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# E-Procurement Service Quality in Malaysia

*Sharifah Latifah binti Syed A. Kadir<sup>1</sup>*

The government in Malaysia has fully adopted and developed the applications and practices of information communication technologies (ICTs) to provide better online services to enhance the government's credibility. To understand service quality issues within this new delivery channel, this paper investigates e-procurement portal/websites through the use of E-Service-Quality (E-S-QUAL) and E-Recovery Service-Quality (E-RecS-QUAL) scales by employing a questionnaire survey distributed to 400 respondents. The collected data were analyzed using Smart PLS 3.0 to test the relationships among efficiency, system availability and privacy, responsiveness, and contact. The results show that both E-S-QUAL and E-RecS-QUAL strongly influence perceived service quality and behavioral intentions. In addition, the evidence of perceived service quality in its role as a mediator was significant. The findings constitute an empirical contribution to the literature on the application of electronic service quality.

**Keywords:** Behavioral Intention, E-Procurement, E-Service Quality, Perceived Service Quality

Pemerintahan elektronik di Malaysia telah mengembangkan dan menerapkan praktik ICT agar dapat memberikan pelayanan online yang lebih baik kepada masyarakat untuk meningkatkan kredibilitas pemerintah. Artikel ini membahas portal E-Procurement dengan pengukuran E-Service-Quality dan E-Recovery Service-Quality yang didapatkan melalui survey kuesioner yang disebarkan ke 400 responden. Data yang terkumpul kemudian diolah dengan menggunakan Smart PLS 3.0 untuk menguji hubungan antara efisiensi, ketersediaan dan privasi sistem, serta kecepatan respon dan kemudahan kontak. Hasil olah data menunjukkan bahwa baik E-S-QUAL dan E-RecS-QUAL mempengaruhi persepsi atas kualitas layanan dan perilaku masyarakat. Selain itu, peran persepsi kualitas layanan sebagai mediator juga signifikan. Temuan dalam penelitian ini memiliki kontribusi dalam menambah literatur mengenai penerapan pelayanan elektronik.

**Kata kunci :** Intensi Perilaku, E-Procurement, E-Service Quality, Perceive Service Quality

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## Introduction

With the introduction of the Internet, the concept of service quality has grown in terms of conceptualization and measurement, managing service quality, and its effects in the electronic environment. The current information and communication technology (ICT) development in Malaysia has made Internet use more crucial to people's social lives, especially in the context of economic development. Increased use of the Internet will inevitably result in changes to the way services are delivered. The e-government has also changed the way services are delivered through the use of ICT as a medium of communication with citizens,

among employees in the organization itself, and with other governments and businesses to enhance public service delivery to public and private entities.

E-procurement was officially launched in Malaysia in 1999 as an initiative under the MSC project master plan and one of the Electronic Government Flagship projects. E-procurement is a system created to allow governments to electronically select items to be procured from a personal computer (PC), initiate an electronic approval procedure, and create, submit, and receive purchase orders, delivery orders, and other related documents electronically (Rathakrishnan, 2007). E-procurement is a comprehensive process in which governments

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use information technology (IT) systems to establish agreements for the purchase of products and services or to obtain products and services in exchange for payment. The e-procurement initiative has a long-term objective of bringing government agencies in the country and suppliers around the world together in a virtual trading environment (Zaharah, 2007).

In addition, e-procurement is also proposed by Malaysia's government to attract more small and medium-sized enterprise (SME) companies to conduct their respective businesses in a more effective manner by connecting the government and suppliers or vendors to an online environment. In other words, e-procurement refers to the use of electronic methods in every stage of purchasing, from identification of requirements through payment and potential to contract management (Kaliannan & Awang, 2010). Government agencies are the buyers that procure goods or services from vendors. In Malaysia, the system becomes a one-stop portal for the public sector for procurement transactions. E-procurement can be a platform for multi-buyers and multi-suppliers in electronic procurement websites, which allow government agencies to act as independent buying teams under a single organization (Zaharah, 2007).

The e-procurement portal, or website, plays an important role for potential users. The website's performance relies on its ability to deliver good quality service to customers. Therefore, it is important that system providers and governments understand that users need to be amenable to fulfillment in an online environment. Website e-service quality can be defined as the extent to which a website facilitates efficient and effective shopping, purchasing, and delivery of products and services; it is a powerful trigger for customer satisfaction, which plays an important role in maintaining customer relationships (Zeithaml, Parasuraman, & Malhotra, 2002).

Eventually, how citizens perceive the quality of e-procurement services will depend on several factors, such as connection speed at their respective residence; long download times and slow speeds can ruin the perception of services, which might lead to decreased perceived quality. An effective website or portal can increase customer satisfaction and enhance the perception of quality. Service

quality can be well defined by differences between the expected and perceived services, or what the customer requires, and the customer's satisfaction with the products or services being offered. The quality of e-services is perceived as a tool for discourse regarding customer needs and a focal driver of customer satisfaction via the Internet (Parasuraman, Zeithaml, & Berry, 1985).

Approximately 120,000 suppliers are registered with the Malaysian Ministry of Finance, but only 50,000 suppliers are e-Perolehan-enabled, out of which only 6,000 are active users of the system (Kaliannan, Awang, & Raman, 2009). From the e-Perolehan 2016 report, the number of online transactions using e-procurement decreased from 2014 to 2015 along with a decrease in the total number of transactions from 1,577,740 to 1,540,314.

Some issues inherent within the e-procurement initiative prevent the Malaysian government and service providers from maximizing the value of the e-procurement system (Kaliannan, Awang, & Raman, 2010). Issues such as cost prior to suppliers becoming e-procurement-enabled, infrastructure, user skill and the lack of bandwidth support, and poor computing and information system architecture stop them from becoming e-procurement-enabled. System constraints must also be addressed. The system, in its current incarnation, is not robust for several reasons. In addition, there is also the issue of the provision of good quality service to users when providers are more concerned about profits. For example, the system under e-procurement does not allow a company with a wide base of products to promote itself, thus making it unattractive to suppliers as the system will increase their costs. As a result, many registered suppliers became conservative adopters of the e-procurement system.

The paper investigates the above issues by examining the dimensions of e-service quality that influence the suppliers, SMEs in Malaysia, in their intention to revisit and continue using the e-procurement services. According to Shu Hui et al. (2011), the public's and stakeholders' negative perceptions of the public procurement systems in Malaysia have decreased slightly. This decrease is mainly due to improvements and refinement of the system, as highlighted by the contractors and procurement officers.

## Literature Review

To better understand the function of e-government, citizens need to recognize the differences between traditional government services which require citizens to conduct business face-to-face and e-government which provides direct access (via the Internet) to the information, documents, forms, and requests that allow two-way communications with citizens. One can find news, submit complains, or even ask and find answers to queries on websites. E-procurement intends to provide greater access to information, equal services, and standard procedures to users and transform service delivery; this requires competent skills in the system provider since electronic government holds tremendous promise for improvements in internal governmental management, as it does for public service delivery (Kaliannan, Raman, & Dorasamy, 2009).

### Service Quality and E-Service Quality

Service quality can be determined by the difference between customers' expectations of a service provider's performance and their evaluation of the services they received (Parasuraman et al., 1985, 1988). Customers compare the quality of the service that they want to receive and what they actually receive (Gefan et al., 2002). Regarding customer satisfaction, many studies (Parasuraman et al., 1988; Boulding, Kalra, Staelin, & Zeithaml, 1993; Cronin & Taylor, 1992; Athanassopoulos, 2000) have found evidence of the links among service quality, satisfaction, loyalty, perceived value, and behavioral intentions (Leonard & Sasser, 1982; Cronin & Taylor, 1992; Chang & Chen, 1998; Gummesson, 1998; Silvestro & Cross, 2000; Cabuk et al., 2013).

The concept of service quality has also evolved in terms of conceptualizing, measuring, and managing service quality in the electronic environment (Carlson & O'Cass, 2011) through the development conception of e-service (Loonam & O'Loughlin, 2008), meaning that e-service quality (e-SQ) has fast become more important as well. One of the first definitions of quality in e-services was suggested by Zeithaml et al. (2002, p. x) as "*the extent to which a web site facilitates efficient and effective shopping, purchasing and delivery.*"

This acts as a trigger for customer satisfaction with a website and plays an important role in maintaining customer relationships. e-SQ, to some extent, refers to the effectiveness and efficiency of online browsing, online purchasing, and the delivery of goods and services (Parasuraman et al., 2005).

Meanwhile, Santos (2003) describe e-service quality as overall customer evaluation and judgment regarding the excellence and quality of e-service in the virtual marketplace that incorporates a customer's interaction with a website (Parasuraman et al., 2005) in which customers shop, purchase, and arrange delivery through website facilities in an efficient and effective manner. A good quality website can be distinguished through the customer's perspective on how it facilitates the process of bringing the customer and company together (Wirtz & Lovelock, 2011).

The potential benefits of e-service include ease of access to information, direct access and contact with specific representatives, greater access to services, and cost savings and efficiencies in the provision of services (De Ruyter, Wetzels, & Kleijnen, 2001; Boyer, Hallowell, & Roth, 2002). On the other hand, companies must shift their focus of e-business from e-commerce to e-service, the transactions that occur before, during, and after. Furthermore, Rust and Lemon (2001) acknowledge e-services' role in cyberspace, which is now recognized as a key determinant for successful e-business (Carlson & O'Cass, 2011), with positive impacts on customer satisfaction (Chang & Wang, 2008; Barutcu, 2010; Liang, 2012).

### E-Service Quality Measurement

Measurements of e-SQ have been applied in different industries, including Internet banking (Jun & Cai, 2001; Yang, Jun, & Peterson, 2004; Ho & Lin, 2010; Jayawardhena, 2004; Siu & Mou, 2005; Zhu, Wymer, & Chen, 2002; Wu, Tao, & Yang, 2012; Kayabasi, Celik, & Buyukarslan, 2013), online shopping (Ilter, 2009; Celik & Basaran, 2008; Seethamraju, 2006), mobile service quality (Ozer, Argan, & Argan, 2013; Kuo, Wu, & Deng, 2009; Lu, Zang, & Wang, 2009), online travel (Park et al., 2007; Kaynama & Black, 2000; Shchiglik & Barnes, 2004; Chen & Kao, 2010). Nevertheless, to

date, no industry-specific measurements have been developed (Yarimoglu, 2015).

In addition, Lee and Lin (2005) modify the SERVQUAL scale to include web design, reliability, responsiveness, and trust as drivers leading to higher e-service quality. Earlier, Zeithaml et al. (2002) proposed an e-SQ measurement using the 11 dimensions of access, ease of navigation, efficiency, flexibility, reliability, personalization, security/privacy, responsiveness, assurance/trust, site aesthetics, and price knowledge. Generally, e-SQ perceptions can be applied to online businesses, and both scales can be used to gauge customers' perceptions; the level ratings' trends help identify the strengths and weaknesses of the website and may provide ideas for improvement (Parasuraman et al., 2005).

Measurement for e-service quality was developed in the 2000s because delivering high-quality services is vital in businesses. From the SERVQUAL developed by Parasuraman et al. in 1985 to measure service quality reliability, responsiveness, assurance, empathy, and tangibles, the measurement was refined for E-S-QUAL in 2005 with four dimensions to constitute the "core" quality comprising efficiency, fulfillment, system availability, privacy, responsiveness, compensation, and contact. Parasuraman et al. (2005) also developed E-RecS-QUAL scales to measure service problems and inquiries, as well as non-routine encounters with customers that constitute "recovery." The determination of E-S-QUAL and E-RecS-QUAL might not be relevant in all contexts or to all customers, but both dimensions exclusively measure the service quality conceptual domain of e-SQ.

This paper adopted Parasuram et al.'s (2005) E-S-QUAL, which is composed of the four dimensions of efficiency, fulfillment, system availability, and privacy, via 22 items and E-RecS-QUAL based on the three dimensions of responsiveness, compensation, and contact and measured using 11 items.

### **Perceived Service Quality**

Perceived quality can be explained as a global judgment or attribute relating to superiority of a service relative to competing offering (Parasuraman et al., 1988). On the other hand, Santos (2003) identifies perceived service

quality as the overall customer evaluations and judgments regarding the excellence and quality of service delivery. Although technology has intensely changed the ways in which companies interact with and serve their customers, customer requirements for quality service have not shown any signs of changing (Bitner, 2001); even using technology, providing the service quality, is still important to firms (Bitner, 2001; DeLone & McLean, 2003; Ding & Straub, 2008; Zeithaml et al., 2002).

Brady, Cronin, and Brand (2002) note that established perceived service quality has been a significant predictor of customer satisfaction and behavioral intentions and is important in gaining a competitive advantage (McDougall & Levesque, 2000) that is related to customer behaviors such as word-of-mouth recommendation and intention to purchase (Woodruff, 1997). Lee and Lin (2005) report that an important factor in determining customers' perceived e-service quality is website design.

### **Behavioral Intentions**

Zeithaml, Berry, and Parasuraman (1996) equate behavioral intentions to customers remaining with or defecting from the company and define it as a potential behavior which is triggered by service quality and satisfaction (Zeithaml et al., 1996). Perceived service quality is related to positive behavioral intentions and can be as a signal of retention or defection that can be detected through word-of-mouth (WOM) communications, patronage intentions, and all behavioral intentions, specifically WOM communications, intention to purchase, and price sensitivity (Alexandris, Dimitriadis, & Markata, 2002).

Zeithaml et al. (1996) suggest that increasing customer retention, or lowering the rate of customer defection, is a major key to a service provider's ability to generate profits. Favorable behavioral intentions are associated with a service provider's ability to get its customers to say positive things about the service provider, recommend it to other consumers, remain loyal to it (i.e., repurchase from it), spend more with the company, and pay a price premium.

This paper represents an attempt to explain the two antecedents that affect websites' perceived quality and the consequences of consumer behavioral intentions. E-S-QUAL



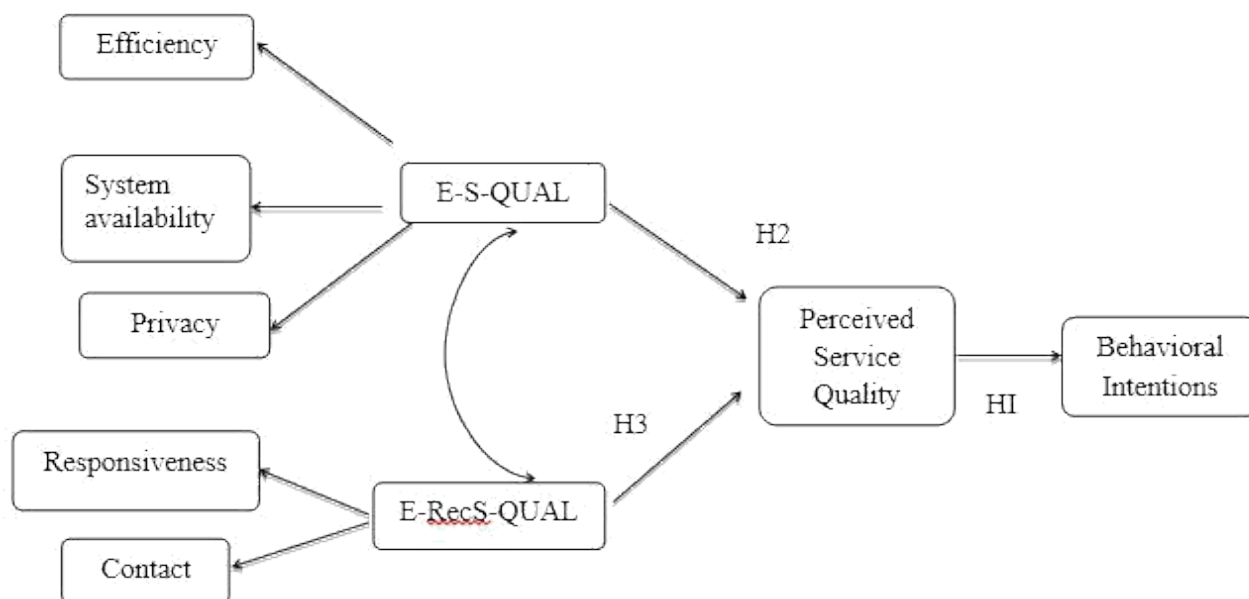


Figure 1. Conceptual model

and E-RecS-QUAL dimensions are used to evaluate online perceived service quality and behavioral intentions. We proposed the following hypotheses:

- H1: Perceived service quality has a significantly positive impact on behavioral intentions.
- H2: Perceived service quality is positively affected by E-S-QUAL.
- H3: Perceived service quality is positively affected by E-RecS-QUAL.
- H4: Perceived service quality mediates the effects of E-S-QUAL on behavioral intentions.
- H5: Perceived service quality mediates the effects of E-RecS-QUAL on behavioral intentions. Based on the literature and hypotheses, we propose the research framework shown in Figure 1.

## Methods

This study utilized a cross-sectional research design with a quantitative approach via a questionnaire survey. The next subsections provides details of the research methodology.

### Sampling Design and Measurement Scales

The population of this study includes all employees in various businesses that are using e-procurement services. The targeted sample is e-procurement users within SMEs in

Malaysia. A convenience sampling technique was used to obtain a large number of completed questionnaires in a quick and economical manner and questionnaires were distributed to 400 companies from various locations in Malaysia. The questionnaire contained a screening question to ensure that respondents had the experience of using e-procurement. Respondents comprised employees from various levels who had experience using the e-procurement service. The survey used 5-point Likert-type scales with anchors of 1 (strongly disagree) to 5 (strongly agree), which were adapted from the scales of e-SQ of Parasuraman et al. (2005). A total of 158 completed responses was gathered but only 100 were usable for the analyses due to incomplete responses in certain sections of the questionnaire.

### Data Analysis Techniques

The collected data were analyzed using the Statistical Package for Social Sciences (SPSS) for the preliminary tests, including descriptive analysis, reliability, factor analysis, and correlation and multicollinearity. Due to the small sample size (less than 200), partial least squares (PLS) analysis was performed using the Smart PLS 3.0 software to test the hypotheses. Cronbach's coefficient alpha is commonly used for reliability as an indicator of internal consistency. It provides an indication of the

Table 1. Descriptive Statistic

Variables	Mean	Std Dev	Skewness	Kurtosis
Efficiency	3.73	0.639	-0.378	-0.100
System Availability	3.50	0.656	-0.404	1.029
Privacy	3.91	0.661	-1.042	3.155
Responsiveness	3.61	0.765	-0.138	-0.486
Contact	3.49	0.771	-0.185	-0.287
Perceived Service Quality	3.71	0.623	-0.468	0.193
Behavioral Intention	3.63	0.696	-0.470	0.705

average correlation among all items that make up the construct. Factor analysis is a technique of data reduction that reduces a large number of variables to a smaller set of underlying factors. It summarizes the essential information contained in a set of variables (Coakes & Steed, 2009).

## Results and Discussion

The respondents were mostly from private limited firms, 30% from limited companies and 20% from sole proprietors, with almost a quarter (about 27%) having fewer than 10 workers. We found that more than 55% of these firms has used the e-procurement portal for business/transactions for 1-3 years and only 10% has used it for 6-9 years. Most respondents (71%) indicated that they took less than one hour to complete a transaction in the e-procurement portal, while only 2% indicated more than five hours to complete a transaction. A total of 87% of the respondents was satisfied with the e-procurement portal as opposed to 13% which was not satisfied.

### Descriptive Statistics

The descriptive statistics shown in Table 1 show that *privacy* is extremely important, with the highest mean score of 3.91 (s.d.=0.66), and contact is least important, with a mean score of 3.498 (s.d.=0.77). In terms of normality, we observed that the skewness does not indicate a serious departure from normality since the value is less than 0.5, with the exception of privacy, which is negatively skewed. In terms of the normal bell shape, the kurtosis presented again indicates mild non-normality with moderate departure for *privacy*.

### Reliability and Validity

The first-order and second-order factor models of E-S-QUAL and E-RecS-QUAL were tested to assess how each of the factors may justify the behavioral intention toward the service provider using Smart PLS; the results are presented in Table 2. All items load highly (more than 0.7) to their respective constructs, indicating that convergent validity is met. Although the second *efficacy* item shows a loading 0.638, it still can be accepted (Chin, 1998). Table 2 also shows that composite reliability is met (CR exceeding 0.8); hence, all items are reliable.

### Validating of hypotheses

We run the model using Smart PLS on our structured measurement model as in Figure 2 to validate our hypotheses. The construct for E-S-QUAL is second-order, with the dimensions of *privacy*, *system availability*, and *efficiency* as first-order constructs with reflective direction. Similarly, the E-RecS-QUAL scale is also a second-order construct having dimensions of *responsiveness* and *contact*, which are first-order constructs. The output shown in Table 3 is the result

Based on Table 3, E-RecS-QUAL only explained 49.1% of variation for *perceived service quality*, while E-S-QUAL explained 54.8% of the variation in *perceived service quality* toward e-procurement usage, and *perceived service quality* explained 96.64% of the variation in *behavioral intention* toward the e-procurement portal. The R squared multiple coefficient for *perceived service quality* is 0.548 ( $p < 0.001$ ), meaning that almost half of the variation in *perceived service quality*

Table 2. Measurement Model Reliability

Construct Name	Factor Loading	CR	AVE
<b>Behavioral Intentions</b>			
I will say positive things about it to other company/friend.	0.992	0.948	0.821
I will recommend it to someone who seeks my advice.	0.896		
I will encourage friends and others to do transaction/business with it.	0.847		
I will consider it to be the first choice for future and development of business.	0.884		
<b>Contact</b>			
Provides a telephone number to reach the company	0.87	0.904	0.759
Has customer service representatives or is available online	0.892		
Offers the ability to speak to a live person if there is a problem	0.851		
<b>Efficiency</b>			
Makes it easy to find what I need	0.775	0.921	0.594
Makes it easy to get anywhere on it	0.638		
Enables me to complete a transaction	0.734		
Information is well organized	0.794		
Loads its pages fast	0.794		
Simple to use it	0.829		
Enables me to get onto it quickly	0.807		
Is well organized	0.78		
<b>Privacy</b>			
Protects information about personal/company details	0.917	0.921	0.797
Does not share my/company information with other sites	0.839		
Protects information about me/company account information	0.92		
<b>Perceived Service Quality</b>			
The information on transactions available at this portal is excellent.	0.859	0.915	0.729
The overall convenience and comfort of using the e-portal is excellent.	0.874		
The extent to which the e-portal gives a feeling of being in control.	0.813		
Overall, I feel value from this e-portal; it is worth the time and effort.	0.867		
<b>Responsiveness</b>			
Provides my company with convenient options for problem faced	0.824	0.892	0.735
Tells what to do if information is not processed	0.85		
Takes care of problems promptly	0.895		
<b>System Availability</b>			
Always available for business/tender notification	0.724	0.862	0.609
Launches and runs right away after a successful registration	0.782		
Runs smoothly and does not crash	0.819		
Pages do not freeze after entering information	0.794		



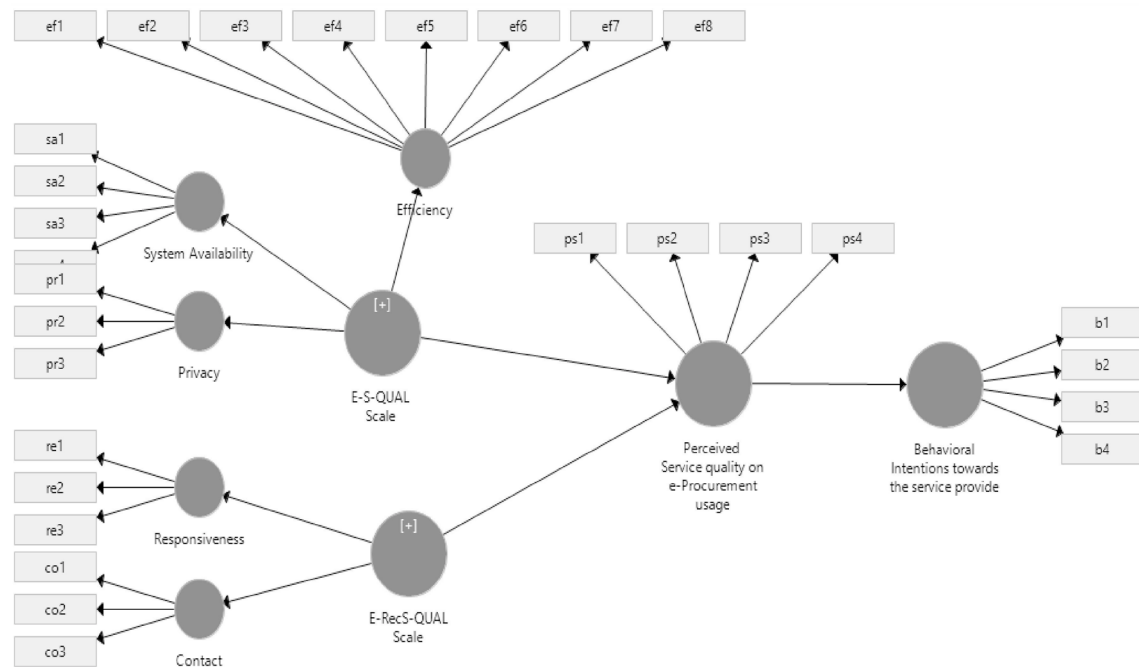


Figure 2. Full Measurement Model

Table 3. Path Coefficient

Path	Std Beta	Std Error	t-value	Decision	F <sup>2</sup>	R <sup>2</sup>
E-RecS-QUAL-> CO	0.946	0.011	86.88**	Supported	8.459	0.491
E-RecS-QUAL-> PS	0.254	0.091	2.79**	Supported	0.078	0.894
E-RecS-QUAL-> RE	0.943	0.012	77.67**	Supported	8.019	0.85
E-RecS-QUAL-> PS	0.222	0.091	2.432**	Supported	0.058	0.491
E-S-QUAL -> EF	0.922	0.015	60.397**	Supported	5.682	0.559
E-S-QUAL -> PS	0.551	0.094	5.857**	Supported	0.366	0.532
E-S-QUAL -> PR	0.729	0.053	13.789**	Supported	1.135	0.889
E-S-QUAL -> SA	0.81	0.045	18.092**	Supported	1.912	0.657
E-S-QUAL -> PS	0.569	0.097	5.876**	Supported	0.378	0.548
PS -> BI	0.701	0.065	10.72**	Supported	0.964	

Table 4. Total Effect and Direct Effect of IVs on (DV)

	Total Effect		Direct Effect	
	Coefficient	t-value	Coefficient	t-value
E-RecS-QUAL -> BI	0.306	2.941	0.212	2.071
E-S-QUAL -> BI	0.447	3.991	0.208	1.575

Table 5. Indirect Effect of IVs on DV

	Indirect Effect	SE	t-value	Bootstrapped Confidence Interval	
				95% LL	95% UL
H4: E-S-QUAL -> PS -> BI	0.399	0.087	4.570	0.228	0.570
H5: E-RecS-QUAL -> PS -> BI	0.156	0.066	2.355	0.026	0.285

is accounted for by E-S-QUAL and E-RecS-QUAL. Therefore, Hypotheses H1, H2, and H3 are supported.

To validate the mediating role of *perceived service quality*, the total and direct effects of the independent variables on the dependent variable were examined. Our study applied the bootstrapping procedure (Williams & Mackinnon, 2008) to allow for testing the mediation hypotheses, as Preacher and Hayes (2008) suggested, by testing the indirect effects. Based on Tables 4 and 5, E-S-QUAL has a significant total effect on *behavioral intention* ( $c=0.447$ ;  $t=3.991$ ). In the presence of the mediator, E-S-QUAL decreases its influence toward *behavioral intention*, but still maintains its significant direct effect ( $c=0.208$ ;  $t=1.575$ ). Therefore, this result supports Hypothesis 4 that *perceived service quality* on e-procurement usage partially mediates the relationship between E-S-QUAL and *behavioral intention*.

On the other hand, E-RecS-QUAL has a significant total effect on *behavioral intention* ( $c=0.306$ ;  $t=2.941$ ) and when the mediator is added, E-RecS-QUAL decreases its influence on behavioral intention, but still maintains its significant direct effect on behavioral intention ( $c=0.212$ ;  $t=2.071$ ). Thus, Hypothesis 5 is supported, meaning that the indirect effect of E-RecS-QUAL on *behavioral intention* is significant. This result also shows that *perceived service quality* on e-procurement use partially mediates the relationship between E-RecS-QUAL and *behavioral intention*.

## Conclusions

This study focused on SMEs registered with e-procurement systems under the Malaysian government; it used the E-S-QUAL and E-RecS-QUAL scales to examine their effect on perceived service quality and behavioral intentions via a questionnaire survey in which respondents' cooperation in completing the survey form was very limited.

In this study, efficiency and privacy were the more important dimensions and contact was less important. Although system availability and responsiveness were less important influencers, the path coefficient showed that both were statistically significant for their impact on perceived service quality and behavioral intention. This study provided additional

support for Morgan and Hirlinger (1991), who noted that adverse action promotes the efficiency of service when the grounds for the action are related to either an employee's ability to accomplish his or her duties satisfactorily or some other legitimate government interest. Efficiency evaluates the service quality of the e-procurement portal or website regarding the ease of use, which must be customer-driven and service-oriented, as Kaliannan, Awang, and Raman (2009) noted; this requires the government or service provider to look into this and the issue of privacy more deeply. With the advances in technology, the vulnerabilities of personal information have invariably increased. Information privacy may apply in numerous ways, including encryption, authentication, and data masking. Thus, attempts should be made to ensure that all information is available only to those with authorized access.

Although Parasuraman et al. (2005) asserted that perceived service quality is the extent to which a provider successfully serves the purpose of customers, this study found support for the service quality of the e-procurement portal being more concerned with quality and what users will acquire from the service. Improving users' satisfaction is an important approach to increasing users' interest in the portal. In this manner, to ensure that users and the public enjoy e-procurement service, the government needs to increase its promotion efforts regarding e-procurement portal usage.

The e-procurement services in Malaysia support the contention in the general marketing literature that users' perceived service quality is a factor in creating and enhancing users' behavioral intention. Although other factors influence e-procurement's users, the government should look at users' expectation regarding the service quality of the e-procurement portal. For example, an effective website or portal can increase customer satisfaction and enhance the perception of quality through the enhancement of connection speed as long download times and slow speeds can ruin the perception of service quality. The quality of e-services is perceived as a tool for a discourse regarding customer needs and a focal driver of customer satisfaction.

In conclusion, improving service quality of e-procurement services is vital since the behavioral intention of users heavily depends on their perceived level of service quality.

Evidence from our study may be useful to industry players and policy makers since providing efficient services in electronic media and ease in gathering information can improve intention and attract more potential new users or encourage existing users to continue using

the e-procurement portal. Thus, our study on e-procurement services in Malaysia supports the contention in the general marketing literature that the main factor enhancing behavioral intention is users' perceived service quality, which may affect marketing strategies.

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