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### E-GOVERNMENT PRACTICES AND ORGANIZATIONAL PERFORMANCE IN MALAYSIA LOCAL GOVERNMENTS

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#### ABSTRACT

e-Government implemented to enhance the quality and performance of services in the public sector. Malaysia faces various issues and challenges in developing e-Government, including organizational performance weaknesses. Therefore, empirical studies are important to demonstrate the impact of e-Government on the performance of the public sector holistically and comprehensively, which is greatly needed to serve as input in efforts to improve the quality of e-Government. This study explores the literature on e-Government and organizational performance to see the extent of e-Government's contribution to the performance of the local government sector. To fill the research gap, an empirical study using quantitative research methods was conducted on local government in Malaysia. A total of 149 questionnaires were distributed to Local Authorities in Malaysia, and 87 questionnaires were returned. Then, the data were analysed using descriptive methodology and an inferential statistical approach. The study findings indicate that the implementation of e-Government does not have a significant impact on organizational performance. The difference results may be attributes to variations in the e-Government development index between developed and developing countries. Additional factors such as the difference acceptance level and challenges in implementation may further affect the outcomes. Therefore, the study's findings conclude that the direct relationship is not significant. It is possible that other intermediate factors or variables exist within the relationship, which could allow for the study to be tested indirectly.

**Keywords:** e-Government, organizational performance, Malaysia local government

## **INTRODUCTION**

The functioning of public sector organizations remains an argumentative issue due to their vital roles in promoting socioeconomic growth. The public sector is unique with a wide range of stakeholders including the public, government agencies, suppliers, and politicians (Azmi, 2008). Performance issues are still a major problem (Zakaria & Razak, 2011) and they show up in both service delivery and overall organizational results. Governments have responded by implementing a variety of strategies to address these issues. One of the approaches focuses on the implementation of e-Government as a management step to improve service quality and subsequently the organizational performance of the public sector. The organizational performance varies significantly depending on the organization whether profit-driven or non-profit. Previous literature has discussed the system of measurement to be considered for evaluating performance such as non-financial and financial. According to (Yaacob et al., 2008) non-financial measurements such as customer happiness, staff contentment, and service quality are more pertinent to government organizational performance and are necessary to meet performance goals (Zakaria et al., 2017). Furthermore, non-financial dimension is essential for financial performance, as they provide a more comprehensive view of organizational performance (Kloot & Martin, 2000). Therefore, based on the discussions from previous studies, this research employs both financial and non-financial measures as dimensions to assess the performance of local government organizations in Malaysia.

## **LITERATURE REVIEW**

Organizational performance plays a crucial role in a nation's development and economic growth. Several studies have highlighted that the primary objective of enhancing an organization's performance is to achieve sustainable growth and competitiveness. Improving performance can lead to increased efficiency, better resource management, and higher levels of customer satisfaction. Therefore, improvement is closely tied to an organization's ability to tolerate and adapt to environmental changes. The organizational performance emphasizes enhancing its capability to address challenges effectively. By identifying and understanding potential obstacles, organisations can develop strategies that not only mitigate risks but also turn challenges into opportunities for growth (March & Sutton, 1997). The emphasis on organizational performance is informed by various perspectives, with growth being conditional upon the organizational context, focus of work, structural framework, resource utilisation, and goal attainment capabilities (Gavrea et al., 2011). Furthermore, e-Government has emerged as a significant component for both organizations and government entities, enabling them to effectively address the needs of citizens and users. e-Government encompasses not only the internal functions of organizations but external applications that pertain to a wide range of operations and services (Moon et al., 2014).

### **e-Government**

e-Government practices has been used as one of the new instruments in interactions with the public, business community, and other government departments (Husin et al., 2017). This e-government practice has shifted the paradigm from a more traditional approach to a more electronic and systematic one (Husin et al., 2018). Accessing government information is made simpler for citizens via the e-Government application (Kurniawan et al., 2023). So, performance efficiency is the key to e-Government, which is defined as more accurate and efficient information access. This efficacy illustrates how information technology can provide highly valuable capabilities in the era of knowledge-based economic competitiveness (Husin et al., 2017). According to Kumbakara (2008), information technology (IT) investment is now considered vital for supporting long-term planning and initiatives. In addition to

investments in other assets like transactions, information, and strategic resources, IT investment is especially critical for expanding infrastructure. Along with investments in other assets, such as transactions, information, and strategic assets, IT investment is crucial, particularly for infrastructure expansion. Therefore, in the context of this study, e-Government represents a key initiative and expenditure by the government to shift from a traditional to an electronic form of governance.

The success or failure of an e-Government initiative depends on several problems and achievements that the government and implementers must resolve (Abdulnabi, 2024). The implementation of e-Government project affected by various problems and difficulties, determines whether it succeeds or fails. Human resources, legal concerns, a lack of political, social factors, technical infrastructure, finance, vision and strategy, security and privacy, effective coordination, leadership, skills, and change management are some of the significant factors that impact the use of information technology in the majority of countries (Abdallah & Fan, 2012; Dada, 2006; Gichoya, 2005; Pudjianto & Hangjung, 2009).

Despite of issues and challenges, however e-Government is spread globally at federal, state and local level (Moon et al., 2014). According to Walker and Andrews (2015), local level is the level that implements many reforms in order to further improve the quality of services. e-Government at the local level is one way to provide services to the community and bring innovation to the internal operations of the government (Cook et al., 2002). e-Government at the local level offers a means to deliver services to the community and introduce innovation into the government's internal operations. The advantages of e-Government at this level demonstrate that its implementation can; i) increase efficiency, ii) improve internal communication, iii) provide better customer service and iv) taking care of the people's requests and expectations (Cook et al., 2002). Cook et al. (2002) outlines four key dimensions of e-government at the local level: e-services, e-management, e-democracy, and e-commerce. However, the dimension is varied and difference it depends on the area of the research itself. The table below shows the dimension of e-Government discussed in previous studies.

**Table 1**

*e-Government Dimensions*

Authors	e-Services	e-Management	e-Democracy	e-Commerce
Baum et al (2000), Akesson et al (2008), Siau & Long (2009), Al-Shehri & Drew (2010), Safeena & Kammani (2013)	✓		✓	
Muir & Oppenheim (2002), Sridhar (2005), Kumar et al (2007), Bwalya (2009), Al-Sobhi & Weerakkody (2010), Zampou & Pramatari (2011), Othman et al (2011), Srivastava (2012), Krishnan et al (2013), Ahmad, Markkula & Oivo (2013)	✓			
Wangpipatwong (2009)			✓	
Fang (2002), Carter & Belanger (2004), Jain & Kesar (2008), Kefallinos et al (2009), Srivastava & Teo (2010), Srivastava & Teo (2011), Krishnan dan Teo (2012), Abu-Shanab (2012), Odat & Khazaaleh (2012), Alawneh et al (2013), Sharma (2015)	✓	✓	✓	
Wang & Lio (2008), Krishna & Teo (2011), Alenezi et al (2015)	✓	✓		
Sahari et al (2011)		✓		
Oh (2013)	✓		✓	

Based on the Table 1, there are four main dimensions discussed in the study of e-government. Most of the past studies focus on the dimensions of e-services, e-management and e-democracy while less focus on the e-commerce aspect. In the context of e-Government at the local level, there are four main dimensions discussed by previous researchers (Cook et al., 2002; Moon, 2002). This study focuses on how e-Government services interact with local government performance. For this purpose, three key dimensions of e-Government were chosen to assess its implementation at the local level. These dimensions are e-services, e-management, and e-commerce are relevant to the context of the study. The operational definition is: e-services refers to the delivery of government information, programs, and services via the internet, e-management refers to the use of IT to improve government administration by enhancing the flow of information between government offices and e-commerce refers to the exchange of money for goods and services over the internet.

### **e-Government and Organizational Performance**

The literature review indicates that e-Government and public sector performance are related in terms of cost reduction, productivity enhancement, and process and administrative efficiency (Pang et al., 2014; Ramli, 2017). The organizational performance of public sector is significantly positive correlated with the e-Government (Twizeyimana & Andersson, 2019). According Joseph and Kitlan (2008), there are several potential advantages to e-Government implementation in the public sector, including lower administrative costs, more efficient government operations, closer and stronger ties between the public and the government. In addition, e-Government has significantly increased accountability and transparency in public sector (AlMulhim, 2023). For example, the Central Vigilance Commission (CVC) in India created a website to increase transparency and reduce corruption by providing the public with a wealth of information about corruption (Bizimana, 2020). Thus, to increase the transparency of policies, procedures, and information dissemination, the public is encouraged to file complaints against public servants who accept bribes.

Therefore, based on discussion demonstrates that the relationship between e-Government and organizational performance has been covered in the literature. There aren't many studies on how information technology affects the public sector. There is a dearth of systematic empirical research on e-Government services between 1990 and 2012 and just 139 papers on the subject of information technology (Arief et al., 2021). Studies on local government are indeed scarce, even though there is widespread recognition that e-Government initiatives impact all levels of government national, state, and municipal. Most studies on current e-Government practices focus on the national and state levels (Snead & Wright, 2014). Based on studies by Danziger and Andersen (2002) and Pang et al. (2014) stated that half of the empirical studies on local government focus on non-economic performance. The organization's performance is not at the core of the discussion (Pang et al., 2014). The study only discusses performance from the perspective of employee productivity, work performance, cost reduction, process effectiveness, and others (Ramli, 2017). This perspective does not meet to evaluate the organizational performance of the public sector (Luftman, 2000). Therefore, recognizing the existing gap, this study focuses on local government to examine the relationship of e-Government implementation on the organizational performance. The core of the discussion encompasses both financial and non-financial perspectives, aiming to provide a comprehensive understanding of how digital initiatives influence service delivery, efficiency, and community engagement.

## METHODOLOGY

This study employed a quantitative research approach to analyse how e-Government associated with organizational performance. Data analysis that produces numerical data is referred to as quantitative research. This approach is closely associated with survey research techniques and experiments, enabling researchers to gather measurable information on various variables (Saunders et al., 2019). Therefore, a descriptive study was conducted to explain the relationships between variables and test the hypothesis. This approach aligns with the nature of the planned study, which seeks to provide a clear understanding of the phenomenon under investigation (Saunders et al., 2019). By focusing on how e-Government implementation relates to the organizational performance of local government, this study aims to explain key factors that influence outcomes especially to collect data to describe humans, events, or situations.

Therefore, correlation studies are the best method for explaining the relationship. Correlation studies are a subset of descriptive studies and are often conducted to measure the relationship between two or more variables that change together (Cooper & Schindler, 2013). This study focuses on relationship analysis and hypothesis testing in alignment with its objectives, specifically examining the relationship between e-Government implementation and organizational performance and it was conducted cross-sectionally or as a 'snapshot' across time (Saunders et al., 2009). Information technology managers and higher-level employees were among the participants in the study. Each research model construct is measured on a six-point Likert scale in the questionnaire. The q-sort approach has been applied to the questionnaire development process. The Q-sort process is used to refine the statements based on real respondents and to enhance the selection of items for each construct.

One of the most widely used and thorough methods for evaluating organizational performance is the Balanced Scorecard (BSC) approach which is used as the dimension for the dependent variable (Molina et al., 2014). Kaplan and Norton (2005) created the BSC, which takes non-financial indicators in an organization's reporting (Mehralian et al., 2017). The four performance perspectives of the BSC include financial, customer, employee, and internal processes. Therefore, the instrument was taken and adapted from Yaacob (2008); Chan (2004); Fuentes et al., (2004); Kaplan and Norton (1996); Kanji (1998) which consists of seventeen (17) items. Organizational performance was measured using seventeen (17) items adjusted to a 1-6 Likert scale. The measurement items are shown in Table 2.

In this study, e-Government is treated as an independent variable, focusing on its role in the provision of services through digital information technology. This includes aspects such as automated exchanges between the public, business, and government sectors, enhanced democratic public communication, and streamlined administrative transactions (Hameed & Al-hawabkah, 2013; Moon et al., 2014). However, for the purposes of this study, e-government is defined as digital information technology encompassing three main dimensions: e-services, e-management, and e-commerce. Therefore, e-government is operationalized using a total of nineteen (19) items, which are measured on a 1-6 Likert scale. The measurement items are presented in Table 3.

**Table 2**

*Dimensions and Items for Measuring Organizational Performance Variables*

Dimension and Item	Sources
Financial	(Yaacob, 2008a); (Chan, 2004);(Fuentes-Fuentes et al., 2004) (Kaplan & Norton, 1996); (Kanji, 1998).
1. The organisation successfully managed the budget well.	
2. The organisation successfully achieved savings in operational costs.	
3. The organisation's productivity shows consistent improvement.	
4. The cost of services provided by the organisation is always increased.	

Customer

1. The services provided by the organisation have high community demand.
2. The level of customer satisfaction with the services provided by the organisation is high.
3. The department successfully provided services to customers within the targeted timeframe.
4. The organisation's reputation among customers is satisfactory.

Worker

1. The level of staff motivation is always at a high level.
2. The training program for the department staff is not running effectively.
3. The safety and health risks of staff on duty are guaranteed.
4. Our staff have a high level of job satisfaction.
5. The work environment can support the achievement of organisational goals.

Internal Process

1. Organisations are sensitive in identifying changes in customer needs.
2. The organisation took a short time to introduce the new service.
3. The technology used to carry out the task is outdated.
4. The organisation successfully established work procedures to improve the quality of the services provided.

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**Table 3**

*Dimensions and Variables Items in e-Government Measurement*

Dimensions and Items	Sources
<b>e-Management</b>	
<ol style="list-style-type: none"> <li>1. Electronic (digital) documents are provided to reduce paper usage.</li> <li>2. Electronic (digital) documents make our staff's work easier.</li> <li>3. Our organisation provides services online (example of bill payments, taxes, fines, and so on).</li> <li>4. Electronic (digital) management reduces administrative complexity</li> <li>5. Electronic (digital) management enhances our staff's ability to deal with customers more effectively.</li> <li>6. Electronic (digital) management increases our staff's productivity.</li> <li>7. Electronic (digital) systems reduce the budget for resources.</li> </ol>	(Hameed & Al-Shawabkah, 2013)(Kareem & Haseeni, 2015b); (Oh, 2013); Wenbo Shi (2001); (Papadomichelaki & Mentzas, 2012)
<b>e-Service</b>	
<ol style="list-style-type: none"> <li>1. Our organisation's website features attractive visuals.</li> <li>2. The interface of our organisation's website is well-organized. (well organized).</li> <li>3. Transactions through the website can be completed easily and quickly.</li> <li>4. We respond to user requests easily.</li> <li>5. The security of our organisation's website is trusted by users.</li> <li>6. The information provided on our organisation's website is accurate, up-to-date, and easy to understand.</li> </ol>	
<b>e-commerce</b>	
<ol style="list-style-type: none"> <li>1. e-commerce transactions can reduce organisational costs.</li> <li>2. e-commerce applications enhance the quality of service delivery</li> <li>3. e-commerce applications increase user trust in the government.</li> <li>4. e-commerce applications can improve communication with users regarding public issues.</li> <li>5. e-commerce applications enhance user satisfaction.</li> <li>6. e-commerce applications increase job satisfaction.</li> </ol>	

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## RESULT AND DISCUSSION

A research objective that analyses e-Government (as the exogenous variable) and the performance of local government organizations (as the endogenous variable) aims to uncover how e-Government initiatives influence various aspects of organizational performance. The relationship is analysed based on the hypothesis:

*Hypothesis (H<sub>1</sub>): There is a significant relationship between e-Government and organizational performance.*

Table 4 shows the relationship between e-Government and performance as hypothesis, along with the path coefficient ( $\beta$ ), t-value, and p-value. The results indicate that the hypothesized relationship ( $H_1$ ) is not supported with  $\beta = 0.075$ ,  $t = 0.532$ , and  $p = 0.595$ . The results show that the implementation of e-Government does not have a significant relationship on the organizational performance of local government.

**Table 4**  
*e-Government Results and Organizational Performance*

Relationship	Coefficient ( $\beta$ )	Standard Devision	t - value	p- value	Result
e- Government -> Organizational Performance	0.075	0.141	0.532	0.595	Not Significant

These findings contrast with those of studies by Yang and Rho (2007), Mungai (2017) and Hameed et al. (2013), which demonstrated a significant positive relationship between e-Government applications and the organizational performance. Variations in the results of this study can be attributed to implementation-related issues. The competence of an organization to manage information technology is one of the key pillars that present difficulties and barriers in the development of e-Government (Ndou, 2004).

According to Zheng et al. (2013), the growth characteristics of a nation significantly impact the development of e-Government, leading to varying effectiveness in its implementation. For instance, countries with robust economic growth and higher levels of technological adoption often see more successful e-Government initiatives, as they have the necessary infrastructure and resources to support such programs. AlMulhim, (2023) emphasizes that several factors, including administrative management, the degree of information technology use, and knowledge management techniques, play crucial roles in the successful implementation of e-Government. For example, effective administrative management can ensure that e-Government strategies are aligned with organizational goals and that there is adequate training for staff, enabling them to leverage new technologies effectively.

Additionally, Susanto and Makmur (2024) highlight the importance of managing information technology infrastructure, particularly in bridging the technology gap in rural areas. In these regions, where access to digital resources may be limited, targeted efforts to enhance infrastructure can make a significant

difference. For instance, establishing community access points with reliable internet can empower local populations to engage with e-Government services. By gaining a thorough understanding of these implementation challenges, stakeholders can identify specific actions to promote the achievement of national development goals in this digital age. This could involve developing training programs for public officials, investing in technological infrastructure, or enhancing public awareness campaigns about available e-Government services.

## CONCLUSION

The implementation of e-government is a strategic method for enhancing the performance of public sector services. However, in order to achieve the government's vision, several challenges must be overcome, particularly those related to infrastructure, as well as social and cultural factors. The findings from the studies and analysis clearly demonstrate the relationship between e-government and organizational performance does not show the significant relationship. The results suggest that additional research is necessary to determine the most effective strategies for successfully implementing e-Government in developing countries, particularly at the local level. A significant relationship may emerge if it is measured indirectly, involving other variables such as IT capabilities, knowledge management, total quality management, and other factors that are considered relevant to e-government practices and performance. Therefore, this study is expected to provide an overview of the relationship between e-Government and organizational performance in Malaysia.

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