hassan A.A, Azan Z., (2023), Evaluating The Perception of E-Government Services Usage in Urban Malaysian Communities, Jilid 4, Bilangan 3, Paper ID 32-87

EVALUATING THE ACCESSIBILITY OF E-GOVERNMENT SERVICES USAGE IN URBAN MALAYSIAN COMMUNITIES

Aini Hidayah Aminuddin* (a), Ahmad Adham Abu Hassan (b), Zaliza Azan (c)
*Corresponding author

(a) Faculty of Business, Accounting and Social Science, Universiti Poly-Tech Malaysia, kl2204010847@student.kuptm.edu.my
(b) Faculty of Business, Accounting and Social Science, Universiti Poly-Tech Malaysia, kl2111010187@student.kuptm.edu.my
(c) Faculty of Business, Accounting and Social Science, Universiti Poly-Tech Malaysia, zaliza@uptm.edu.my

DOI:
Received 13 November 2023, Accepted 20 December 2023, Available online 29 December 2023

ABSTRACT

This study examines how individuals see the usage of e-government services in urban Malaysian areas. The research model includes the following elements: accessibility, usage of e-government services and the Theory Acceptance Model. Enhancing the effectiveness and quality of public services is the goal of Malaysian e-government applications. However, they're still not very common, particularly in impoverished urban districts. The poll aims to ascertain people's perceptions of using e-government services with respect to gender, years of internet usage, age, race, and occupation. The data for the study were gathered using an online survey that was sent to one hundred participants. The results showed that the adoption of e-government apps was significantly influenced by things like accessibility and usage of e-government services. It was also demonstrated that utilizing these programmes has a major influence on satisfaction, suggesting that users find them useful and fulfilling. According to the study's conclusion, it is critical to comprehend how urban inhabitants see and use e-government services in order to tailor government programmes that close the digital gap, satisfy community demands and expectations, and ultimately enhance public service delivery in the digital age.

ARTICLE INFO

Keywords:
Accessibility,
Usage,
Theory Acceptance Model.

1.0 INTRODUCTION

The study on e-government services in urban Malaysian contexts explores the perceptions and utilization of e-government apps among citizens. It underscores the significance of factors such as accessibility and usage of e-government services in influencing citizens' satisfaction with digital government services (Athmay et al., 2016). The research findings indicate that the utilization of e-government apps is associated with increased user satisfaction, demonstrating the benefits and satisfaction derived from using these services (Athmay et al., 2016). Moreover, the study aims to tackle the underutilization of e-government services, particularly in urban areas with low incomes, by examining how users perceive this process (Athmay et al., 2016).

To improve the implementation of e-government services in Malaysian urban settings, it is essential to bridge the digital divide and align government services with community needs and expectations (Reddick & Ανθόπουλος, 2014). Understanding how urban residents perceive and utilize e-government services is crucial for enhancing public service delivery in the digital age (Reddick & Ανθόπουλος, 2014). The lack of information is identified as a significant barrier that hampers the effective implementation and enhancement of e-government services in urban Malaysian contexts (Reddick & Ανθόπουλος, 2014). In conclusion, the study offers comprehensive insights into the critical elements that influence citizens' satisfaction with digital government services and encourage the adoption of e-government apps in Malaysia. By addressing factors such as accessibility, usage, and user satisfaction, the research contributes to advancing the standard and efficacy of services provided by the government in urban Malaysian areas.

2.0 LITERATURE REVIEW

The present study's independent and dependent variables—the Theory Acceptance Model (TAM), Theorical Framework, Usage of E-Government Services, and Accessibility of E-Government Services—are described in this section.

2.1 Usage of E-Government Services

Malaysia's e-government, which is built around the My Government Portal, functions as a centralized Government Single Gateway that gives people access to a variety of online services and integrated data from government agencies. According to the website My Government, it uses a citizen-centered and life event approach to increase public access to government services and information on particular life events and their unique needs. In addition, the Multimedia Super Corridor (MSC) project's 1996 launch marked the start of the government's transition to digitalizing service delivery systems, sometimes referred to as electronic government or e-government. Participating in this inaugural attempt were the agencies that fall under the purview of the federal, state, local, and other levels of government. A few of the trial services and initiatives that were introduced during this period included:

Use the Electronic Document Management System provided by the Government Office Environment (GOE-EDMS) for managing documents electronically:

- The Project Management System II (SPPII) for project management;
- The Human Resource Management Information System (HRMIS) for human resource management;
- The e-Perolehan system is used for government acquisitions;
- e-Kehakiman and e-Syariah for Syariah courts and Civil courts, respectively;
- e-PBT for services rendered by the Local Authorities.

Many comprehensive plans and action plans have been produced to support and sustain the existing digitalized service delivery system. These include:

1. Public Sector Digitization Strategic Plan: This plan outlines the overarching strategy for digitization within the public sector and provides a high-level roadmap for the use of digital technology.

2.Agency Strategic Plan: Every government agency develops a strategy plan unique to its requirements and objectives in order to guarantee alignment with the broader digital aims.

3.Digital Service Design based on Enterprise Architecture: This approach creates digital services that are efficiently and rapidly built by fusing the concepts of enterprise architecture with digital service design.

4.Agency ICT strategy Plan: Government agencies create ICT (Information and Communication Technology) strategy plans to guide their technology-related investments and efforts.

5. My Government Portal: This portal provides individuals with access to a wide range of services and data by serving as a single, easily accessible site for all digital government services.

6. Malaysian Government Mobile Applications Gallery (GAMMA): This collection of mobile applications built by various government agencies provides individuals with simple access to government services via their mobile devices.

All of these comprehensive strategies and action plans work together to improve the digitization of government services, making them more user-friendly, effective, and focused on the requirements of residents.

2.2 Accessibility of E-Government Services

Access to government services through e-government systems offers significant advantages, as highlighted by OseiKojo (2017) (Fan & Yang, 2015). The provision of online services by the government, such as vehicle licensing, cargo clearance, and license renewal in Ghana, demonstrates the elimination of bureaucratic processes and the facilitation of online access to essential services. This aligns with the concept of the "access divide" discussed by the ITU (2017), which emphasizes the importance of equitable access to ICT technologies, including the internet and mobile phones. The digital gap, as part of the digital divide model by Dewan and Riggins (2005) , underscores the critical role of access to technology in e-government adoption. Moreover, the collaboration between the Ministry of Communications and a Danish ICT company in Ghana's "Connecting the Unconnected Project" showcases the efforts to enhance access to e-government services, particularly in rural areas. This initiative, utilizing local cloud and satellite wifi technologies, enabled remote exchange of information on agriculture, health, and other topics between government representatives and rural populations (UN, 2018). The study by Fan & Yang (2015) emphasizes the importance of providing quality e-government services that are authoritative, timely, and accessible, aligning with the goal of e-government systems to offer useful and required information services. Additionally, the research by Yaw et al. (2017) underscores the significance of access to ICT technology in influencing e-government adoption in Ghana.

In conclusion, the integration of online services, the reduction of the access gap through ICT technologies, and the provision of quality e-government services are crucial factors in enhancing government service delivery and promoting digital inclusion in Ghana.

2.3 Theory Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was developed by Davis in 1989 and 1993 to provide a theoretical framework for successful technology adoption and to explain the mechanisms behind technology acceptance (Haynes & Thies, 1991). This model aimed to predict user behavior by focusing on critical activities that mediate the interaction between external factors, such as information system characteristics, and the practical use of these systems (Haynes & Thies, 1991). Inspired by the Theory of Reasoned Action, the TAM offered a psychological perspective on human behavior, addressing a gap in the information systems literature (Haynes & Thies, 1991). Davis's work laid the foundation for the creation of the Technology Acceptance Model, emphasizing key cognitive and behavioral factors like Perceived Usefulness and Perceived Ease of Use ("The International Journal of Public Sector Management", 1993). The TAM and its subsequent versions have been crucial in understanding the human-technology interaction and have provided insights into how users perceive and utilize technology ("The International Journal of Public Sector Management", 1993).

Understanding the TAM and its components can provide practitioners with valuable insights into enhancing the accessibility and usage of e-government services. The TAM's focus on perceived usefulness and ease of use can guide the design and implementation of e-government platforms to better meet user needs and expectations, ultimately improving user engagement and satisfaction with these services. In conclusion, Davis's Technology Acceptance Model has significantly contributed to the field of technology adoption by offering a structured framework for understanding user behavior and technology acceptance. Leveraging the insights provided by the TAM, organizations can optimize the design and implementation of technology solutions, such as e-government services, to enhance user accessibility and usage.

Theorical Framework

Theoretical framework, adapted from Shuib, L., Yadegaridehkordi, E., & Ainin, S. (2019), to determine evaluating the perception of e-government services usage in urban Malaysian communities, is depicted in Figure 1.

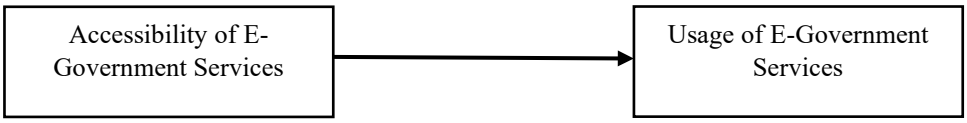

Figure 1: This conceptual framework has been adapted from Shuib, L., Yadegaridehkordi, E., & Ainin, S. (2019)

3.0 METHODOLOGY

The research employed a methodology to ascertain the level of digital accessibility and usage of e-government services among the indigenous populace about the utilization of e-Government services in Malaysian urban areas. Data for the study were quantitatively gathered using a 23-question survey that included background information and Likert scale questions. The principal aim of the Likert scale inquiries was to assess the perspectives of Malaysian urban populations about the use of e-government services. The research, which looked at the accessibility of e-government services, employed a Google Form poll to gather data from 100 respondents. Non-probability convenience sampling was employed in the study to select samples at random and collect a set volume of data.

The poll was circulated over many social media networks and conducted using an internet platform. Research aims to investigate how participant experiences and perceptions of e-government services relate to each other in urban Malaysian communities. The findings may be trusted to give a trustworthy overview of the circumstances in these particular metropolitan Malaysian regions. The thesis assessed the data's dependability utilizing a range of SPSS methods, such as reliability tests, one-way ANOVA, and independent t-tests. Cronbach's alpha is used in reliability testing to quantify Likert scale items, which are the main measure of a questionnaire's consistency.

4.0 FINDINGS AND DISCUSSION

The descriptive findings based on the demographic information, correlation, and reliability of the respondents are presented in this part.

Reliability

A variety of statistical techniques are commonly utilized to assess the reliability of scales or sets of questions. One prevalent method is Cronbach's alpha, which evaluates the internal consistency of a set of items or survey questions to measure the reliability of assessing a specific concept or idea (Tavakol & Dennick, 2011). Cronbach's alpha is particularly useful in evaluating the internal concept consistency of Likert scale inquiries (Tavakol & Dennick, 2011). Internal consistency, as measured by Cronbach's alpha, indicates the degree to which all items in a test measure the same construct, reflecting the inter-relatedness of the items within the test (Cortina, 1993).

Cronbach's alpha tends to approach reliability as the items in tests become more tau-equivalent, meaning they are linearly related and differ only by a constant, such as when tests consist of equal portions of general and group factor variance (Cortina, 1993). Despite potential issues with scales, Cronbach's alpha may still be acceptable, as demonstrated in examples from the science education literature (Taber, 2017). Additionally, the reliability of scales can be assessed through various methods, including internal consistency, split-half reliability, and retest reliability, to ensure the validity of questionnaires (Jang et al., 2017; Chen et al., 2023). In summary, Cronbach's alpha is a valuable metric for evaluating the internal consistency and reliability of scales and survey questions. It provides researchers with a quantitative measure to assess how well items in a test are interrelated and consistently measure the same underlying concept or construct, essential for ensuring the accuracy and validity of research instruments. Four Likert scale questions are shown as reliable in Table 1 below, while three Likert scale questions are shown as reliable in Table 2.

Table 1: *Reliability Statistic for Accessibility of E-Government Services*

Reliability Statistics

Cronbach's Alpha	N of Items
.858	4

Item Statistics

	Mean	Std. Deviation	N
I perceive the easiness of use of an E-government service	3.6600	.91254	100
I easily navigate around an E-Government website	3.6500	.91425	100
E-Government websites provide access for persons with disabilities	3.3800	.91872	100
I receive the expected assistance when I need it	3.4200	1.01683	100

For the four Likert scale questions, the Cronbach's Alpha was .858, meaning that the internal consistency of the four items is comparatively "good". To put it another way, the four questions looked at how well e-government services were accessible (easy to use). High reliability and internal consistency were identified in the samples.

Table 2: *Reliability Statistic for Usage of E-Government Services*

Reliability Statistics

Cronbach's Alpha	N of Items
.937	3

Item Statistics

	Mean	Std. Deviation	N
I have a positive attitude towards using e-government services	3.8200	.98862	100
I use/intent to use e-government services	3.7700	.95193	100
I often use/intent e-government services	3.6600	.99717	100

For three Likert scale items, a Cronbach's Alpha value of .937 suggested a comparatively "excellent" level of internal consistency. Stated differently, the three questions examined the efficiency of employing e-Government services. The results showed that the samples' internal consistency and dependability were rather good.

Correlation

Using the "Correlation" technique in SPSS (Statistical Package for the Social Sciences), we have calculated several types of correlations between the variables in your dataset in the section that follows. Correlation is a statistical technique used to ascertain the direction and degree of a link between two or more variables. It makes it easier for you to understand how changes in one variable relate to changes in another.

Correlation data (See Table 3).

Table 3: *The correlation between variable independent and dependent variable*

Correlations

		Accessibility	Usage
Accessibility	Pearson Correlation	1	.781**
	Sig. (2-tailed)		<.001
	N	100	100
Usage	Pearson Correlation	.781**	1
	Sig. (2-tailed)	<.001	
	N	100	100

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

As demonstrated by Table 3, there is a statistically significant correlation between the first relationship and the usage of e-government services in terms of usability and accessibility.781). This showed Malaysian urban people' preference for and ease of access to e-government services. The use of e-government services and their accessibility are significantly correlated, as Table 3 shows. Furthermore, it indicates that the significance of the association is at the 0.01 level. The result will include a correlation matrix that shows the correlations and associated p-values between the variables we have selected for analysis. Here is an expression for the correlation coefficients: There is no correlation when the value is 0, and the range from perfect

positive correlation (-1) to perfect negative correlation (-1). For the most part, interpreting the results requires looking at the correlation coefficients and the associated p-values. In contrast, significant negative correlations indicate that one variable tends to decline as the other increases, while strong positive correlations indicate that one variable tends to rise as the other tends to rise. A p-value assists us in determining the statistical significance of an observed correlation by identifying whether it is most likely the product of chance or truly indicates a link between the variables.

Correlation data (See Table 4).

Table 4: *The percentage of agree for all the question*

ITEM	QUESTION	PERCENTAGE OF AGREE
Accessibility of E-Government Services	I perceive the easiness of use of an e-government service	41%
	I easily navigate around an e-Government website	44%
	E-Government websites provide access for persons with disabilities	48%
	I receive the expected assistance when I need it	37%

According to the study results displayed in Table 4, 41% of Malaysian city dwellers concur that it is convenient to use e-government services for financial transactions. Moreover, up to 44% of Malaysian city dwellers concurred that they could simply browse an e-government website to complete their financial responsibilities. Additionally, since e-government websites are accessible to those with impairments, 48% of Malaysian city inhabitants are impartial when it comes to managing financial affairs. Finally, about 37% of Malaysian city dwellers concurred that they get the support they need while handling banking-related concerns.

Descriptive

In the part that follows, we will evaluate how urban Malaysian populations perceive the use of e-government services, accounting for consumer-influencing criteria such as gender, years of internet usage, age, race, and occupation. The traits or circumstances that, in a certain circumstance, have a major impact on the result or dependent variable are known as influential variables. They are also known as predictors or important variables. These factors have the potential to impact or determine the results of a certain research, analysis, or system. Important variables are often used in a wide range of fields, including data analysis, statistics, and scientific research. According to our hypothesis, there are substantial differences in how urban Malaysian populations perceive the use of e-government services based on factors such as gender, years of internet usage, age, occupation, race, and level of education. Data was collected for the study using a Google Form survey distributed to the community of 100 responders.

Demographic data (See Table 5).

Table 5: *The percentage of demographic*

ITEM	LIST OF ITEMS	PERCENTAGE
Gender	Male	49%
	Female	51%
Level of education	PhD Degree	1%
	Master Degree	6%
	Bachelor Degree	62%
	Diploma	20%
	SPM	9%
	Others	2%
Age	Less than 20 years old	6%
	20 -30- years old	74%
	30 - 40 years old	9%
	40 - 50 years old	8%
	Above 50 years old	3%
Occupation	Government	10%
	Non-Profit Sector	1%
	Student	52%
	Private	29%
	Others	8%
Race	Malay	97%
	Chinese	1%
	Indian	2%
Years of Use Internet	1 - 2 years	2%
	3 - 5 years	7%

More than 5 years	91%

The demographic inquiry examined how Malaysian urban inhabitants evaluated the usage of e-Government services based on the pie chart above, according to table 2, part A. Figure 1 shows that women account for 51% of Malaysian urban users, while males make up the minority (49%). Bachelor's degrees (62%), certificates (20%), and Sijil Pelajaran Malaysia (9%), were the most common kinds of education among Malaysian urban e-Government service users. More than half of those polled chose all of them. As indicated in the pie chart above, the demographic study examined the ages of Malaysian urban inhabitants in relation to how they regarded the usage of e-Government services. The results show that 74% of Malaysian urban users are between 20 and 30 years old; 9% are between 30 and 40 years old; 8% are between 40 and 50 years old; 6% are under 20 years old, and the remaining respondents are above 50 years old. Most Malaysian urbanites (52%) answer "others" when asked what they do for a living, followed by the private (20%), public (10%), and nonprofit (20%) sectors. More than 50% of the participants selected all of these choices. The aforementioned pie chart illustrates how Malaysians of different races felt about using e-Government services, according to the demographic question. The data that is currently available indicates that 97% of Malaysians that reside in urban regions are Malay, with the remainder being made up of Chinese and Indians. Ninety-one percent of Malaysian urbanites have been online for more than five years, seven percent have been there for three to five years, and the other seven percent have just been on it for a year or two. Therefore, this study expects the following hypotheses:

H_1: Accessibility of e-government services (ease of use) and usage of e-government services is significant.

5.0 CONCLUSIONS & RECOMMENDATIONS

Conclusions

In conclusion, by saying that governments must prioritize e-government services' accessibility to ensure that everyone, including those with impairments, can use them. It is recommended that governments endeavour to create e-government systems that are suitable for their own cities or countries, while also complying with federal legislation that set legal criteria for accessible e-government websites. The provision of public services and business-government engagement are thought to be revolutionized by e-government services. E-government websites are still difficult for people with disabilities (PWDs) to access, particularly in low- and middle-income countries where PWDs are disproportionately concentrated. Finding out how accessible e-government websites are for people with disabilities is the main focus of most studies on e-government accessibility.

Recommendations

- Web-based e-government apps should be simple to use across all platforms (PC, webTV, mobile devices), and they should be compatible with assistive technology that persons with disabilities may utilize.
- In order to offer a more sustainable environment for residents, governments must improve resource management by identifying demands and making decisions based on extensive research.
- Governments should deploy e-government solutions that match the needs of their countries or communities as soon as possible.
- Why Governments should use the e-Government Interoperability Framework (e-GIF) to improve the efficacy of their services.
- Governments should make sure that their e-government websites satisfy the legal requirements for accessibility by adhering to federal legislation that set such standards.

REFERENCES

Athmay, A., Fantazy, K., & Kumar, V. (2016). E-government adoption and user's satisfaction: an empirical investigation. Euromed Journal of Business, 11(1), 57-83. https://doi.org/10.1108/emjb-05-2014-0016

Chen, Z., Xia, L., J, Y., & Zhang, H. (2023). Psychometric evaluation of the chinese version of self-assessment scale for the community- based and emergency practice among medical students.. https://doi.org/10.21203/rs.3.rs-2995641/v1

Cortina, J. (1993). What is coefficient alpha? an examination of theory and applications.. Journal of Applied Psychology, 78(1), 98-104. https://doi.org/10.1037/0021-9010.78.1.98

Fan, J. and Yang, W. (2015). Study on e-government services quality: the integration of online and offline services. Journal of Industrial Engineering and Management, 8(3). https://doi.org/10.3926/jiem.1405

Haynes, R. and Thies, E. (1991). Management of technology in service firms. Journal of Operations Management, 10(3), 388-397. https://doi.org/10.1016/0272-6963(91)90075-9

Jang, Y., Kim, J., & Lee, K. (2017). Validation of the revised piper fatigue scale in koreans with chronic hepatitis b. Plos One, 12(5), e0177690. https://doi.org/10.1371/journal.pone.0177690

Reddick, C. and Ανθόπουλος, Λ. (2014). Interactions with e-government, new digital media and traditional channel choices: citizen-initiated factors. Transforming Government People Process and Policy, 8(3), 398-419. https://doi.org/10.1108/tg-01-2014-0001

Taber, K. (2017). The use of cronbach's alpha when developing and reporting research instruments in science education. Research in Science Education, 48(6), 1273-1296. https://doi.org/10.1007/s11165-016-9602-2

Tavakol, M. and Dennick, R. (2011). Making sense of cronbach's alpha. International Journal of Medical Education, 2, 53-55. https://doi.org/10.5116/ijme.4dfb.8dfd