The Influence of e-Government towards Organizational Performance in Public Sector

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ARTICLE INFO	ABSTRACT
	e-Government is one of the management practices in order to improve the quality of service moreover public sector performance. This paper aimed to investigate the relationship between electronic government (e-Government), organizational information technology (IT) capability and public sector organizational performance. This study contributed to the literature in the area of IT in public sector. Past studies empirically examine relationships among the three variables which are widely practiced in private sector but receive less attention in the area of public sector. Four hypotheses had been developed aligned with the research framework. To test the research framework, the quantitative approaches using the survey method was used. A total of 149 questionnaires were distributed to Local Authority in Malaysia. Out of that, 87 questionnaires were usable for further analysis. Data were analyzed using descriptive statistics and inferential statistics approach. The result showed the organizational IT capability acts as a full mediator towards the relationship between e-Government and organizational performance. The findings of this study are expected to contribute the increasing of knowledge in the area of government studies.

1. Introduction

A public sector organization is a concept that is still debated until today. This is because the public sector has various unique roles such as facilitators, socio-economic development and so forth [6]. Stakeholders such as suppliers, politicians, government agencies, the public and others have different emphasis on public sector performance [6]. Performance weakness is a major issue of the public service sector [38]. The community demands that the public sector improve the overall performance, service delivery system and responsibility to shareholders [38]. The quality of services is a major result of public services as the public service is a major component of the services industry [6]. Hence, the public sector needs to ensure their customers' needs are met and customer service can be enhanced continuously.

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Beginning in early 1990, the government began to gradually introduce information and communication technology (ICT) such as e-mail, online conversation, servers and others to get involved the communities and spread the latest news efficiently. The implementation of e-Government to replace the traditional government as in the form of bureaucracy which needs lengthy procedures, time consuming and lack of transparency in management. Therefore, in order to achieve the vision of e-Government and make it a reality, various obstacles and challenges faced and failure are commonplace for organizations worldwide [20]. Infrastructure, social and cultural issues is important factors contributed to the implementation and adoption of e-Government amongst countries over the world moreover for the developing countries.

Generally, public service activities focus on managing government services in low level of units or other legal institutions based on the power given. Public service is a service provided to a large number of people and in practice, legislative and executive regulations to determine the function of public service [5]. Hence, public service is very important in building a good relationship with the communities. The services delivered must be based on a set of innovations of public needs [5,32]. Greater understanding of citizens needs can help in realizing promises to further contribute to the trust in public sector services [17].

Recognizing the importance of the public sector in terms of quality in services delivery, the management measures has been taken. The traditional hierarchical and rule-based management governments are replaced by competitive knowledge-based economic needs such as flexibility, network organization, vertical and horizontal integration, innovative entrepreneurship, organizational learning and accelerating service delivery [25]. Therefore, e-Government is required by today's civil service to replace a traditional government which is in the form of bureaucracy. However in order to achieve the vision of e-Government and make it a reality, various obstacles and challenges faced and failure are commonplace for organizations worldwide [20]. Infrastructure, social and cultural issues is important factors contributed to the implementation and adoption of e-Government amongst countries over the world moreover the developing countries. Therefore, this paper examines the implementation of e-Government and its impact on public sector performance.

1.1 e-Government

e-Government is a new form of interaction between government and citizen, workers, businesses and government agencies. This new interaction has transformed the government's paradigm from a traditional form of government to electronics form. Through e-Government application, the access performance is increased in terms of convenience, accuracy and efficiency of service which leads citizen easy to access government information [10]. Although, e-Government is not only expected to the benefit outcomes it also raises the level of government awareness on the citizens responsibilities in terms of needs, income improvement and cost reduction [11]. e-Government makes the relationship between citizens, businesses, employees and government agencies become more valuable and effective through existing relationships such as government to the citizens (G2C), government to businesses (G2B), government to employees (G2E) and also government to government (G2G) [31]. The implementation of all government activities via online becomes a more sophisticated and effective way in promoting the people to participate actively in government activities [1].

According to Rokhman [30], the benefits of e-Government can be categorized into three main categories: i) transformation in services provision becomes more accessible, responsive and cost effective, ii) renewing local democracy making the council more open, more responsible and capable in leading the community and iii) promoting local economic power through modern infrastructure

and skilled workforce. Based on these goals its focuses on two main objectives which are internal and external objectives: i) internal objectives are related to the use of e-Government technology to achieve the goals of efficiency, transparency, responsibility in carrying out administrative activities; ii) external objectives are related to the provision of services to meet the public needs and to assure satisfaction through various online services [8,30].

1.2 e-Government and Organizational Performance

e-Government is one of the government steps in management transformation in order to improve the quality of services and public sector performance. Through e-Government, the combination of ICT and the involvement of the people will create an e-engagement that enable the people to play a better role in government management and procedures [5]. According to Joseph *et al.*, [21], there are many potential benefits of implementing e-Government on the public service sector such as lower administrative costs, making government operations more efficient, forming stronger and closer ties between the people and the government, making the government more responsible and transparent and others. The provision of online services and the use of electronic media for service delivery reduce administrative costs rather than manual operations. For examples, the cost for government offices and agencies which are well known in using paper could be reduced [21]. Through data sharing and information across departments, issues such as paper loss, data destruction, inconsistent data entry and speed up the transaction process can be addressed. The diversity of availability information in the website that related to the public administrative activities especially from the economic and legal aspects enhances transparency in public service [25]. For instance, the Central Control Commission (CVC) in India initiates website with the aim of reducing corruption and increasing transparency by sharing a large amount of information related to corruption with the citizens. Citizen are encouraged to lodge their complaints and provide information on public servants on corruption taking in order to improve transparency of rules, procedures and information delivery [25]. Hence, e-Government can make governance better than before even though is constrained by social and political norms in the region [21].

1.3 Organizational Information Technology (IT) Capability and Organizational Performance

Past studies discuss about the obstacles and challenges during the implementation of e-Government. Organizational worldwide faced by various obstacles and challenges and failure are the commonplace [20]. According to Salem [2], about 60% of e-Government implementation fails or does not achieve expected results especially in developing countries. Whereas e-government projects in developing countries were found around 35% totally failure, 50% partially failure and only 15% succeeded [2,18]. This figure indicated that the failure rate in developing countries is high and becomes more risky compared to developed countries. This failure rate has been identified due to infrastructure issues, social and cultural issues, usability, accessibility, lack of trust, lack of understanding among the people and business needs, lack of confidentiality and lack of marketing [2]. Besides the issues, the capability of information technology (IT) infrastructure has been identified as a major challenges and obstacles [3,15,25]. Although e-Government has a high positive influence on transforming the public service in most of the countries, the presence of obstacles affected the development of e-Government [13,35,36]. Considering this issues, this study investigates the organizational IT capabilities in the relationships between e-Government and organizational performance.

Generally, previous studies have shown lacking of research efforts that focus impact of IT on public sectors. In between 1990 and 2012, only 139 papers published in mainstream information systems (IS) journal are more or less related to a topic of government IT, and only 11 papers explicitly investigate the impact of IT on economic or non-economic outcomes [28]. Further, public administration researcher also paid less attention in the area of IT in public sector as pointed out by [14], where a few quantitative empirical studies on that particular topic. Moreover, organizational performance not being the main focused of the discussions [28]. One-dimensional perspective of the study such as labor productivity, job performance, cost reduction, process effectiveness does not meet the complete need to evaluate public sector performance [16,24,37]. Hence, further studies look at multidimensional perspective which is financial, customer, employee and internal process as discussed by [22]. This perspective is capable in providing the holistic view of public sector organizational performance. Therefore, this study examines the relationship between three variables which is e-Government, organizational IT capability and organizational performance.

2. Methodology

A set of questionnaire was developed to collect data for this study. In order to achieve the objectives of the study, the Malaysian Local Authority were selected as the population. The personnel involved in the survey were from IT manager and above. The questionnaire was consist of four parts; (i) the general information of the organisation (the position of respondent, experiences, organization types, number of employees and types of e-Government applications), (ii) e-Government, (iii) organizational IT capability and (iv) organizational performance. A questionnaire using a six-point Likert scale was used to gather data for each construct of research model.

The prime consideration of the design in this survey instrument was to keep it short and focused in order to obtain an adequate response rate. Questionnaires were designed based on a multiple item adapted from previous study. The process of developing the questionnaire also included a q-sort procedure. This q-sort procedure was used to improve the items construct placement and also rephrase statement based on the actual respondents. Experts from industries and academics were also consulted. The comments and feedback were analysed and a few modifications were made.

A total of 149 questionnaires were distributed to Local Authority in Malaysia. Out of that, 87 questionnaires were usable for further analysis. Collected data were analysed using descriptive statistics and inferential statistics approach.

3. Results

Based on result at table 1, the objective of this paper is to establish the relationship that has been determined between e-Government, organizational IT capability and organizational performance.

Table 1

Hypothesis Testing Results

No	Path Coefificient	β-value	STDEV	t-value	p-value	Decision
H1	e-Gov ----> Orga. Perfo	0.075	0.141	0.532	0.595	Not Supported
H2	e-Gov ----> Orga. IT Capability	0.762	0.047	16.224	0.000***	Supported
H3	Orga. IT Capability ----> Orga. Perfo	0.304	0.136	2.238	0.025**	Supported
H4	e-Gov--->Orga. IT Capa. --->Orga. Perfo	0.232	0.108	2.149	0.032**	Supported

Significant level: ***: $p < 0.01$; **: $p < 0.05$

3.1 e-Government and Organizational Performance

Previous studies have shown that e-Government applications have a positive and significant impact on the performance of public sector organizations and business sectors (for examples studies by Hameed *et al.*, Kareem *et al.*, Mungai and Yang *et al.*, [39-42]. However, the use of IT for governance is different between developed and developing countries. The use of e-Government is also unbalanced in all public sector organizations [43,44]. Aritonang [5] found that the implementation of online services does not alter the culture of public sector service. Thus, this study was conducted to examine the relationship in different contexts and use different variables to analyze the results. Hence, this relationship had been analyzed based on the hypothesis:

H1: There is a significant relationship between e-Government and organizational performance

The results indicates that the hypothesized relationship (H1) was not supported with the values of β = 0.075, t = 0.532 and p = 0.595.

3.2 e-Government and Organizational IT Capability

e-Government has a significant relationship with the organization's IT capability [7,33]. The allocation of the investment for forming flexible IT infrastructure supports planning or initiatives in the future. Investment allocation to IT assets has a significant relationship with the organization's IT capabilities [4]. Hence, this relationship had been analyzed based on the hypothesis:

H2: There is significant relationship between e-Government and IT capability of the organization

The resut designate that the e-Government has a significant relationship with organizational IT capability due to β value is 0.762 whereas the value of t = 16.224 and the value of p = 0.000. It was shown that H2 emperically supported.

3.3 Organizational IT Capability and Organizational Performance

The effectiveness of IT use is a fundamental factor that leads to the growth and competitiveness of an organization. The capability to use IT more efficiently and effectively is a factor that distinguishes an organization from another organization [9,15]. There are many research literatures proving that IT capability has direct significant impact on organizational performance [9]. However there is also studies reveal that IT capability can only influence organizational performance indirectly [34]. The confusing finding indicated the need to reexamine the effect of the organizational IT capability in this model as a mediator. Hence, this relationship had been analyzed based on the hypothesis:

H3: There is significant relationship between organizational IT capability and organizational performance

The result revealed that the organizational IT capability has a significant relationship with organizational performance (β = 0.304 t = 2.238 and p = 0.025). Therefore, H3 was supported.

3.4 Organizational IT capability mediates the relationships between e-Government and organizational performance

Investment in IT creates capability for an organization and makes the organization more competitive then achieving an increase in performance [9]. Empirically, it has proven that investment allocation towards the creation of flexible IT infrastructure has a significant impact on the capabilities of an organization [4]. The empirical evidence also shows that technology does not necessarily create competitive advantages and has no significant direct relationship between IT and performance [45-47]. According to Ross *et al.*, [48] an organization generates competitive advantage of its IT capability rather than their IT applications. Therefore, this study suggests IT capability act as a mediator. Thus, this relationship is analyzed based on the hypothesis:

H4: IT capability mediates the relationship between e-Government and organizational performance

The result indicates that hypothesized mediational relationship is confirmed to be statiscally significant. This is established by the result with achieved values of β = 0.232 t = 2.149 and p = 0.032. hence, H4 was supported.

Based on comprehensive reviewed of the literature and developed hypothesis, a new conceptual framework that had been proposed as shown in figure 1.
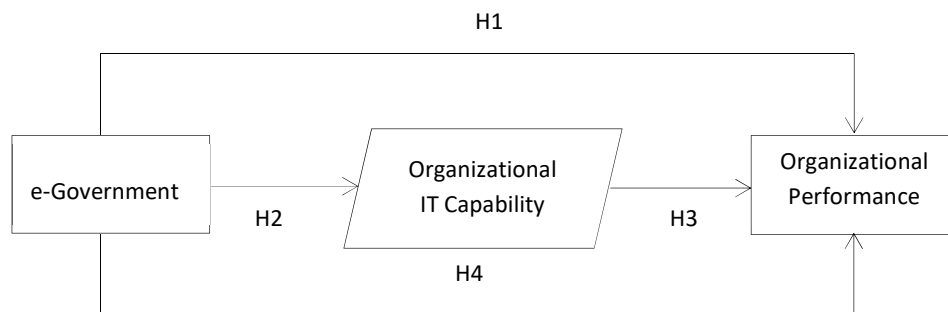

Fig. 1. New Proposed Framework

4. Conclusions

The public sector is the most important sector that contributes to the vast majority of the country's economy. The public sector is not mainly motivated to gain profit, but rather to provide quality services and meeting the needs of communities. The improvement in the service performance is the main goal of the public sector. e-Government implementation is a management step towards improving the performance of public sector services. However, in order to achieve the vision of government and make it reality, the various obstacles and challenges faced due to infrastructure, social and cultural issues. Based on studies and analyzed resulted, it clearly demonstrates the relationships between e-Government and organizational performance, e-Government and organizational IT capabilities and IT capabilities and organizational performance. Moreover, organizational IT capability acts as a full mediator on relationship e-Government and organizational performance. Thus, this paper is hopefully could give insights the relationship among e-Government, organizational IT capability and organizational performance.

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