

# Jurnal EVOLUSI

Please cite this article as: Rahim NA, & AGhani N (2025). Investigate awareness of e-government services towards usage e-government services of rural community in Gemencheh. Jurnal Evolusi, Volume 6 (1).

# INVESTIGATE AWARENESS OF E-GOVERNMENT SERVICES TOWARDS USAGE E-GOVERNMENT SERVICES OF RURAL COMMUNITY IN GEMENCHEH

Nur Athirah Rahim\*, Norhaninah A Gani \*Corresponding author:

Universiti Poly-Tech Malaysia, <u>kl2111010100@student.kuptm.edu.my</u> Universiti Poly-Tech Malaysia, norhaninah@uptm.edu.my

DOI:

Received 3 April 2024, Accepted 1 April 2025, Available online 30 May 2025

#### **ABSTRACT**

To lessen the digital divide between urban and rural areas, the research studyexplores the technological readiness of the rural community in Gemencheh, Negeri Sembilan. In order to empower these underserved areas, the study aims to determine how equipped rural people are to embrace and use technology. The problem statement emphasizes the difficulties that rural communities face in embracing technology, especially when it comes to limited access to digital tools and services that are essential for economic growth, healthcare, and education, due to inadequate technology infrastructure. The study uses a quantitative methodology and a survey design to examine factors like attitudes toward technology, digital skill competency, access to technology infrastructure, and perceived benefits and drawbacks of using technology. A questionnaire including 29 questions divided into seven categories is being distributed as part of a survey in Gemencheh, Negeri Sembilan, to learn more about the attitudes and preparedness of rural communities for adopting new technologies. To guarantee truthful responses, the respondents who are people from the rural community are informed about the goals of the study. In order to provide a complete view of the rural community's technological readiness, data is gathered using a questionnaire-based methodology that is customized to its unique needs. SPSS software is used to facilitate data analysis, and a Cronbach's alpha reliability test is scheduled to validate the data.

#### ARTICLE INFO

Keywords:

Awareness of E-Government Services, Usage of E-GovernmentServices, Readiness Rural Community, Quantitative

Published by Universiti Poly-Tech Malaysia

This article is published under the Creative Commons Attribute (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create dericative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen at: <a href="http://creativecommons.org/licenses/by/4.0/legalcode">http://creativecommons.org/licenses/by/4.0/legalcode</a>

### 1.0 INTRODUCTION

Access to and acceptance of technology have become more and more important for societal development and economic success in an era marked by rapid technical developments and digital transformation. But accessing and utilizing technology can present special difficulties for rural people, which keeps the digital divide between urban and rural areas alive. Therefore, it is crucial to comprehend how prepared rural areas are to accept technology in order to develop policies that would effectively close this gap and advance digital inclusion.

The goal of this study is to find out how technologically savvy the rural residents of Gemencheh, Negeri Sembilan, Malaysia are. Gemencheh exemplifies a typical rural environment beset by infrastructure limitations, socioeconomic inequality, and restricted access to technology. This study looks at the villagers' readiness in Gemencheh to accept and use technology. Its goal is to pinpoint the main variables that affect this adoption process and suggest ways to improve digital empowerment and connectedness in rural communities.

Using a descriptive quantitative research design, the study methodically gathers structured data to provide answers to particular technological readiness research questions. Using this method, the study aims to classify participants according to factors related to the use of technology, including digital literacy, internet connectivity, access to digital devices, and attitudes toward technology. The research intends to give important insights that might drive policy recommendations and actions targeted at improving digital inclusion in rural communities like Gemencheh by evaluating survey data and identifying patterns and trends. Overall, byevaluating the Gemencheh community's technological readiness, this study tackles a significant part of rural development. Policymakers, stakeholders, and community leaders can collaborate to implement targeted interventions that empower rural residents, improve digital access, and bridge the digital divide for a more inclusive and connected society by understanding the factors influencing technology adoption in rural areas.

The rural population, often characterized by unique socio-economic dynamics, may face distinct challenges in accessing and utilizing e-government services compared to their urban counterparts. Factors such as limited internet connectivity, lower digital literacy rates, and cultural perceptions towards online platforms can significantly influence the awareness and uptake of these services among rural residents. Against this backdrop, this study aims to delve into the awareness levels and usage patterns of e-government services within the community of Gemencheh. By understanding the current landscape, identifying barriers, and exploring potential solutions, this research endeavors to contribute valuable insights towards enhancing the effectiveness and inclusivity of e-government initiatives in rural settings.

Governments all throughout the world are using technology to give their citizens effective and easily available services in an increasingly digitalized world. Convenience, openness, and responsiveness in the provision of

public services are provided via e-government services, which comprise an extensive array of digital tools and online platforms. However, public awareness and adoption are crucial for the effective deployment and use of e-government services. Governments must ascertain the public's understanding of e-government services in order to adjust their tactics, enhance accessibility, and guarantee inclusion in the provision of services. In order to create a more effective and citizen-centric governance system, this study aims to explore individuals' awareness of e-government services, identify critical elements impacting awareness levels, and provide solutions for raising awareness and utilizing e-government services.

#### 2.0 LITERATURE REVIEW

## 2.1 The Level Of Competition Among The Internet Providers In Rural Areas

One of the most important factors in determining the extent of digital inclusion for rural populations is the level of competition among rural internet providers. The level of rivalry between various rural internet service providers is reflected in this independent variable. By controlling and varying the level of competition, researchers may directly evaluate the substantial influence of competition on elements that are important to rural B40 households, like affordability, internet access, and service quality. First off, the degree of competition has a big impact on rural areas' internet service availability and accessibility. Increasing competition among providers frequently results in higher expenditures for coverage and infrastructure. This additional investment may improve impoverished communities' access to the internet in remote locations.

Furthermore, the pricing of internet services in rural areas may be directly impacted by the competition among internet providers. In order to compete for consumers, providers may be forced to offer reduced prices, which would ultimately make internet services more accessible and affordable for rural B40 families. Morris (2022) J. Morris, W. Morris, & Bowen, R. In conclusion, the level of competition among rural internet providers significantly influences the accessibility, price, and availability of internet service for rural residents. Researchers can learn more about how competition affects rural communities' digital inclusion by examining and modifying the level of competition. This knowledge can then be used to help policymakers create strategies that will improve connectivity, close the digital divide, and ensure that rural residents have equitable access to technology.

In order to fulfill the specific demands of rural areas, competition among rural internet providers is crucial in promoting innovation and pushing improvements in service quality. Internet service providers are compelled by this facet of competition to improve their products in order to set themselves apart from rivals. In order to give rural users a more positive and seamless online experience, providers work to enhance customer service, provide faster connection times, and guarantee more dependability. Furthermore, more competition pushes internet service providers to innovate. Providers are encouraged to launch innovative goods and services designed to meet the unique needs of rural communities.

For example, providers may introduce cutting-edge technologies like mobile hotspots or satellite internet in response to competition to address connectivity issues in remote rural areas. This invention improves rural consumers' overall internet experience by expanding their options and enhancing the quality of services provided. Atkinson, R. D., and Brake, D. (2022, July 18)

To sum up, the level of competition among rural internet providers is an important independent variable that affects a number of digital inclusion factors, such as affordable internet access, the quality of services, innovation, and policy decisions regarding the adoption of new technologies in rural areas. Researchers and policymakers may effectively promote equitable access to technology for rural B40 families, improve connectivity, and bridge the digital divide by carefully examining how competition affects these crucial factors.

# 2.2 Availability Of Government and Commercial Subsidies

A key factor in closing the digital divide between urban and rural areas is the availability of both public and corporate subsidies. The goal of government subsidies is to promote digital inclusion and lessen inequities by lowering the cost of digital equipment for rural B40 families through financial help or tax incentives. Scholars examine the effects of these subsidies by closely examining modifications in scope and availability, providing valuable insights into how well they promote the adoption of technology in rural areas. In a similar vein, companies improve accessibility in rural regions by providing digital device discounts or subsidies.

Analyzing these commercial subsidies' features and accessibility is necessary to determine how well they contribute to closing the digital divide. Ultimately, academics may advise policymakers on practical ways to support fair access to technology and improve digital inclusion for rural populations by examining the effects of both public and private subsidies on technology adoption. Sections Selan, S. (May 22, 2021).

Governmental and commercial incentives have a direct impact on the price of digital equipment, which in turn affects the adoption of technology among individuals, especially rural B40 households. By lowering the financial barrier associated with purchasing digital equipment, these subsidies—offered by both the governmentand private sector—promote digital inclusion and lessen the gap between urban and rural communities. Scholars can offer policymakers important information about the efficacy of financial aid schemes by examining the relationship between the accessibility of subsidies and rates of technology adoption.

By knowing how these subsidies affect the rates at which technology is adopted, policymakers can better design interventions to remove barriers related to affordability and improve underprivileged people' access to the internet, thereby closing the digital divide. Amaglobeli, D., Kumar, U., and Moszoro, M. (2023)

Government and private sector subsidies have a big impact on how policies are developed to promote digital inclusion, especially in rural areas. Policymakers can design focused interventions that improve underprivileged populations' access to digital resources by using knowledge gained from studying the effects of subsidies on technology adoption. Through the evaluation of the impact of subsidy programs on technology adoption rates, policymakers may customize strategies to tackle affordability issues and guarantee a fairer allocation of digital resources. Comprehending the influence of subsidies on the rates of technology adoption furnishes

policymakers with vital data to tailor approaches that alleviate obstacles to affordability and foster digital penetration throughout diverse economic strata.

In the end, attempts to increase digital inclusion and lessen inequities in technology access are greatly influenced by the availability of public and private subsidies as independent factors. This emphasizes the significance of subsidy programs in creating policies for fair technology access.

# 2.3 Theory

According to Natasia, Wiranti, and Parastika (2022), the Technology Acceptance Model (TAM) has five main constructs: perceived ease of usage (PEU), perceived usefulness (PU), attitude towards utilizing (AT), purpose to utilize (B), and true system utilization (AU). According to Sukendro et al. (2020), TAM suggests that people's attitudes toward adopting a system are predicted by their perceptions of a system's usefulness and simplicity of use. This paradigm emphasizes the significance of perceived ease of use influencing perceived usefulness and is well-documented and utilized in social science research.

Furthermore, as noted by Amer Al-Abwan (2013) and Rani (2022), TAM evolved from Davis's Technology Adoption Model (TAM) to clarify technology adoption and its connection with Ajzen and Fishbein's Theory of Reasoned Action (TRA). This highlights TAM's significance in understanding the relationship between intention and behavior concerning technology adoption. Salloum, Mohammad Alhamad, Al-Emran, Monem, and Shaalan (2019) noted that TAM's extensive framework has outperformed other theoretical models in research on educational technology acceptance.

### 3.0 METHODOLOGY

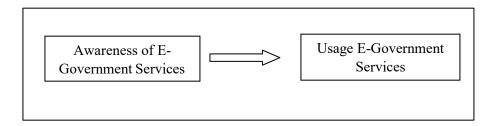


Figure 3.1 Conceptual Framework

This study uses descriptive quantitative research techniques to investigate factors influencing technology readiness and suggest ways to improve digital networking and empowerment in rural areas. The research will be conducted among villagers in Gemencheh, Negeri Sembilan, using a quantitative method involving a survey. The sample will consist of 100 respondents, selected through probability sampling. The questionnaire, based on a Likert Scale, will be used to answer questions about technology infrastructure, digital skills, attitudes towards technology, perceived advantages, and challenges in using technology. The questionnaire consists of 29 items divided into seven sections, and is better suited for SPSS software, saving time and facilitating quick data tabulation. The study aims to provide valuable insights into the factors influencing technology readiness and the need for improved digital networking and empowerment in rural areas.

This study aims to assess the preparedness of a rural community in Gemencheh, Negeri Sembilan for technology adoption. A questionnaire-based methodology is used to gather data on residents' attitudes and readiness for technology adoption. The questionnaire consists of seven parts and 29 questions, arranged into different sections.. The questionnaire is an adaptation of Al-Magid (2006) and Karim (2004), and its organized style allows for a methodical investigation of the community's technological preparedness. The study aims to provide a comprehensive picture of the rural community's level of technological preparedness, ensuring that the knowledge gathered is useful for developing well-informed plans for improving technology integration in rural communities. The questionnaire includes questions on demographic information, accessibility of e-government services, awareness of digital

# 4.0 FINDINGS AND DISCUSSION

**Table 1: Respondent Demographic Profile** 

Demographic	Categories	Frequency	Percentage (%)		
Gender	Male	39	39%		
	Female	61	61%		
Age	15 - 24 years old	24	24%		
	25 - 54 years old	49	49%		
	55 - 64 years old	25	25%		
	65 - over	2	2%		
Education	Primary Education	6	6%		
	Secondary Education Pre-	37	37%		
	University (Form 6) /	25	25%		
	Matriculation	32	32%		
	Diploma / Bachelor and above				

The percentage of gender responders is shown in Figure 4.1 as 100 respondents. The majority of them are female, with a total of 61 people, or 61%, while the diverse gender has a total of 39 people, or 39%. the number of respondents by percentage age. The majority of respondents in this survey are between the ages of 25 and 54 years old, accounting for 49 people, or 49%. The 55 to 64-year-olds are the second highest age group. That is, 25 people, or 25% of the population. The group aged 14 to 24 years old has 24 people, equivalent to 24%. The group for lower than above 65 years old respondents, has 2 respondents, or 2%. number of percentages for education. Most respondents in this survey come from secondary school, which is 37 people, or 37 %. It follows with respondents from educational backgrounds of diploma, bachelor, and above, accounting for 32 respondents, or 32%. The group for Pre-University (Form 6) or matriculation was able to collect from 25 respondents, or 25%. Meanwhile, the group for primary school has 6 respondents, or 6%.

**Table 2: Descriptive Analysis** 

No.	Measurement items	1	2	3	4	5	Mean
							Standard Deviation
1.	E-government service provide the precise information I need]	0%	2%	51.5%	46.5%	0%	3.44
							.539
2.	Usually the e-government services provide up- to-date information	0%	2%	50.5%	45.5%	2%	347
							.578
3.	E-Government websites enable me to actively give my opinion to the government	0%	2%	57.6%	39.4%	0%	3.35
							.577
4	There savings (time and money) using e- government services	0%	4%	42.4%	51.5%	2%	3.52
	government services						.612

Jurnal Evolusi. Volume 6, Issue 1,2025. e-ISSN 2735-2234

5	I able to communicate with government officials through egovernment services	0%	3%	51.5%	42.4%	3%	3.44
	through egovernment services						.611

Table 4.2 shows the independent variable, which is the amount of awareness of EGovernment services, and the result of mean and standard deviation. The highest mean was item4, which was 3.52 and the standard deviation was 0.612. The respondent agrees that they will save the money and time by using e-government services. The lowest mean is 3.35 and the standard deviation is 0.577, which is item 4.

**Table 3: Cronbach's Alpha Coefficient** 

Variables	Instruments	Cronbach's Alpha Coefficient (α)
Independent Variable		
Awareness of e-government service	4	<0.06
Dependent Variable		1
Usage of e-government service	3	<1

The Awareness of the e-government service was assessed using four questions. In Table 4.7, the Cronbach's Alpha for the questions in this part was calculated to be  $\alpha = <0.06$ , which is considered acceptable. The coefficients obtained for the usage of e-government were considered excellent.

**Table 4: Result Of Pearson Correlation Coefficient** 

		Awareness of e government service	Usage of e government service
Awareness of e government service	Pearson correlation	1	636**
	Sig. (2-tailed)		<.001
	N	99	99
Usage of egovernment service	Pearson correlation	636**	1
	Sig. (2.tailed)		<.001
	N	99	99

Table 4.12 shows that the relationship between awareness of e-government service and usage of e-government service is moderately positive, with a correlation coefficient of 0.636. Both significant values are <.0.001, which is less than the highly significant level of 0.05. It shows a significant statistical relationship between awareness of e-government services and usage of e-government services.

#### 5.0 CONCLUSION

The research study on the awareness of e-government services for the rural community in Gemencleh, Negeri Sembilan, presents a comprehensive examination of technology readiness and digital empowerment in rural areas. By delving into the level of preparedness of rural communities to embrace technology, the study aims to reduce the digital disparity between urban and rural areas, ultimately empowering disadvantaged communities through enhanced access to digital tools and services.

The study uses a quantitative approach and survey design to examine a number of factors that affect the adoption of technology in rural areas, such as digital skills proficiency, attitudes toward technology, and the perceived benefits and drawbacks of using it. The research highlights the unique barriers to technology adoptionin rural settings by focusing on Gemencleh, a typical rural community facing technological challenges. In particular, the inadequate infrastructure in these areas limits access to vital digital services that are essential for many aspects of daily life. The importance of competition among internet providers in influencing rural residents' access to digital inclusion is emphasized by the study. Developing solutions to improve connectivity and effectively close the digital divide requires an understanding of how competition affects internet access, price, service quality, and innovation. The availability of public and private subsidies also shows up as a major factor in encouraging digital inclusion in rural areas, emphasizing the significance of creating efficient subsidy programs to guarantee fair access to technology for everyone, regardless of socioeconomic background.

By addressing these challenges and proposing strategies to overcome them, the research study provides valuable insights for policymakers, stakeholders, and community leaders to devise targeted interventions aimed at

promoting digital inclusion and empowering rural communities. The findings underscore the need for collaborative efforts among various stakeholders to bridge the digital divide and foster inclusive development in rural areas like Gemencleh, Negeri Sembilan. Through a holistic approach that considers technology readiness, infrastructure development, competition among internet providers, and subsidy programs, the study advocates for a more connected, empowered, and inclusive society where rural communities have equal access to the benefits of technology and e-government services.

#### REFERENCES

- Research Guides: Organizing Your Social Sciences Research Paper: Limitations of the Study. (n.d.). https://libguides.usc.edu/writingguide/limitations#Research
- Blut, M., & Wang, C. (2019, August 5). *Technology readiness: a meta-analysis of conceptualizations of the construct and its impact on technology usage*. Journal of the Academy of Marketing Science. https://doi.org/10.1007/s11747-019-00680-8
- Kamal, S. A., Shafiq, M., & Kakria, P. (2020, February 1). *Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM)*. Technology in Society. <a href="https://doi.org/10.1016/j.techsoc.2019.101212">https://doi.org/10.1016/j.techsoc.2019.101212</a>
- Dardak, R. A. (2023, October 30). Transformation of Rural Community in Malaysia through Development Programs, and Modern Technology. FFTC Agricultural Policy Platform (FFTC- AP). <a href="https://ap.fftc.org.tw/article/3438">https://ap.fftc.org.tw/article/3438</a>
- Selan, S. (2021, May 22). Rural B40 families left in the dark as tech-savvy townies shop, pay their bills online and more. MalaysiaNow. <a href="https://www.malaysianow.com/news/2021/05/22/rural-b40-families-left-in-the-dark-as-tech-savvy-townies-shop-pay-their-bills-online-and-more">https://www.malaysianow.com/news/2021/05/22/rural-b40-families-left-in-the-dark-as-tech-savvy-townies-shop-pay-their-bills-online-and-more</a>
- Porter, M. E. (2014, August 1). *Strategy and the Internet*. Harvard Business Review. https://hbr.org/2001/03/strategy-and-the-internet
- Morris, J., Morris, W., & Bowen, R. (2022, January 1). *Implications of the digital divide on rural SMEresilience*. Journal of Rural Studies. <a href="https://doi.org/10.1016/j.jrurstud.2022.01.005">https://doi.org/10.1016/j.jrurstud.2022.01.005</a>
- Cui, L., & Wang, W. (2023, October 12). Factors Affecting the Adoption of Digital Technology by Farmers in China: A Systematic Literature Review. Sustainability. https://doi.org/10.3390/su152014824