GOVERNMENT PURCHASING: A REVIEW OF E-PROCUREMENT SYSTEM IN MALAYSIA

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ABSTRACT

The quest to improve the government service delivery is becoming an important agenda for most governments. Information and Communication Technology (ICT) and the Internet in particular have opened new possibilities for the government and the governed, just as it has for the businesses and its customers. Governments of both developed and developing countries have embraced ICT to improve the quality of public service, increase public access to information and to energize more participation in civic affairs. This case study examines the overall implementation of the e-Government initiative in Malaysia, with specific emphasis on the electronic procurement project, also known as e-Perolehan. The general consensus amongst both the buyer and seller communities is that e-procurement will become a catalyst towards a new and innovative supply chain management process within our public sector. It is envisioned that within the next three to five years, more suppliers will grab the opportunity and benefit fully from the e-procurement initiative in Malaysia. Findings from our factor analysis and correlations indicate that organizational, environmental, and technological factors influence the adoption of e-Perolehan in Malaysia.

1. Introduction

An important issue in public sector management today is the increasing demand for transparency, efficiency and effectiveness in service quality (Ancarani, 2005). The advent of the Internet, digital connectivity, the explosion and use of e-commerce and e-business models in the private sector are pressuring the public sector to rethink hierarchical, bureaucratic organizational models. Customers, citizens and businesses are faced every day with new innovative e-business and e-commerce models implemented by the private sector and made possible by ICT (Information and Communication Technologies) tools and applications, are requiring the same from governmental organizations. The introduction of Electronic Government (e-Government) is becoming increasingly popular in both the developed and developing countries to increase the efficiency and effectiveness of the government procedures and activities.

E-Government is defined as the use of technology, particularly the Internet, as a means to deliver services to citizens, businesses and other entities (Hart and Teeter, 2000; Howard, 2001; West, 2004). The common focus is on the application of ICT to improve the internal management of the government, to offer more flexible and convenient services to the public and to a limited extent, to enhance public participation and democracy (West, 2004; Seifert & Relyea, 2004; Hazman et al., 2006; Maniam et al., 2006). Implementation of e-Government bring forth many advantages such as the reduction in paperwork, the provision of continuous service availability to customers, a reduction in response time and a reduction in error rate (Maniam, 2005).

E-Government systems are not confined to automation of government service delivery systems targeted towards citizens' at large (G2C). E-Government platforms also include the use of ICT to streamline the procurement processes within public sectors (G2G & G2B). E-procurement refers to "the use of electronic methods in every stage of the purchasing process from identification of

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requirements through payment, and potentially to contract management" (Chan & Lee, 2002; de Boer et. al, 2002; Knudsen, 2002; Tonkin, 2003; Davila et. al, 2003; Moon, 2005). There are significant benefits in adopting e-Procurement technologies (Neef, 2001; Tonkin, 2003; World Bank, 2003; Vaidya et al, 2006, Maniam et al., 2007).These benefits are expected to accelerate the rate of adoption of these technologies once the uncertainties that remain are reduced to levels that encourage significant resource commitments. Organizations that use e-Procurement technologies report savings of up to 42 percent in purchasing transaction costs (Davila et al., 2003). This cost reduction is associated with less paperwork, which translates into fewer mistakes and a more efficient purchasing process.

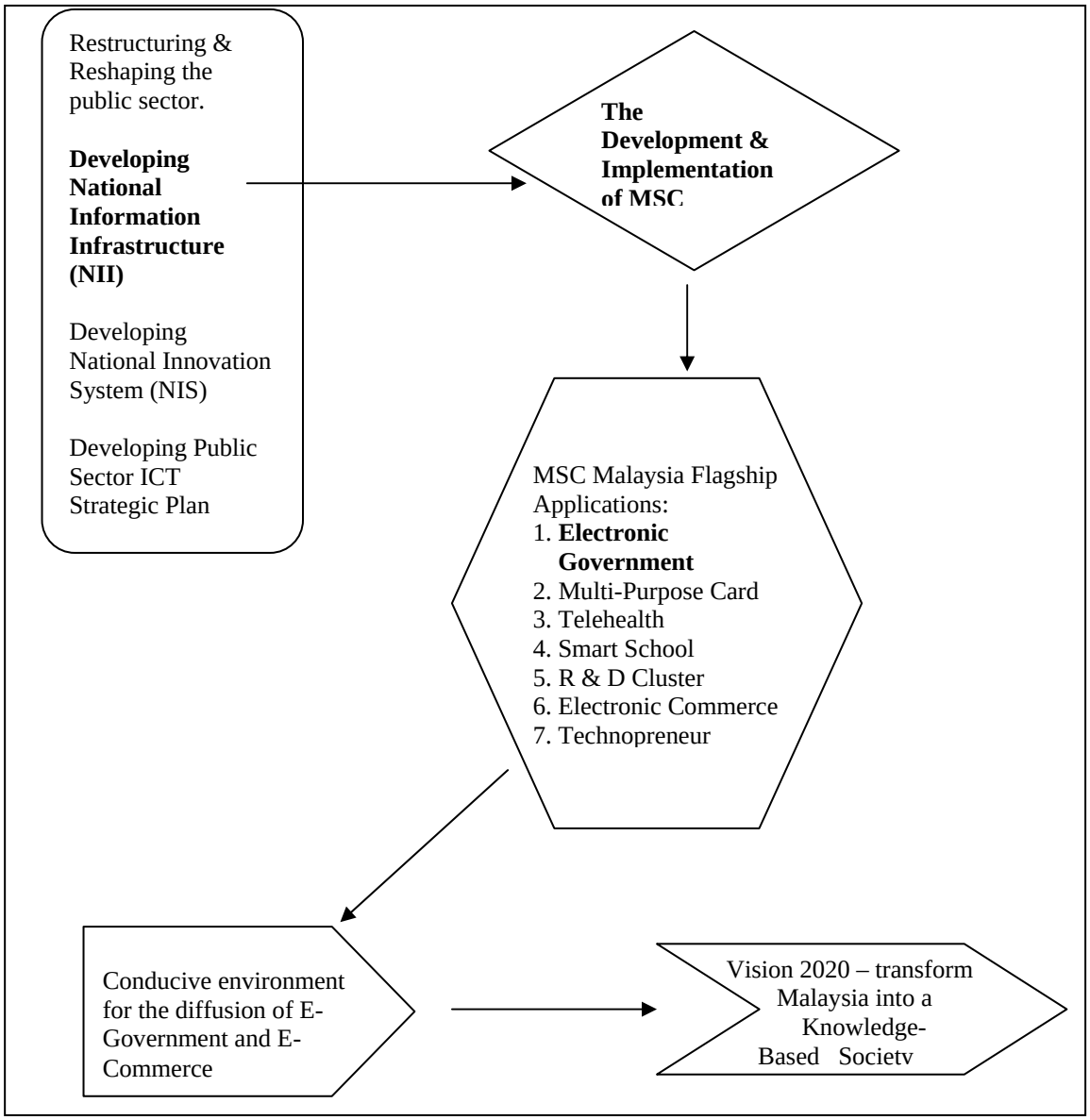
In this paper, we present our findings about the e-Perolehan project implementation in Malaysia. Within the e-Government Flagship Application under Malaysia's Multimedia Super Corridor initiative, this project is envisioned to leapfrog the civil sector's procurement and supply chain processes into a new dimension. Specifically we highlight the overall objectives of the project and also report some of the findings from the survey that was conducted in the year 2006.

2. E-Government & E-Perolehan Initiatives in Malaysia

The public sector in Malaysia is going through period of rapid change. The government's leading role in spearheading the surge forward into the information rich digital age has compelled the public sector to lead the way (Hazman & al-Aladin, 2000). In the last several years, the public sector has become a major investor and user of information technology. The government of Malaysia launched e-Government as one of the Multimedia Super Corridor (MSC) Flagship Applications with the aspiration to employ multimedia technologies to re-invent the way the government operates. E-Government will improve both how the government operates internally as well as how it delivers services to the people of Malaysia. The e-Government implementation seeks to improve the convenience, accessibility and quality of interactions with citizens and businesses; simultaneously it will improve information flows and processes within government to improve the speed and quality of policy development, coordination and enforcement.

As Malaysia develops, government must keep pace with the changes that are accruing. E-Government presents a golden opportunity to update all elements of government to ensure that the public sector continues to meet the evolving needs of the public and the private sectors as the nation strives towards the goals of Vision 2020 (Sohaimi, 2003).The dual objectives of e-Government are to reinvent the government in terms of service delivery through the use of IT and to catalyze the successful development of the MSC with IT as one of the leading sectors of the economy (Muhammad & Nazariah, 2003). While computerization programmes in both the public and private sectors had been going for several decades, it was with the MSC that Malaysia caught the attention of the world with this unique initiative to create an entire 'cyber-region' and a base for a world class technology, multimedia and content industry. The vision of e-Government is a vision for people in government, business and citizenry working together for the benefit of Malaysia and all of its citizens (Othman, 1997). The vision calls for reinventing government using multimedia and IT to improve productivity. It also seeks to create a collaborative environment that fosters the ongoing development of Malaysia's multimedia industry. Figure 1 show the model of e-Government that was formulated in the context of Malaysian public sector administration:

Figure 1: The Malaysia Model of e-Government Development



There are eight projects launched to date under the e-Government Flagship since it was started in 1997. All this projects will use ICT and multimedia technologies to transform the way the government operates, coordination and enforcement. Table 1 summarizes the projects and its characteristics.

Table 1: Main Projects under the E-Government Flagship

Projects	Characteristics
Generic Office Environment (GOE)	Provides a new paradigm of working in a collaborative environment where government agencies communicate, interact and share information
Electronic Procurement (EP)	Links the government and suppliers in an online environment. Government agencies as buyers procure goods/services by browsing catalogues advertised by suppliers. Aimed at best value for money, timely and accurate payment
Project Monitoring System (PMS)	Provides a new mechanism for monitoring implementation of development projects, incorporating operational and managerial functions, and knowledge repository
Human Resource Management Information System (HRMIS)	Provides a single interface for government employees to perform HRD functions effectively and efficiently in an integrated environment.
Electronic Services (e-Services)	Enables direct, online transactions between the public, the government and large service providers via electronic means
Electronic Labour Exchange (ELX)	A one-stop-centre for labor market information, accessible to government agencies, the business sector and the citizens.
E-Syariah	Introduces administrative reforms that upgrade the quality of services in Syariah courts. To enhance the Islamic Affairs Department's effectiveness-better monitoring and coordination of its agencies and 102 Syariah courts.
E-Land	To achieve an updated, effective, efficient and accurate National Land Administration System via utilization of Information Communication and Technology (ICT), the e-Tanah project of Ministry of Natural Resources and Environment encompasses 24 main areas in land administration.

Source: MDeC (www.mdc.com.my)

2.1 The e-Perolehan Facts

Government procurement is perceived as a major function of government and a substantial amount of money is allocated annually for the purpose of procurement of goods and services (Thai, 2001; Maniam et al., 2007). The Malaysian government's allocation of budget for procurement increased substantially from RM 6.1 million (USD 4.09 million) in 1999 to RM 14.2 million (USD 6.17 million) in 2003 and RM 23.1 million (USD 6.6 million) in 2007 (Maniam & Halimah, 2007). Table 2 shows the total amount of money spent annually by the government in purchasing goods and services by the government of Malaysia.

Table 2: Malaysian Government Budget on Procurement

Year	Total Government Budget (RM million)	Procurement of services & Supplies (%)	Total Allocation (RM million)
2007	159 496	14.5	23 151
2006	136 748	15.0	20 553
2005	117 444	16.0	18 790
2004	112 490	15.3	17 215
2003	109 801	13.0	14 253
2002	100 518	12.0	12 065
2001	91 046	11.1	10 078
2000	78 025	9.7	7 564
1999	65 095	9.5	6 188

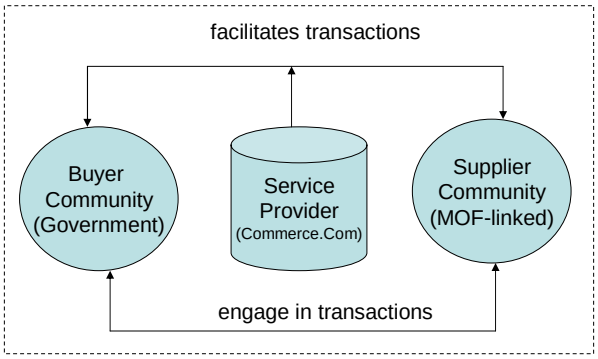
Source: www.mof.gov.my

The e-Perolehan initiative in Malaysia as mentioned is a project within the e-Government flagship application area, under the MSC project master plan. The e-Perolehan system streamlines government procurement activities and improves the quality of service provided. It was officially launched in 1999 as one of the Electronic Government Flagship projects. E-Perolehan converts traditional manual procurement processes in the government machinery to electronic procurement using Internet technology. The new procurement system allows the Government ministries to electronically select items to be procured from the desktop, initiate an electronic approval process, and also create, submit, and receive purchase orders, delivery orders, and other related documents electronically.

2.2 The e-Perolehan Participants

The model that is used for the implementation of e-Perolehan essentially allows the supplier community and the various government agencies to transact with each other via a single system platform called the e-Perolehan system (MAMPU, 1997; Maniam et. al, 2006, 2007). In this model, there are three distinct communities, namely the supplier community, the buyer community, and the procurement service provider, acting as the core participants of the e-Perolehan initiative. Figure 2 illustrates the three core entities involved in Malaysia's e-Perolehan initiative.

Figure 2 – e-Perolehan participants



The Suppliers

On the suppliers' side, e-Perolehan allows them to present their products on the World Wide Web (www), receive, manage, process purchase orders and receive payments form government

agencies via the Internet. The supplier community consists of suppliers who have registered with the Ministry of Finance (MoF) to provide supplies and services to the government. There are more than 120,000 registered suppliers supplying goods and services under four categories namely central contract, direct purchase, quotation and tender purchase.

Buyer Community

The government is the buyer community in the e-Perolehan system. The Malaysian government spent about RM 18,791 million on procurement in the year 2005 and has increased the amount to RM 21,425 million for 2006 and RM 23,151 million in 2007 (refer to Table 2).

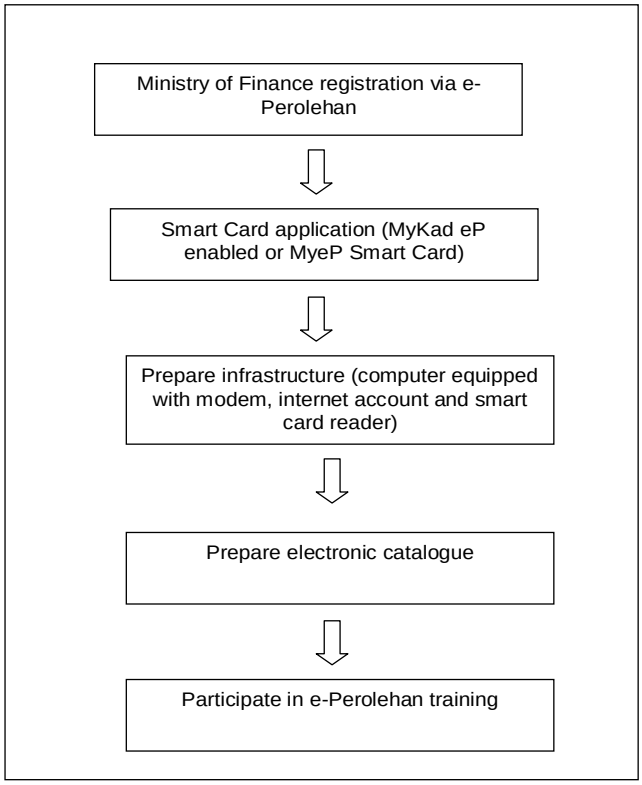
The Service Provider

Incorporated on 21 June 1999 as an e-Commerce service provider, Commerce DotCom Sdn. Bhd. was granted by the Government of Malaysia the exclusive right to implement and operate the Government's electronic procurement system. CDC provides the electronic system which enables the full transaction of the procurement process between the buyer and the seller.

2.3 The e-Perolehan enablement process

Figure 3 illustrates the complete supplier e-Perolehan enablement process. All the government suppliers are required to register with the MoF if they wish to do business with the federal government agencies and departments.

Figure 3: Steps to e-Perolehan enablement



Source: CDC Interview

3. Data Collection

A total of 3,000 questionnaires were sent in October 2006 by mail to randomly selected suppliers. The findings reported here are based on the analysis of 502 completed questionnaires. Table 3 depicts the characteristics of sample surveyed in this study. Most of the firms are Private Limited (90 percent) and fall within the Small Medium Industries (SMI) definitions. In terms of number of employees, most of the firms employed less than 20 workers (75 percent). About 50 percent of the firms have registered as e-Perolehan enabled after the year 2004 compared to about 40 percent of them registered before 2004. About 73 percent of the firms' annual sales using e-Perolehan system are within RM 1 million per year; however, only about 25 percent have recorded annual sales in the range of RM 1 million to RM 5 million per year. Eighty nine percent of the respondents doing business with both the government and the private sector, and about 11 percent of them solely depend on government business. A total of 266 suppliers (53 percent) out of 502 firms have used at least one of the e-Perolehan modules, that is, central contract, direct purchase, tender and quotation, whereas 236 suppliers have not used the e-Perolehan system. However, about 91 percent of the latter has indicated that they will adopt e-Perolehan in the near future.

Table 3: Organization's Profile

Type of Organization

Type of Organization	Frequency	Percent
Sendirian Berhad / Private Limited	452	90
Berhad / Limited	9	1.8
Sole Proprietor	41	8.2
TOTAL	**502**	**100**

Number of Employees

No. of Employees	Frequency	Percent
Less than 10 workers	259	51.6
11-20 workers	118	23.5
21 – 30 workers	40	8.0
31-40 workers	10	2.0
41-50 workers	23	4.6
more than 50 workers	52	10.4
TOTAL	**502**	**100**

Year of e-Perolehan Registration

Year	Frequency	Percent
2000	49	9.8
2001-2003	151	31.1
2004-2006	296	58.9
2007	6	1.2
TOTAL	**502**	**100**

Annual Transaction using e-Perolehan

Sales RM 000'	Frequency	Percent
Less than RM 250	162	32.3
RM 250 – RM 500	93	18.5
RM 500 – RM 750	62	12.4
RM 750- RM 1 million	59	11.8
RM 1 – RM 5 million	94	18.7
More than RM 5 million	32	6.4
TOTAL	**502**	**100**

Market Focus

Market Focus	Frequency	Percent
Only Government	55	11.0
Both Government & Private	447	89.0
TOTAL	**502**	**100**

E-Perolehan Users

Number of users / non-users	Frequency	Percent
Yes	266	53.0
No	236	47.0
TOTAL	**502**	**100**

4. Results

Factor analysis was carried out for the purpose of questionnaire content validity and reliability. The primary purpose of factor analysis is to analyze the interrelationships among large number of variables that are highly interrelated (Hair, et al., 2006). A total number of 66 items or questions were used for the purpose of constructing factor analysis and out of this, two items were deleted and hence 64 items which has loading factor more than five percent was included. Also, the items were categorized into ten constructs as shown in the following tables. The criteria used for this study is to adopt a cut-off loading point for factors with eigenvalues greater than 1.0. In interpreting factors to determine which factor loadings are worth considering, this study adopts loadings 0.50 as significant.

The independent variables are organized into three sub-groups. The first sub-group describes the organizational perspective as influencing factors towards the adoption and usage of e-Perolehan and it consists of four constructs. The second sub-group focuses on technological perspective with three constructs towards the adoption and usage of e-Perolehan. The third sub-group, that is, environmental perspective with three constructs explains its influence towards the e-Perolehan adoption and usage.

Table 4: Factor Analysis – Organizational Perspective

Variable	Items	Factor Loading
Organizational Leadership	1. Management support	0.82
	2. Lead role by management	0.84
	3. Invested time, effort & money	0.72
	4. Proactive about e-Perolehan	0.75
	5. Stresses on importance of e-Perolehan	0.71
Organization Perceived Usefulness	1. e-P is useful	0.66
	2. e-P supports selling requirements	0.74
	3. e-P improves selling efficiency	0.81
	4. e-P simplifies selling process	0.81
	5. e-P reduces financial costs	0.78
	6. e-p increases administrative savings	0.80
	7. e-P increases overall job performance	0.80
	8. e-P increases overall job productivity	0.84
	9. e-P is effective than manual system	0.71
	10. e-P improves information management	0.77
	11. e-P is fast	0.54
	12. e-P improves inventory management	0.67
Organization Perceived Ease of Use	1. e-P is easy to use	0.73
	2. e-P is flexible to interact with	0.71
	3. e-P is easy to learn	0.83
	4. e-P is user friendly	0.77
	5. e-P can be easily understood	0.84
	6. e-P skills can be acquired easily	0.74
Organization Facilitators	1. Sufficient training for IT is provided	0.65
	2. Sufficient training for e-P is provided	0.77
	3. Sufficient technical support is available	0.77
	4. Management encourages use of e-P	0.57
	5. Management provides information on e-P	0.70
	6. Management rewards staff to use e-P	0.69

Table 4 shows that there are four constructs under the organizational perspective namely, organizational leadership with five items, organization perceived usefulness with 12 items, organization perceived ease of use with six items and organization facilitators with six items. All together there are 29 items measuring organizational perspective.

Table 5: Factor Analysis– Technology Perspective

Variable	Items	Factor Loading
IT Infrastructure	1. Has access to telecommunication services	0.72
	2. Enough computers to all the staff	0.83
	3. Staff can access to Internet services	0.84
	4. Internet access is fast	0.73
IT skills	1. Enough IT qualified staff	0.66
	2. IT support for e-P is readily available	0.70
	3. IT helpdesk readily available	0.84
	4. Staff are well trained to use e-P system	0.77
E-Perolehan Capability	1. Less uncertainty about e-P	0.51
	2. e-P system can handle multi-task	0.82
	3. Supplier-government interaction enhanced	0.80
	4. e-P system is secure	0.79

In the case of technology perspective, three constructs was created that is, IT infrastructure with four item, IT skills with four items and e-Perolehan capability with four items (Table 5) giving a total of 12 items to be used for further analysis.

Table 6: Factor Analysis – Environmental Perspective

Variable	Items	Factor Loading
Government Policy and Regulations	1. Vision & objectives for e-P is available	0.75
	2. Clear operating guidelines is available	0.64
	3. Specific agency is responsible for e-P	0.73
Government Advocacy	1. Common approach across all agencies	0.67
	2. Laws/legislation to support e-P	0.71
	3. Specific legislation addressing e-P	0.72
	4. e-P policy enhances suppliers confidence	0.68
	5. Proactive effort to promote use of e-P	0.76
	6. Educate suppliers on e-P benefits	0.73
	7. Full responsibility in ensuring security	0.71
	8. Incentives to e-P enabled suppliers	0.68
Industry Acceptance	1. Suppliers used e-P have benefited greatly	0.66
	2. Suppliers used e-P are perceived favorably	0.65
	3. Relationships among suppliers improved	0.66
	4. Supplier-government relationship improved	0.75
	5. e-P promotes healthy competition	0.69
	6. e-P is reliable	0.65
	7. Transparency of transactions increased	0.76
	8. Degree of accountability increased	0.78
	9. Degree of transparency increased	0.79
	10. e-P gives satisfaction to suppliers	0.82
	11. e-P improves organizations image	0.76
	12. Suppliers has confidence in e-P system	0.75

As shown in Table 6, a total of 23 items was selected from the three constructs for environmental perspective namely, government policy and regulations with three items, government advocacy with eight items and industry acceptance with 12 items.

The data collected was tested for reliability and the overall results gave alpha value more than 0.98. Table 7 describes the mean value of the ten factors that were obtained from the factor analysis. The result indicates that the mean score for all these factors are above three. In other words, on average the respondents have indicated positive perception about the e-Perolehan initiative in Malaysia. In the case of organizational factors, the highest mean score is for organizational leadership (mean = 3.737), followed by organization facilitators (mean = 3.3705), organization perceived ease of use (mean = 3.5677) and the lowest mean score is for organization perceived usefulness (mean = 3.4474).

In the case of technology factors, out of the three sub-factors analyzed, IT infrastructure scored the highest mean (mean = 3.9562). This indicate that most of the organizations have already invested in IT infrastructure such as having enough computers for the staff, Internet access and training for the staff on how to use the Internet. This followed by IT skills (mean = 3.4731) and the lowest mean score is for e-Perolehan capability (mean = 3.4617).

The last factor analyzed is industry acceptance factors, where there are three sub-factors in this context. The highest mean score is achieved for government policy and regulations pertaining to e-Perolehan issues (mean = 3.6965). This shows that the suppliers are generally happy with the Ministry of Finance as the lead agency in implementing e-Perolehan initiative. In the case of government advocacy, that is, the extent to which government promotes the initiative, the mean score is relatively high (mean = 3.3912) indicating proactive attempts by the relevant government agencies. The lowest mean score is achieved for industry acceptance (mean = 3.3829).

Table 7: Summary of the Descriptive Profile

e-Perolehan Adoption Factors	Mean	S.E. Mean	Std. Deviation	Variance
Organizational Factors:				
• Organizational leadership	3.737	0.031	0.6967	0.485
• Organization perceived usefulness	3.4474	0.0336	0.75284	0.567
• Organization perceived ease of use	3.5677	0.0328	0.73589	0.542
• Organization facilitators	3.3705	0.0312	0.69982	0.490
Average of Organizational Factors	*3.5308*	*0.0265*	*0.59385*	*0.353*
Technological Factors:				
• IT infrastructure	3.9562	0.0308	0.69110	0.478
• IT Skills	3.4731	0.0324	0.72610	0.527
• e-Perolehan Capability	3.4617	0.0295	0.66089	0.437
Average of Technological Factors	*3.6303*	*0.0236*	*0.52898*	*0.280*
Environmental Factors:				
• Government policy & regulations	3.6965	0.0273	0.61239	0.375
• Government advocacy	3.3912	0.0316	0.70708	0.500
• Industry acceptance	3.3829	0.0313	0.70114	0.492
Average of Environmental Factors	*3.4902*	*0.0265*	*0.59478*	*0.354*

5. Discussions

The e-Perolehan initiative is expected to provide significant benefits to both the buyer (government) and supplier communities. There are several benefits of e-Perolehan for the government. The system firstly, offers more effective and efficient procurement process in line with the country's transformation to the knowledge based economy (K-Economy). E-Perolehan is a vehicle for the government to leapfrog into the new economy and promote the widespread adoption of e-Business in the country. The system also is stated to lower the operational cost for the government over time. In addition, the government will be able to reduce administration and operational costs through the usage of e-Perolehan as business processes are reduced and streamlined. From the government's perspective, the e-Perolehan system provides latest product information and pricing available on-line. E-Perolehan will always be up to date with the latest information that will help the buyer to make a more accurate procurement decision.

It has been six years since Phase 1 of the e-Perolehan initiative was launched. Although there are about 120,000 government linked suppliers (registered with MoF), only approximately 50,000 suppliers are e-Perolehan enabled, out of which only 6,000 are active users of the system. The rest are classified as inactive or casual participants of the system. The following points highlight

the key issues inherent within Malaysia's e-Perolehan initiative that prevents the government and the service provider from maximizing the value potential of the e-Perolehan system:

5.1 Cost

There are costs involved before a supplier becomes e-Perolehan enabled. Specifically, suppliers have to bear the cost of purchasing a smartcard for transaction, pay for training, and also any software renewal cost that occurs. These payments are directed towards Commerce Dot Com Sdn. Bhd. Given that the majority of the suppliers within the traditional category belong to the small-medium size operations scale, it is only natural that they are not keen in becoming players within e-Perolehan because of the costs involved.

5.2 Infrastructure and Skills

As mentioned the majority of the supplier community fall within the small-medium size industry grouping. Traditionally, this sector has not been well versed with use of the state of the art information systems. Issues such as lack of bandwidth support, poor computing and information systems architecture in general, prevent the majority of the suppliers from playing a more active part in e-Perolehan.

5.3 Business Focus/Change Management

Majority of the suppliers are not keen to do business with the federal government, given the e-Perolehan requirement. Suppliers prefer to do business with local and state government as they can use traditional methods for selling their products. Furthermore e-Perolehan still has not gone into tender and quotation compared to direct purchase and central contract which is small in volume. This issue is also in line with the need for better change management to convert the mindset of traditional sellers to embrace change and use technology in the procurement process in general.

5.4 System Constraints

The feedback received from the survey also suggests that the system in its current incarnation is not robust on several aspects. For examples, a supplier registered with the system, can only upload product information for ten different product areas, for free. Additional charges will be incurred if more product lines are listed within the system. In short, for a company that has a wide product line, the additional cost involved to market the product via the system might not be attractive.

5.5 Government Policy

Although the Federal government of Malaysia encourages suppliers to become e-Perolehan enabled, the government can decide if it is willing to transact with a non e-Perolehan company, as long as the company is registered with MoF. Stated differently, although in theory the supplier community must become part of the e-Perolehan system, in practice, this requirement has not been made mandatory as yet.

Despite the lackluster response by the majority of the seller community, close to 6,000 suppliers have fully embraced and are active participants of the system. This situation is predominantly true for suppliers that visualize e-Procurement as an opportunity and given the fact that the government could make it mandatory for large scale suppliers to use the system actively.

6. Conclusion

One of the main challenges for an e-Procurement project is the establishment of an appropriate and context tailored strategy. Every project or initiative needs to be rooted in a very careful, analytical and dynamic strategy. This seems to be a very difficult task, requiring a focus on many aspects and processes, a holistic vision, long-term focus and objectives. Many public institutions limit their activities to a simple transfer of their information and services online without taking into consideration the re-engineering process needed to grasp the full benefits. The government must have a clear strategy to overcome the barriers to change. Part of the strategy is to engage in a rigorous assessment of the current situation, the reality on the ground and the inventory of projects, articulate costs, impacts and benefits of programme as well as continuously monitor and evaluate the project upgrading. Borrowing a lesson from the private sector, e-Procurement must be customer-driven and service oriented. This means that a vision of e-Procurement implies providing greater access to information as well as better, more equal services and procedures for public and businesses.

E-procurement, a new avenue for buying direct and indirect goods and services, is an effective procurement system, making waves in purchasing circles. The service provider plays a crucial role in offering sourcing and procuring solutions that satisfy customer needs and provide ample value addition to the service provided. In the past, traditional methods of procurement offered little transparency and lesser satisfaction of negotiation with suppliers. E-procurement offers the benefits of greater transparency, wider geographical reach and lesser time of transaction and better pricing. Also sustained savings can be achieved through automated, easy-to-use purchasing, invoice management, and supplier enablement capabilities. E Procurement Solution would help Government capture and settle all spend and readily obtain global user and supplier adoption. This improves process efficiency, increases compliance, and garners sustainable savings across the enterprise

The findings suggest that the government should take a more proactive role in promoting e-Perolehan in Malaysia. This includes among others, making sure that the government's policy on procurement avoids any contradiction with the e-Perolehan implementation plan. In addition, issues such as regulating the cost for training and purchase of the relevant equipment should also be within the control of the government to ensure the small scale suppliers can be enticed to become active participants of the system. In terms of the sellers (suppliers) two kinds of e-Perolehan adopters currently exist. First is the aggressive adopters who are involved fully (6,000 suppliers). These suppliers seem to benefiting from e-Perolehan and are trying to achieve competitive advantage by using IT in their procurement process. Nevertheless, there are the conservative adopters (the laggards) – are taking 'wait and see' approach, before they are willing to actively become part of the system. On balance, the general consensus amongst both the buyer and seller communities is that e-Procurement will become an important management tool to enhance the performance of supply chain especially in the public sector. In this regard, we expect that between the next three to five years, more suppliers will grab the opportunity and benefit fully from the e-Perolehan initiative in Malaysia.

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