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Outlining the Potential of e-Procurement Adoption among Suppliers in Malaysia

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Abstract: *This paper conducts a general discussion literature review, explaining the e-Procurement concept and providing the potential of e-Procurement adoption among suppliers in Malaysia. This paper presents the difference between procurement and purchasing also the difference between traditional procurement and e-Procurement. There are many positive impacts and advantages of e-Procurement to government and suppliers. Suppliers benefit significantly from e-Procurement in terms of new market creation, additional revenue opportunities, competitive advantage, cost savings, customer satisfaction and operational efficiencies. By utilizing the e-Procurement system, the employees are able to increase direct access via supplier's websites to verify price tips, technological requirements and to visualize product images as well as full specification of product. E-Procurement is able to generate electronic applications, creating and approving purchase requisitions and propose purchase orders online to selected suppliers. This in turn creates forces on Malaysian suppliers to adopt e-Procurement to be competitive in the current industry.*

Keywords: e-Procurement, e-Procurement advantages, suppliers, Malaysia

1. INTRODUCTION

The latest invented Information and Communication Technology (ICT) is the Internet which has significantly changed the economic, market and industrial structures (Fernandes & Vieira, 2015; Kaliannan & Awang, 2010; Liu, Sun, Wang & Zhao, 2011).

The inclusive Internet works every second, indicating that it can be exploited every time and everywhere in the world. This accelerates the growth of Internet or electronic transactions. ICT propose the countries across the Asia, Europe and Americas an advance style to generating transparency culture via e-government (Bertot, Jaeger, Grimes, 2010; Relly & Sabharwal, 2009). In other words, the ICT dramatically influences the way an organization undertakes its business (Bertot *et al*., 2010; Fernandes & Vieira, 2015; Norzaidi, Chong, Murali & Intan Salwani, 2007). Small, medium and large firms cannot ignore the need to integrate information networks into their strategies, operations and performances (Lai, Kee-Hung, Christina & Edwin, 2008; Liu *et al.,* 2011; Saeed & Abdinnour-Helm, 2008). Suppliers that exploit ICT have the ability to get closer to their customers than their competitors (Bertot *et al*., 2010; Liu *et al*., 2011).

On top of that, the governments around the globe, including Malaysia have started to bring into play the Internet to electronically deliver services to the people. To achieve this Malaysia launched the Multimedia Super Corridor (MSC) project in August 1996. The main strategy is to accelerate Malaysia's entry into the information economy, while gearing itself towards the status of a developed nation by year 2020. The MSC's seven flagship applications are electronic government (e-government), e-business, smart schools, multipurpose card, telehealth, research and development clusters and technopreneur development (Malaysian Administrative Modernisation and Management Planning Unit, 2010). Malaysia's e-government applications are Perolehan (Ministry Of Finance/ MoF), e-Court (Prime Minister's Department), Project Monitoring System (Prime Minister's Department), e-Services (Ministry of Transport), e-

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Land (Ministry of land Development and Coop), e-Syariah (Prime Minister's Department), Electronic Labour Exchange (Ministry of Human Resource), Generic Office Environment (Prime Minister's Department) and Human Resource Management Information System (Public Services Department) (MAMPU, 2010). The focus of this study is e-Perolehan because it is one of the critical elements under the Government Transformation Programme (GTP).

In recent years, electronic procurement (better known as e-procurement or ePerolehan (eP) has been utilized as a implies to reduce paper works and lower administrative costs, reduce costs as it allows better quantity purchases, encourages a wider selection of purchasers and suppliers, advances delivery as well as enhanced quality (Fernandes & Vieira, 2015; Hsiao & Teo, 2005;Ketikidis, Kontogeorgis, Stalidis, & Kaggelides, 2010; Liu *et al.*, 2011;Mills-Senn, 2012;Panda & Sahu, 2011; Thomson, Doug & Singh, 2001). By utilizing the eP system, the employees are able to increase direct access via supplier's websites to verify price tips, technological requirements and to visualize product images as well as full specification of product. eP be able to generate electronic applications, creating and approving purchase requisitions and propose purchase orders online to selected suppliers (Liu *et al.,* 2011). This in turn creates forces on Malaysian suppliers to adopt eP to be competitive in the current industry (Mills-Senn, 2012; Yusoff, Abas, Islam & Muhd Yusuf, 2011).

Several researches have been accomplished to evaluate how the achievement of eP benefits to the firms (Croom & Brandon -Jones, 2007; Hardy & William, 2008; Liu *et al.,* 2011; Mills-Senn, 2012). Those studies supported the claim that eP increases transaction volume and reduces operational costs (Yusoff *et al*., 2011).

However, several studies highlighted the risks (Kauffman & Mohtadi, 2004; Zakaria, 2006; Yen & Ngai, 2003) and failure of eP as well as the unsuccessful implementation of eP. Considering the main factors related with eP usage is significant so that the firms, vendors, industry groups and government bodies that intend to adopt and use the eP system could take appropriate efforts and programs to support those factors (Eadie, Perera & Heaney, 2010; Eadie, Perera & Heaney, 2011;Liu *et al.,* 2011; Teo, Lin & Lai, 2009; Yusoff *et al*., 2011).

The eP system in Malaysia was developed by Commerce Dot Com Sendirian Berhad (CDC), a corporation which was known as a Build Operate Transfer (BOT) project by the Malaysian government for 12 years until the year 2012. To date, the adoption rate among Malaysian suppliers is quite disappointing compared to the investment made by the Malaysian government (MOF, 2010). This highlights the need to study e-Procurement advantages that can motivate Malaysian suppliers to adopt and use eP in their business transactions. From the aforementioned eP issues, there is a need to identify the advantages of eP adoption in Malaysia. Thus, the purpose of this study is to determine eP advantages to facilitate the growth of business transactions using eP system among Malaysian suppliers.

1.1 The difference between procurement and purchasing

The Dictionary of Procurement Terms (National Institute of Government Purchasing, 1996, p 64) defines procurement as:
"purchasing, renting, leasing, or otherwise acquiring any supplies, services, or construction; includes all functions that pertain to the acquisition, including description of requirements, selection and solicitation of sources, preparation and award of contract and all phases of contract administration"

Wu, Zsidisin and Ross (2007) referred eP as the use of Information Technology (IT) to assist Business to Business (B2B) procuring transactions for materials and services. On the other hand, purchasing has been more narrowly classified as:
"the act and the function of responsibility for the acquisition of equipment, materials, supplies and services. Purchasing describes determining the need, selecting the supplier, arriving at a fair and reasonable price and terms, preparing the contract or purchase order and ensure timely delivery" (NIGP, 1996, p 68)

The term eP is quite difficult to define (Vaidya, Yu, Soar & Turner, 2003; World Bank 2003). However, the terms eP and e-purchasing have been used synonymously in many studies to relate them with the e-commerce evolution (MacManus, 2002). Based on the above definitions, it could be said that the scope of purchasing is much narrow or subset of procurement.

1.2 The difference between traditional procurement and e-Procurement

Traditional procurement is a paper based method of purchasing, off contract of buying and limited of

control for spending while eP assists, combines and simplifies the whole supply chain procedure in a seamless, synchronized and efficient mode (Chang & Wong, 2010; Eadie *et al*., 2010; Teo *et al*., 2009). eP basically signifies buying products and services online. In this scenario, most firms are already utilizing eP in their business transactions.

However, the term is coming more and more to mean automating the whole purchasing process and making order as well as requisition information available along the entire of the value chain via the Internet (Chang & Wong, 2010; Eadie *et al*., 2010; Teo & Lai, 2009). The eP permits both system communication of synchronized financial and purchasing process regardless for the Electronic Data Interchange (EDI), middleware or Value Added Networks (VANs). The administration of both buying and selling sides can gain information at every moment, identifying progress and difficulties (Lai, Wong & Cheng, 2006).

Minahan (2001) defined eP as the process of utilizing web based technologies to support the identification, evaluation, negotiation and configuration of optimal groupings of trading partners into a supply chain network, which can respond to change market demands with greater efficiency. According to Croom and Brandon-Jones (2007), eP refers to the use of Internet, integrated with ICT to accomplish individual or all stages of procurement process including searching, sourcing, negotiating, ordering, receiving and post-purchase reviewing.

This is in tandem with the definition made by Sain, Owen and Hill (2004) whereby they advised that eP is the electronic integration and management of all procurement activities, including purchase request, authorization, ordering, delivery and payment between a purchaser and a supplier. In this study, eP is referred to streamlines government procurement activities and improves the quality of service it provides and converts traditional manual procurement processes to online procurement processes which allow suppliers to present their products on the World Wide Web, receive, manage and process purchase orders and receive payment from government agencies via online.

To recapitulate, the eP system represents an IT driven transformation of traditional procurement processes on enormous scale (Calipinar & Soysal, 2012; Chang & Wong, 2010; Eadie *et al*., 201; Ketikidis et *al*., 2010; Panda & Sahu, 2011; Khalid, Ahmad & Irshad, 2011; Liu *et al*., 2011; Yussof *et al*.,2011). There are various applications of eP that focus on one or many stages of the procurement process such as e-tendering, e-marketplace, e-auction or reverse auction and e-catalogue. In addition, eP can be viewed, more generally, as end to end solution that integrates many procurement processes right through the firms (Calipinar & Soysal, 2012; Eadie *et al*., 2010; Fernandes & Vieira, 2015; Khalid, Ahmad & Irshad, 2011; Panda & Sahu, 2011). Table 1 describes the comparison between traditional procurement and eP.

Table 1.Comparison between Traditional Procurement and eP.

Features	Traditional Procurement	e- Procurement
Definition	The process of getting or buying something using paper based system	The process of getting or buying something using the Internet system
Tool/Method	Paper writing	Personal computer
	Face to face	World Wide web
	Fax	eP software
	Telephone	e-catalogue
	Trade directories	Electronic Fund Transfer (EFT)
	Trade journal	
	Sales catalogue	
	Sales representative	
	Letter of credit	
	Cash/cheque	

1.3. E-procurement developments in Malaysia

"Malaysian government takes an advance value for money action under ePerolehan system. Every procurement transactions will be managed through open tender or limited tender. ePerolehan will be accelerate and increase the transparent in the e-government procurement." Y.A.B. Dato' Sri Mohd Najib bin Tun Abdul Razak in Ucapan Pembentangan Pakej Ransangan Ekonomi kedua 10 Mac 2009.

eP is the official and secure online e-market platform, especially for the suppliers and government agencies (Calipinar & Soysal, 2012; Colesca & Dobrica, 2008; Eadie *et al*., 2010; Fernandes & Vieira, 2015). It provides the link between buyer and seller in secured transactions

(Kaliannan & Awang, 2010). eP enables suppliers to directly register and renew their registrations with the MoF via the Internet. In addition, suppliers can submit their application, check the application status and pay the registration fees through eP (CDC, 2010). The eP project started in the year 1999. On 6th October 2000, two eP modules were launched which are Supplier Registration and Central Contract. Then Direct Purchase module was launched on the 10th May 2002 (CDC, 2010). The Quotation and Tender modules were launched on the 27th May 2003. The e-Bidding module was implemented in September 2006 and the latest module, Ministry Contract (CDC, 2010).

Altogether there are seven eP modules and a pilot test has been done in few ministries such as MoF, Ministry of Defence and Ministry of Internal Security to determine their applicability. The main portal is Suppliers Registration module that enables the suppliers to register with the MoF. It consists of activities such as new application, renewal, field addition, profile update and electronic application for bumiputera status.

The second module is Central Contract that is purposely for the procurement that involves specific products from the selected suppliers for the MoF within the specified time frame. The third module, Ministry Contract is purposely for the procurement that involves specific products from the selected suppliers direct to the specific ministry involves. Fourth module is Direct Purchase, which is for the procurement of products and services with the value amounting to RM50, 000. The fifth module is Quotation that focuses on the procurement of products and services with the value amounting between RM50, 000 to RM200, 000. The sixth module is Tender that is for the procurement of products and services with the value amounting at above RM200, 000. The last module is e-Bidding that deals with the procurement of products and services with the value amounting above RM200, 000. It is a procurement application where suppliers compete interactively (CDC, 2010).

eP system supports all government procurement activities via Central Contract, Ministry Contract, Direct Purchase, request for Quotation and Tender and e-Bidding. In short, the vision of eP is to ensure an effective and efficient eP management system as well as to make eP as a main procurement device used by the government agencies, suppliers and citizens (CDC, 2010). The government highlighted that the objectives of eP are to give the best value of money for government procurement, to ensure the suppliers receive faster and more accurate payment, to ensure accountability and transparency in all government procurement and to increase collaboration between the business sector and government (Bertot *et al*., 2010; CDC, 2010).
eP allocates the suppliers to present their products on the website whereby it enables them to receive, manage and process government purchase orders and receive payment from government agencies through online system (Bertot *et al*., 2010). In other words, the eP system supports online product catalogue presentation, order taking, order fulfilment, electronic payment, quotation and tendering. This in turn enables eP to contribute to the reduction of operational cost, the reduction of turnaround time of procurement process, the attainment of best value procurement deals and directly increase of accountability and transparency in all government procurement.

The suppliers are defined as private owned business that responds to calls for bids indicating their intention to sell their products or services (Carayannis & Popescu, 2005). The suppliers will lose the opportunity to do business with the government if they are eP unable which is due to the instruction from Ketua Setiausaha Perbendaharaan (MoF, 2010). To be qualified as eP enabled the suppliers have to follow the following 5 steps:

- Register with MoF via eP system
- Equipment ePXS/ MyKad/MyeP eP system and Smart Card Reader
- Provide infrastructure
- Attend to eP workshop
- Provide e-Catalog

Unfortunately most of the suppliers fail to be eP enabled because most of them only fulfil until step 3 (provide infrastructure) and fail to attend the eP workshop and provide e-Catalogue (CDC, 2010). Normally, the cost for being eP enabled is about RM1,500 per business. Most observers conceded that more talk than transaction has flow via Internet enabled 'supply chain of the future'. The saving opportunities are still there, but the evolution has been slower than expected and this has been borne out in Malaysia.

1.4. Outlining the potential of e-Procurement

There are many positive impacts and advantages of eP to government and suppliers. Suppliers benefit significantly from eP in terms of new market creation, additional revenue opportunities, competitive advantage, cost savings, customer satisfaction and operational efficiencies (Calipinar &

Soysal, 2012; Costa, 2014; Eadie *et al*., 2010; Ketikidis et *al*., 2010; Kaliannan & Awang, 2010; Mills-Senn, 2012; Panda & Sahu, 2011; Walker & Harland, 2008).The efficiency and effectiveness of buying and selling is realized via the automation of the entire procurement cycle.

The use of web based eP also results in few transmission errors compared to paper based, enables electronic invoicing and payment, revolutionize the procurement process and leverages technological infrastructure (Calipinar & Soysal, 2012; Fernandes & Vieira, 2015; Khalid *et al*., 2011; Kotzab, Herbert, Grant & Friis, 2006; Sanders, 2007; Soares-Aguiar & Palma-dos-Reis, 2008).

eP enables purchaser to extend the speed, quality and quantity of information processing (Fernandes & Vieira, 2015; Khalid *et al*., 2011; Prier & Mc Cue, 2007). eP also provides purchasing managers with better control over firm purchasing habits and build a relationship with many suppliers (Eadie *et al*., 2010; Calipinar & Soysal, 2012; Panda & Sahu, 2011; Ronchi, Brun, Golini & Fan, 2010; Soares-Aguiar & Palma-dos-Reis, 2008).

Other benefits of eP are that it removes repetitive manual tasks and reduces paperwork (Costa, 2014; Calipinar & Soysal, 2012; Colesca & Dobrica, 2008; Eadie *et al*., 2010; Kaliannan & Awang, 2010; Nallan, Canan & Hillmer, 2015; Panda & Sahu, 2011; Soares-Aguiar & Palma-dos-Reis, 2008). This enables other resources to be used on high value task such as contract management and compliance between buyers and suppliers (Calipinar & Soysal, 2012; Eadie *et al*., 2010; Fernandes & Vieira, 2015; Panda & Sahu, 2011; Walker & Harland, 2008; Kaliannan & Awang, 2010).

The advantages and positive effect of the eP giving credit to eP enable then helping them to maintain and sustain in the global competitiveness currently. The network provided by eP increase the sale transactions among the suppliers (Calipinar & Soysal, 2012; Costa, 2014; Fernandes & Vieira, 2015; Mills-Senn, 2012; Nallan, Canan & Hillmer, 2015; Panda & Sahu, 2011).

1.5 Discussion and Conclusion

The government highlighted that the objectives of eP are to give the best value of money for government procurement, to ensure the suppliers receive faster and more accurate payment, to ensure accountability and transparency in all government procurement and to increase collaboration between the business sector and government. By providing and highlighting the significant potential of eP among supplier's perspective, the courage and trust of eP adoption is increasing the attention among the suppliers and academics. On top of that, this will promote the academia to growth a number of future studies about eP in Malaysia environment. They must help government to accelerate the eP adoption rate among suppliers in Malaysia in order to be developed country in the future undertaking. Otherwise, the researcher believes that, the more the government actions and promotions in the mass media will quicken the eP adoption rate among suppliers in Malaysia. We hope by highlighting the potential of eP will encourage the suppliers adopting eP in the future.

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