A STRATEGY MODEL FOR ENHANCING E-GOVERNMENT PROCUREMENT IN UAE

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ABSTRACT

Objective: This paper presented a trategy model for enhancing E-government procurement system in UAE.

Research Method: This study was administered through exploratory mode of study and collected 206 data samples through questionnaire survey. The analysis involved reliability amd multicollinearity test for validating the identified elements affecting efficiency of E-Government Procurment (E-GP) services in UAE.

Findings: The analysis results revealed that the identified elements are reliable and important in affecting the efficiency of the E-GP services in UAE. Consequency, a strategy model is propsed for enhancing the efficiency of the E-GP.

Originality: Development model is a new strategy model which can be implemented to enhance the efficiency of the E-service for Government procurement system of UAE.

Keywords: E-procurement, E-GP, Efficiency, strategy model

1. INTRODUCTION

There has been a lot of interest in supply chain management (SCM) since the 1990s, both in academia and business. Many people have regarded procurement as the most important part of an organization's supply chain. Due to shifting customer expectations and the constantly changing marketplace, procurement management is becoming more and more complicated, especially in the e-commerce era. Modern IT-based e-procurement can lower transaction costs, improve procurement efficiency and transparency, and boost overall operation efficiency, giving companies a competitive edge by streamlining supply chains. Because of this, e-procurement has taken a major step forward and has become one of the SCM hotspots.

Electronic procurement, or e-procurement, is the acquisition of goods or services via the internet, typically through a web browser (Dixit, 2007). To keep up with the evolving demands of business and technological progress, ERP systems have evolved since that time (Wang et al., 2005). Because of the widespread use of information technology and the internet in the late 1990s, the huge savings this tool could make (Puschmann & Alt, 2005).

There were numerous studies that attempted to capture the experimentation of this new technology by providing best practises, frameworks, and models. Under the umbrella term of "e-commerce" (Min & Galle, 2003). E-procurement and electronic commerce are nearly identical, but they differ in many ways. A large number of individual customers is common in e-commerce, while e-procurement is more likely to be used for commercial transactions (Johnson & Whang, 2002). E-Government Procurement (e-GP) is the collaborative use of information and communication technologies by government agencies to ensure good governance and value for money in public procurement, while also contributing to the country's socioeconomic advancement. Its goal is to procure goods, works, and services, as well as manage contracts. For enhancing the e-procurment in government organizations, it is essential to develop a common platform and system to educate the people and motivate to use e-GP. Hence, this paper propose a strategical framework to implement e-GP in UAE.

2. LITERATURE REVIEW

2.1 Types of Public E-Procurement

When governments use information and communication technology (ICT) to conduct procurement interactions with bidders for the acquisition of goods, services, and other consulting services required by the government, this is referred to as "public e-procurement" (Davila, Gupta, & Palmer, 2003; Leipold et al., 2004). Vaidya (2007) stated that an inter-organizational procurement system automates any part of the procurement process in order to make government procurement more efficient and more transparent. An e-procurement system that is currently available on the market is called an e-market (De Boer et al., 2002). There several e-procurement available as discussed in the literature such as e-Informing (Boer et al. 2002), e-sourcing (Boer et al. 2002), e-Tendeing (Boer et al. 2002), e-Reverse auctioning (Carter et al. 2004).

2.2 Advantages of E-Procurement

2.2.1 Reducing Fraud in E-Procurement

Many public services have been transformed as a result of government agencies' adoption of ICT (Aman & Kasimin, 2011). E-Government is being implemented in government agencies due to the advancement of information and communication technologies (Azmi and Rahman 2015). The internet cuts down on public sector bureaucracy, provides opportunities for savings, and increases accountability and transparency (Krishnan et al., 2013; Yusoff et al., 2010). E-Procurement has been extensively used by the government to procure goods and services over the years (McCue & Roman, 2012). Besides these, e-procurement has been used to fight fraud and corruption, which has made many government contracts more transparent and accountable.

Neupane et al. (2014) say that electronic procurement can help to lessen the impact of dominant power relations and entrenched interests on public-private interactions by providing a way for the evaluation and selection of a government contract winner to be done in an open way. In order to reduce the number of face-to-face transactions, the use of internet technology for e-procurement is intended to increase market transparency, foster trust, and reduce fraud and corruption (Neupane et al., 2014). According to Azmi and Rahman (2015), a political economist, e-procurement in Malaysia is helping to reduce procurement fraud in the public sector.

2.2.2 Electronic Governence

The goal of electronic governance is to improve public sector information and service delivery. E-governance is the application of information and communication technology (ICT) to government, particularly the internet. For example, it involves delivering public services and sharing information with citizens, businesses, and government agencies via the internet or a variety of other digital platforms. Electronic governance is the "continuous optimization of service delivery, constituency involvement, and governance through the transformation of internal and external interactions through technology, the internet, and new media" (Fang, 2002). There is the emergence of a new era of modernism and creativity as more and more government services are provided electronically (OseiKojo, 2017).

A wide range of academics from developed and developing economies believe that e-governance improves the quality of government services and empowers citizens to participate in the decision-making process (Boateng, 2013; OseiKojo, 2017). Basu (2004) and Asogwa (2013), on the other hand, contend that e-government presents important opportunities for public-sector reform in emerging economies. E-government, in particular, may help to manage public procurement risks and anomalies and to promote sustainable public procurement, which is known as a positive environmental and social outcome.

2.2.3 Sustainable Public Procurement (SPP)

Sustainable consumption and production have been the focus of global action since 2002, when the Johannesburg Implementation Plan launched the global 10-year action on the subject (Preuss, 2009; Walker & Brammer, 2012). To achieve SDGs goal 12 and target 7, which call for fostering SPP practises that are in line with national priorities, these calls to action highlight the global effort to achieve Sustainable Development Goals (SDGs). SPP is the practise of incorporating a larger social and environmental concern into government or public sector procurement (Brammer & Walker, 2011).

With the goal of maximising the well-being of citizens while conserving limited resources, SPP encourages governments to procure goods and services (Witjes and Lozano, 2016). "Green procurement" is the term used to describe sustainable public procurement's environmental impact (Ho et al., 2010). As global CSR and supply chain debates have shifted dramatically, this approach has grown in popularity (Warner & Ryall, 2001; Witjes & Lozano, 2016; Preuss, 2009). Since the majority of public sector organisations have been in favour of private sector involvement in CSR programs, they are now checking to see if their supply chains are following social and environmental purchasing rules.

2.3 Critical Elements Affecting E-Government Procurement

Research into procurement has resulted in an enormous amount of theoretical and conceptual discourse, drawing theories from a wide range of disciplines and academic disciplines (Chicksand et al., 2012; Fernandez et al., 2013; Flynn & Davis, 2014; Ketchen & Hult, 2007). In the course of assessing their purchasing capabilities and options, public procurement officers frequently encounter structural and efficiency and effectiveness issues (e.g., resource-based view). Public procurement officers, like their private-sector counterparts, are constrained by a lack of resources when trying to find the best deal for their constituents. Best value in public procurement is often defined as obtaining the greatest benefit from goods and services at the lowest possible cost. Public procurement officers face more regulatory, institutional, and normative barriers than their commercial counterparts, all of which are referred to as "critical elements" in this study. E-government procurement's efficiency is influenced by a number of critical factors, which are included in the study's conceptual framework. Major categories of elements affecting E-government procurement are as in Table 1.

Table 1: Elements Affecting E-Government Procurement

Elements	Description
E-GP Planning	E-GP planning is the essential element for the success of E-GP through out the process steps i.e. procurement strategy and budgeting, procurement solicitation, and contract award and performance (Matechak, 2002).
E-GP Policies	An e-procurement policy could provide valuable guidance to all levels of authority and departments. A well-written policy document communicates to readers the organization's commitment to e-procurement. The policy can be used by the authorities to communicate the vision of e-procurement within it, thereby beginning to prepare employees for the changes that will occur (Hampshire County Council, 2004). Stakeholders can have clear rules to follow when they work with a specific policy or strategic framework (DOFA, 2006). This can help change social, technological or political environments
E-GP Change Management	Change management is the critical organisational issue which should be addressed properly. If the change process is not thoroughly planned and managed, it can cause significant time

	and monetary loss. A well-thought-out change management strategy can yield enormous benefits (Archer, 2003).
HRM Training	Human resource management is another critical organisational aspect in achieving successful e-GP deployment (HRM). It is critical to pay adequate attention to HRM issues, particularly the selection of appropriate training and education programmes, because any lack of skills required to effectively use e-government systems could be a serious problem, particularly in developing countries (Heeks, 2000)
Service Quality	The goal of electronic government is to improve the delivery of public-sector information and services. The use of ICT to provide public services improves service quality and customer satisfaction (Sharma et al., 2015; Osei Kojo, 2017). E-procurement in the public sector increases transparency and openness in public procurement (Basu, 2004; Neupane et al., 2014; Rotchanakitumnuai, 2013).
Innovation	Public procurement (PP) is one of the most direct strategies for encouraging innovation (Bleda 2019, Brammer & Walker, 2011; Edler & Georghiou, 2007). The purchase of goods and services by the government or a public-sector organisation is referred to as PP (Rolfstam, 2013; Uyarra & Flanagan, 2010). Public organisations can encourage private firms to mobilise the creativity and resources needed to produce creative solutions to unmet demands and social concerns by demanding and purchasing them (Tsipouri et al., 2015). PP can aid the functioning of innovation markets by addressing information-related market failures, i.e., flaws and asymmetries in the information available to individuals planning to conduct or purchase innovations (Edler & Georghiou, 2007; Georghiou, Edler, Uyarra & Yeow, 2014)
E-Government Procurement Efficiency	Public procurement is an important tool for assisting in the efficient management of public resources. It is important to understand the parameters to measure and assess the efficiency of the e-system

3. RESEARCH METHODOLOGY

This study adopted exploratory mode where data collection involved questionnaire survey. The questionnaire is an efficienct and effective tool for acquiring information and recording perception of the targeted respondents (Almansoori et al. 2021). It is easy and low cost method of data collection (Almazrouei et al. 2021). Survey was conducted considering quantitative approach of data collection. The quantitative approach is associated with the positivism paradigm (Alhammadi and Memon, 2020). To ensure that all units of measurement are measuring the same thing, the Likert scale was developed as a unidimensional measurement system. For surveys it's one of the most common scales of measurement to use (Giudici, 2005; Oppenheim, 2000). The 5-Point Likert Scale was used in the study.

4. RESEARCH METHODOLOGY

4.1 DEMOGRAPHY OF THE RESPONDENTS

Research samples are described in terms of their demographic information. Demographic information presents the factual information about the characteristics of the participating respondents (Ahmed et al. 2021). The total number of valid answers is 206. The participants in this study have several years of work experience, and educational background. Among the respondents, the most respondents have a master's degree, but there are also a significant number of people who have a

bachelor's degree and a PhD degree (58 and 41, respectively). There is one person who has a high school diploma and another who has both a high school certifcate. About half of the people who took part in the survey have worked for more than ten years, and the other half have worked for less than ten.

4.2 MULTICOLLINEARITY AND SINGULARITY

Kraha et al. (2012) defined multicollinearity in independent variables as a correlation coefficient of 0.9 or higher between highly correlated variables. Singularities are formed when one variable is a composite of several independent variables (Pallant, 2011). Variation inflation factors (VIF) and tolerance were used to evaluate the data's multicollinearity. Collinearity was first described by Hair et al. (2010) as a rule of thumb. Multicollinearity occurs when the tolerance level is less than 0.1 or the VIF is greater than 1.0. There will be no multicollinearity when tolerance is greater than 0.1 and VIF is less than 10. Table 2 shows the results of the multicollinearity test.

Table 2: Multicollinearity test

Construct	Tolerance	VIF
E-GP Planning	.886	1.103
E-GP Policies	.756	1.269
E-GP Change Management	.938	1.066
E-GP Training	.817	1.166
E-GP Service Quality	.965	1.047
E-GP Innovation	.764	1.256
Efficiency of EEGPP	.833	1.061

All of the tolerance values in Table 3 are greater than or equal to 0.1, and the VIF is greater than or equal to 1.0, which indicates that the data are multilinear.

4.3 RELIABILITY ASSESSMENT

Reliability refers to the degree to which research measurements are free of random error and the extent to which a scale used produces consistent results when repeated measurements of the relevant variable are made (Pallant, 2011). Data reliability can assessed with Cronbach's alpha test (Khaskheli et al. 2020). Cronbach's alpha assesses a scale's dependability. There must be a greater than 0.7 Cronbach's alpha to achieve internal consistency (Wong 2013) The Cronbach's Alpha reliability assessment values are shown in Table 3.

Table 3: Cronbach’s Alpha reliability test

No.	Constructs	Cronbach's Alpha
1	E-GP Planning	0.884
2	E-GP Policies	0.853
3	E-GP Change Management	0.873
4	E-GP Training	0.822
5	E-GP Service Quality	0.909
6	E-GP Innovation	0.899
7	Efficiency of EEGPP	0.894

The alpha values in Table 3 range from 0.822 to 0.909, indicating high internal consistency for each of the factor groups. A high degree of internal consistency in the survey is clearly demonstrated by this finding.

4.4 STRATEGY MODEL TO ENHANCE EFFICIENCY OF EEGPP

EEGPP (Emirati Electronic Government Procurement Platform) is a government procurement platform in the United Arab Emirates, which serves the federal government and its agencies. E-government procurement efficiency was examined in depth to propose an improved model to increase the efficiency of procurement. From a closer examination, it appears that E-GP critical elements have significant impact on the efficiency of EEGPP in the UAE. To cope this issue and enhancing the efficiency of the E-Government Procurement, an effective strategy model is proposed as in Figure 1.

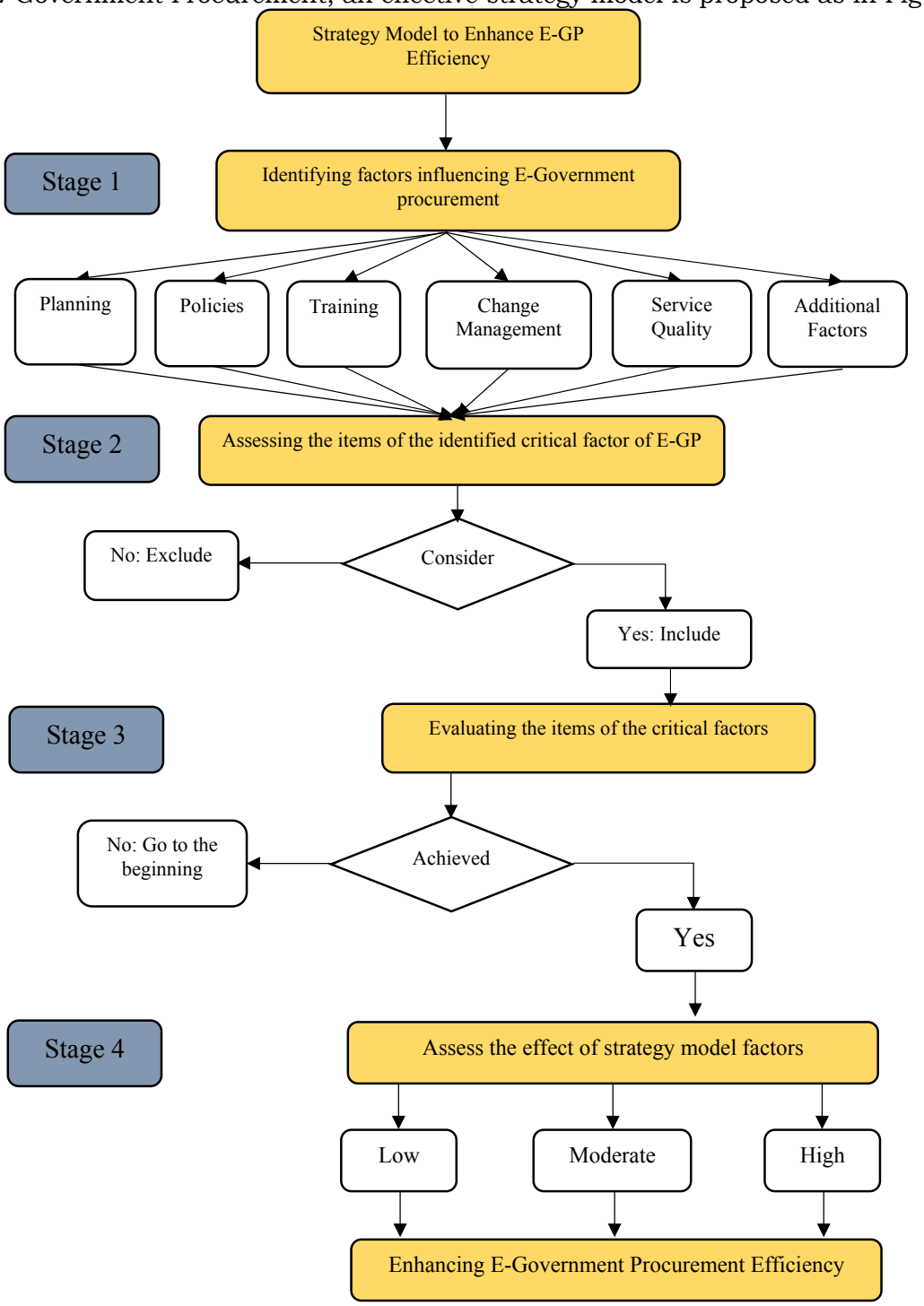

Figure 1: A Strategy Model for Enhancing E-Government Procurement

5. CONCLUSION

Globally e-services are getting attention due to several benefits. IN UAE, government has provided a platform for procurement as E-government procurement (E-GP). Since, the stakeholders are reluctant and worried about the efficiency of the E-GP service. This paper, pointed out various elements which can affect the efficiency of the E-GP. Based on 206 data samples collected from the stakeholder concerned with this service, the identified elements were validated. Also, a strategy model is developed for promoting E-GP as well as to enhance the efficiency of E-GP platform available by the government of UAE.

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