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Measuring eCommerce Website Success

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Abstract

This paper presents a research model, which is built on communication theory (Shannon and Weaver 1948) and DeLone and McLean's (1992, 2003) information system model, to identify eCommerce website success dimensions. The research model is aiming to make a contribution to literature by identifying and incorporating dimensions of success relevant to eCommerce websites. Further empirical research is required to validate the finding.

Keywords

eCommerce website, Success, Communication theory, DeLone and McLean

INTRODUCTION

Business managers have recognised the need to assess the payoffs from their eCommerce investment, yet they are less able to assess the effectiveness of their website due to limited measurements available to them (Straub et al, 2002). Clear, useful measurements that capture website performance have long enabled managers to improve strategies and operations.

Given the investments in time and money that are often required to launch a commercial website and the growing demands to see returns on internet-related investments, a stronger focus on performance and success is becoming critical for internet–based eCommerce (Auger 2005). However, the measurement of commercial website performance has proven to be a difficult task not only because it depends on which stakeholder perspective (the user, the designer or the organisation) is assumed, but also because it is a multidimensional concept (Palmer 2002) that can be assessed at different levels (individual, organisational) using different interrelated criteria (Molla and Licker 2001).

More studies are needed to understand the nature of these systems. An example of such a study is one investigating the success of eCommerce, which is in line with those conducted by Molla and Licker (2001) and by DeLone and McLean (2004). Molla and Licker proposed that the original DeLone and McLean (1992) model could be extended to measure eCommerce success while in 2004 DeLone and McLean adapted their updated information system (IS) success model for eCommerce system success measurements. Both studies proposed a framework to evaluate eCommerce systems from the customer's perspective.

This present study frames theoretical dimensions of website success within the paradigm of the DeLone and MacLean model to be adapted in an eCommerce context by identifying and incorporating dimensions of success. The research demonstrates three criteria of success, each of which is necessary but not sufficient to capture the changes in the website performance. These dimensions are creation, usage and consequences of the system. The primary focus of this research is to develop a measure along those dimensions which is capable of

explaining sufficient variation in the website effectiveness. The perspective in such a research is considered critical, and the organisational perspective is included to meet our objectives.

This study should assist business managers to assess their eCommerce initiative as well as to identify measures for the performance of their eCommerce website. Such measures help managers not only to allocate resources as they develop their eCommerce strategy, but also to evaluate impacts on profitability. Thus, in order to maximise the likelihood of success of such systems the managers should consider focusing on those success dimensions identified in this study.

This paper is organized as follows: the first section presents website for eCommerce followed by information systems success measurement; then, eCommerce system success (choice of dimensions) is rationlised followed by its three dimensions (creation, use, and consequences); finally, the implication of the research is presented followed by the conclusion.

WEBSITE FOR ECOMMERCE

The website, the basic element of conducting business online, is a collection of pages residing on servers that is connected to World Wide Web. It is an information system written in a special language enabling different functionalities allowing the access of anyone with an Internet connection. It is an outcome of a firm's effort to communicate with customers. The purpose of the website, however, is reflected by the firm's online model. A business model that underlies an eCommerce system operates to serve as a communication channel for bidirectional information transfer, a platform for transacting, an interface for providing customer service (Quelch and Klein 1996) and facilitate marketing initiatives (Schubert and Selz 2001). While the goal of such a business model is to market their products/services and maximise profit/shareholder value by allowing transactions online with another party, organisations that incorporate such technologies still need to have a sense of what proportion of their business will be online, their target audience, their value proposition, and most importantly, the path for delivering maximum customer value (Krishnamurthy 2003). The drivers of value in the offline environment are driven by the marketing mix. However, in the online arena, customers are using the commercial website for informational, transactional and/or customer services purposes. The absence of face-to-face interaction between buyer and seller and the non-verbal cues can be offset by other factors such as product information, as buyers can only attend to the characteristics of the message being sent to them (Coughlan et al 2006); quality factors such as interactivity functionalities to make customers feel that they are part of the process; assisting customers to find and select products; responsiveness to queries, to name just a few. Therefore, the objective of the organisation must be to differentiate the site and create a web- unique selling proposition appealing to the target group(s), consolidating competitive advantage and conveying customer value. Hence the organisational use of the website is focused on enhancing the visibility of their Internet exposure to their existing and potential customers, communicating company image, increasing brand awareness, supporting their customers to effectively use products or services provided by the firm and focusing on the three phases of marketing: pre-sale, on-line sale and after-sale.

INFORMATIOM SYSTEMS SUCCESS MEASUREMENT

DeLone and McLean (1992) conducted a comprehensive review of Information Systems (IS) literature in an attempt to structure the myriad of variables associated with the diversity of information systems, and proposed the concept of the IS success model. Their work is still contributing toward a universal model, which many have employed when looking at information system performance (Ballantine et al. 1996; Pitt et al. 1995; Rai et al. 2002; Seddon 1997). Pitt et al (1995) proposed a modification of this model to include a service quality component; Myers et al (1998) suggested additional IS impact measures; Seddon (1997) argued to exclude the usage from the model and used 'net benefit' in his characterisation of the outcome. These modifications were endorsed by Delone and McLean in 2002 with an updated IS success model (DeLone and McLean 2003; DeLone and McLean 2002) as shown in Fig 1. The updated model (henceforth, 'updated D&M IS Success Model') identified six interrelated dimensions of IS success. It suggested that the quality of the content as well as system and service of the IS, determine the users' intention to use and their actual use and satisfaction with the IS. The more satisfied they are with the IS, the more users will use it, and this determines the benefits that they obtain from it. The benefits then reinforce the users' intention to use, their actual use, and their satisfaction with the IS (DeLone and McLean 2003).
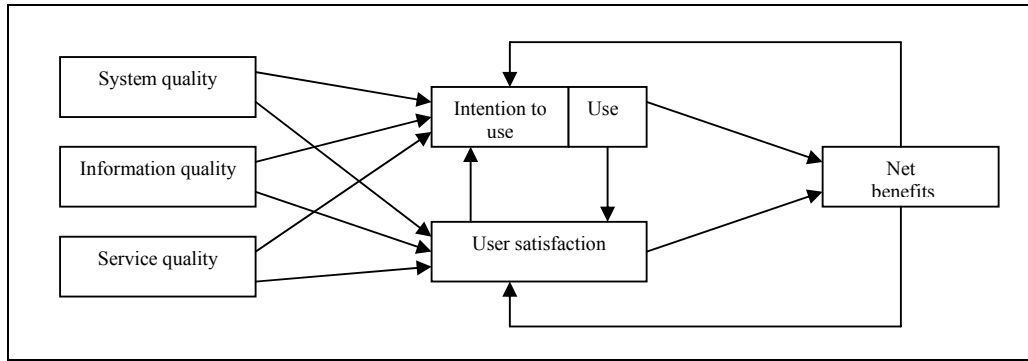
Figure 1. Updated DeLone and McLean IS success model

Source: DeLone and McLean 2003

The updated D&M IS Success Model anchored by the communication theory of Shannon and Weaver (1949) exhibits three criteria of success each of which is necessary but not sufficient to capture the changes in IS performance (Shannon and Weaver 1949):

1. Technical: how accurately the message is transferred to the customer. This is measured by system quality in the updated D&M IS Success Model.

2. Semantic: how precisely the customer receives the intended message. This is measured by information quality in the updated D&M IS Success Model.

3. Effectiveness level reflecting the impact on the basis of the benefit accrued to the stakeholder through utilisation and the response when system in use. This is depicted in the updated D&M IS Success Model by use, user satisfaction and net benefit.

Since 1992, the D&M model has been the central study for all research addressing IS success (Pitt et al. 1995; Ballantine et al. 1996; Seddon 1997; Myers et al 1998; Rai et al. 2002). This also has been extended to website effectiveness as a website is an IS (Molla and Licker 2001). This research is no exception in recognising the potential of the model and its applicability to identify success measures of eCommerce website for the following reasons:

1. The D&M model is based on communication theory and is highly suited to measuring the IS and communications phenomenon that is the Internet.

2. Other models (Seddon's 1997) argue that the use construct is a success factor in a voluntary environment which is the case in the eCommerce context.

The adoption of the updated D&M IS Success Model is driven by an understanding of IS and their impacts (DeLone and McLean 2003) as shown in figure 2. The Shannon and Weaver criteria mentioned above are captured within the process model. This will be explored later. However, as pointed out by researchers the perspective is considered critical in the determination of success (Belanger et al. 2006; Seddon et al. 1999).
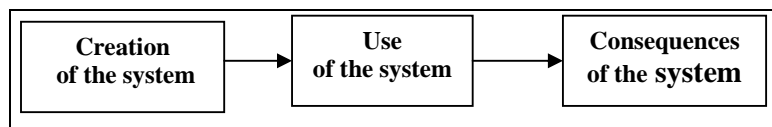

Figure 2: Initial research model based on D&M model and the process
understanding of its creation as applied to IS

From the perspective of the customers, "their expectations need to be met and their interaction with the website has to be a positive experience, in order for the website to be considered successful" (Schaupp *et al* 2006 p2). Quality of users' experience and predominantly users' satisfaction with the website have been used in recent research initiatives as determinants of success (Aladwani and Palvia 2002; Loiacono and Watson 2002; Ranganathan and Ganapathy 2002).

From the organisational perspective, success is measured by the website's ability to attract qualified customers who will aid the firm to achieve its stated goal. Analysing the click stream data from the website traffic is the preferred way to make inferences regarding its effectiveness (Belanger *et al* 2006; Schaupp *et al* 2006).

Based on communications (a website is a communication channel) and IS theories a website can be assessed for effectiveness. However, while D&M capture the changes within a website from the customer experience point of view, this research takes the contrary view and emphasises the organisational perspective. This warrants further discussion in terms of the dimensions exhibited. Executives play a key role in choosing and implementing eCommerce strategies and pursue a more active role in deciding how, when and where IT resources should be used (Tallon and Kraemer 2002).

This raw form of the updated D&M IS Success Model is the reference point to identify measures of success of a website in the context of eCommerce from the organisation perspective.

eCOMMERCE WEBSITE SUCCESS (CHOICE OF DIMENSIONS)

The concept of eCommerce website success is recognised as a problematic issue that can be interpreted in many different ways. However, it is generally accepted that the many aspects of success with respect to a website are complex. In essence multiple, interrelated success dimensions from both a stakeholder and a technical perspective are more likely to capture changes in performance than one single item or even a set of financial measures (Segars and Grover 1998). While a website can be regarded as one form of IS (Molla and Licker 2001), and a socio-technical construction (Stockdale and Borovicka 2004), researchers from various disciplines have studied eCommerce success from different perspectives in a variety of contexts (Feindt et al. 2002; Hong 2007; Huizingh et al. 2007; Pather 2003; Pujani V. and Xu 2005 ; Quaddus and Achjari 2005; Schaupp et al. 2006; Stockdale et al. 2005; Thelwall 2001; Torkzadeh and Dhillon 2003; Turban and Gehrke 2000). The focus of the current research, however, is website success in the context of eCommerce considering the view of the organisation. Business managers' perceptions can help to pinpoint areas within the firm where eCommerce is creating value.

In contextualising the framework in Fig.2 to identify measures for eCommerce website success, a website is first created and made available on the web. Next, online users voluntarily visit the site. Their experience with various features contained in the website will either satisfy or dissatisfy them according to the system, information and service quality exhibited to them which will impact the conduct of their work (DeLone and McLean 2003). This customer perspective is **not** the focus of the present research.

From the organisational perspective (which **is** the focus of this research), the website with a set of features is created to attract users (customers) for the purpose of exchanging value. Online users voluntarily visit the site and the organisation responds to their queries and communicates a set of quality factors for a positive customer experience (Jensen 2003). Consequently, this will not only impact on the firm but also determine what metrics need to be used to understand customers' behaviour in the site. Both customer interaction with the site and benefits accrued to the company determine manager satisfaction with the site. His/her satisfaction enhances the system by either reinvesting or understanding the payoff from their initial expenditure.

 Now, the three constructs of fig.2 are explored in more detail according to the organisational perspective:

CREATION OF THE SYSTEM

A website is created with a number of design elements which contribute towards its overall function (Song and Zahedi 2001). Each website has a purpose as defined by its owner. There have been a number of attempts by researchers to identify and categorise website elements and link these with the purpose of the site.

Forrester Research (1996) defines three types of websites: A promotional site that advertises a company's products and services; a content site that provides updated news, weather, or entertainment; and a transactional site that provides interactive shopping, banking, or customer service.

Ho (1997) classified the business purposes of a commercial website into three categories: informational, transactional, and promotional; and that sites create value for their visitors in four ways: timely, custom, logistic, and sensational. These give a framework resulting in 12 possible features (purpose–value combinations) a site could offer. Data were aggregated to determine the extent of the technology used for industries, countries, and regions; but were of little help for individual sites.

In another effort, Adam and Deans (2000) identified three criteria: communicational, transactional, and relationship, to analyse marketing websites in Australian and New Zealand online businesses. Companies establish different objectives for their website according to the criteria chosen.

In a business model that underlies ECS, a combination of different capabilities (purposes, positions) is needed in the organisation's website to influence its visitors in their buying decisions. These will not only impact the company in terms of benefits accrued to the organisation, it will also influence user behaviour on the website which in turn determines the organisational benefits. The present study identifies four capabilities: **informational, transactional, customer service, and promotional**:

- **The provision of information** targeting customers or any interested visitors is the primary purpose of all commercial websites (Chakraborty et al. 2002; Chen and Wells 1999; Gonza'lez and Palacios 2004; Huizingh et al. 2007; Molla and Licker 2001; Palmer 2002). The Internet is capable of providing comprehensive and rich information to customers who might not be in the same time zone or the same country, and it is available 24 hours and 7 days a week. Informational features can reduce cost by using more efficient communication channels (Quelch and Klein 1996); providing insight into the background of the company, delivering information about their product/service and presenting information to enhance customer service (Elliot et al. 2000; Molla and Licker 2001). Firms needing to establish their entity in the Internet market should provide information that a potential customer needs to make an informed decision to purchase a product or a service. This includes: contact details, company information and functions, product knowledge enhancement (e.g. detailed product description, picture of the product) and other customers' comments/ratings/testimonials (Elliot et al. 2000; Song and Zahedi 2001).

- **Transactional capabilities** refer to an ECS where it is possible to conduct an online financial transaction. This can also reduce costs as well as increasing revenues by attracting new customers and sales or transferring existing sales to a more profitable medium (Quelch and Klein 1996). "Customers and business can use such a system to place and accept orders, track order and delivery status, make and receive payments, and access and update accounts." (Molla and Licker 2001 p133). Both transactional and informational functions are found to have a positive impact on website success (Huizingh et al 2007).

- **Website features that address customer services** can vary from general descriptions to interactive dialogues individually tailored to the customer's specific request (Piccoli et al. 2004). Such capabilities are intended to positively impact on relationships with customers, provide sales support, enhance customers' knowledge, facilitate resources to customers seeking more information, customise their mix according to their needs, and provide policies on issues such as security and returns (Elliot et al. 2000; Song and Zahedi 2001). Treacy and Wiersema (1997) have suggested that eCommerce transforms organisations into a customer intimacy discipline, delivering not what the market wants but what specific customers want. The customer-intimate company makes a business of knowing the people it sells to and the products and services they need, to allow them to value proposition the best solution for customers, with the intention of cultivating relationships in order to garner business opportunities, thus their asset is customer loyalty (Treacy and Wiersma 1997). This can be enhanced through customised services such as loyalty scheme(s) (Elliot et al. 2000)

- **Promotional capabilities** of ECS include aspects that can be communicated to customers to either inform them about the site or promote products/services within the site. The website is the prime product and brand of the online, customers should be directed to the company's Internet exposure before going to their detailed online offering (Constantinides 2002). Indeed, one of the primary objectives of new website is to attract a variety of customers to visit their new internet exposure. In order to attract new customers and keep existing customers, companies need to provide external informational events (Andreassen and Lindestad 1998) since the "build and they will come" model is insufficient to generate traffic (Aaker 2002). Successful online business needs a highly visible website which can be viewed as a predictor to website traffic (Dreze and Zufryden 2004). Also, site awareness (defined as ability of a buyer to recognise or recall that a site as a member of a certain service category) is found to affect relational benefit (Park and Kim 2003). Although difficult, companies see driving traffic to their site as most important (Hoffman and Novak 1996). One of the major categories surveyed by Turban and Gehrke (2000) investigating the major determinant of an effective website was customer focus. They grouped 12 variables of relative importance according to their number of citations in the literature. Promoting the firm site has been found the most important since it is important to direct visitors to the site (Turban and Gehrke 2000). In relation to this, the web site should be easy to find and appear as close to the top of a search result as possible. The higher the rank in the search engine, the greater the proportion of customer traffic visits to the site, which should lead to more purchases. Hence, search engine optimisation has become an important marketing concern and is dependent on how well the web site is designed and laid out (Krishnamurthy 2003). Other online techniques to market the site include reciprocating links with other websites, use of banner ads in other portal sites, use of Meta tags and registering with main search engines. This will increase visibility of the site, help acquire customers (Dreze and Zufryden 2004) and assist in their retention (Gomory et al. 1999; Thelwall 2001). Offline marketing is another aspect to increase visibility of the site to attract customers to it. This can be achieved by different means such as using different media.

Whereas sales promotion techniques within the website include price-based promotion (discounts, special offers and rebates) and non-price promotion (new products, sampling, product trial), this is to attract visitors' attention

and increase their intention to transact (Gomory et al. 1999; Song and Zahedi 2001). Also, users will return to the site to check out the latest of these promotions.

The above mentioned capabilities exhibited in the website are the messages communicated to the customers. How precisely the customer is receiving these intended messages represents the semantic criteria in the communication theory of Shannon and Weaver (1948). However, from the organisational perspective these messages represent goals to be achieved and the performance of these goals to the organisation's expectation defines the success of the semantic criteria.

The organisation needs to deal with whether the above mentioned feature goals (informational, transactional, customer service and promotional) appeal to visitors. Analysing the effectiveness of these goals provides some insight into the organisation's offering. If it is not optimal, an adjustment may be needed, such as adding or deleting some of their design elements. However, poor sales may result from other online effectiveness problems. A complete understanding requires looking at other areas which increase customers' experiences that could influence purchase intention. According to the communication theory of Shannon and Weaver (1948) this is achieved by the technical criteria. The technical aspect of the website is covered in its design quality.

- **Design quality:** There is no fixed recipe for design quality, but common sense can be utilised. To avoid poor style the basic rules of graphic design when designing a website should be used; elements of the website should match the design and style of the rest of the business, and colours on the website should complement the colours that are used in the logo or brand. Poor quality images, unnecessary moving images and flashing text are examples of low quality design. These factors are important when visitors rapidly scan to decide whether or not to continue viewing the site. "Poor design will not necessarily directly lose a business customers, but it represents a lost opportunity to enhance the company image" (Thelwall 2000, p154). Another important issue of the design is the size of the site and the time required to load the site. Online customers were found to be impatient and unwilling to wait for the site to load (Palmer 2002). Conforming to standards is also another design issue that influences visitors and causes them to leave the site if it is found difficult to use and different to what they are used to. World Wide Web Consortium (W3C) has a worldwide standard that covers all aspects of design quality.

To this end, it can be concluded that the online offering of the company is driven by various website capabilities along with design features that are introduced to enhance customer experience, the effectiveness of which is determined by the customer usage of the website.

USE OF THE SYSTEM

Information systems (IS) researchers have demonstrated that usage is a key variable in explaining the performance impact of information technology. Seddon (1997) pointed out that system use is a good proxy for IS success when the use is not mandatory. DeLone and McLean (2003) posited that IS quality affects subsequent "use" which will in turn determine the benefits that accrue to the organisation. In eCommerce, website users are customers; their use is more often voluntary. The nature of the systems' use and the amount of the usage are both important indicators of success and this will not only impact the organisation but also will assist the organisation in improving the quality of their website (DeLone and McLean 2003). Therefore traffic measures should be determined with reference to the number of new or repeated visitors, the number of conversion rates and the pattern of their navigation (DeLone and McLean 2004).

 Epstien (2004) argued that channel optimisation (increased site traffic and sales: measured by looking at site traffic, amount of website downtime, and improvement in sales); cost saving (related to customer interactions: measured by looking at the dollars saved in expenses); value capture (increased eCommerce profits: measured by looking at revenue generated); customer acquisition (looking at the increase in the number of customers gained through eCommerce); and customer loyalty and retention (number of visitors who convert into customers and frequency of customer return visits to the website) are those that impact profitability of the organisation. Huizingh (2002) used numbers of visitors and satisfaction (managerial and user) as indicators of website success and argues that web sales are not a suitable measure as they are not solely as a result of a website, but are the result of combined efforts with other channels. Customers might be informed online and complete the purchase offline (Huizingh 2002).

A traditional method of measuring website usage is by conducting a market research (customer interview) and asking users of their experience with the website to identify ways for improvement. Such an approach is often too costly, requires a long time interval and is time consuming (Weischedel and Huizingh 2006). Alternatively, data can be automatically collected about people visiting the site which allow managers to aggregate data over many visitors, allowing them to evaluate how effective their website is (Schonberg et al. 2000). Online technology is able to collect large amounts of detailed data on visitor traffic and activities on websites. Such data offer a plethora of metrics to which companies must carefully choose measures for diferent purposes (Phippen et

al. 2004). Otherwise, the sheer amount of data available can be overwhelming, as can the multitude of ways to compare it.

However, for the purpose of this research, use is captured by the different metrics available to managers who utilise clickstream data which reflects how customers are using the website. From the organisational perspective, such metrics may suggest where improvements can be made with regard to design, layout, and navigation issues (Schonberg et al. 2000). Despite the limitations of clickstream data (see Weischedel and Huizingh 2006), detailed and concrete data on customers' behaviour can be collected to indicate trends rather than provide definitive data/statistics on website usage. Indeed, a reasonable measure could be determined by assessing whether the full functionality of a website is being used for its intended purposes (Welling and White 2006).

The traffic on a website can be measured by a number of metrics. Among these is traffic volume flowing to the site. Traffic remains a valid measure for success as without traffic no revenues could be generated; however, even with heavy traffic there could be no sales lead. Achieving high traffic volumes is still a prerequisite for higher level goals in most websites, regardless of their purpose (Alpar 2001). Other types of measures include page hits, page views, unique visitors, and viewing time (Alpar 2001). Quaddus and Achjari (2005) used page view, stickiness, conversion rate and the extent of the contribution of eCommerce to meet the organisational goals for their definition of website success (Quaddus and Achjari 2005). However, metrics available to managers can be misleading and their interpretation needs to be accurate in order to be effective. Serving as an indicative measure, they can help to identify weaknesses that need to be considered. Upon discovering the problematic situation (e.g. the number of visitors is below expectation), this will prompt the company for further investigation into the root of the problem and ultimately lead to a remedy for the situation (for example search engine optimisation).

CONSEQUENCES OF THE SYSTEM

Fig.1 depicts use and consequences of the system to represent the effectiveness of IS success. While use represents the success at the site level, consequences represent success at both individual and organisation level (DeLone and McLean 2003). DeLone and McLean (2003) replaced both individual and organisational impacts in their original model with the net benefit construct for the sake of parsimony. It is the net benefit construct that sets the level of analysis and captures the impact of eCommerce to the stakeholder. Net benefit is determined by context and objectives for eCommerce investment (DeLone and McLean 2004). However, for the purpose of this study, we are looking at the profit-based SME as the stakeholder of the ECS and the benefit accrued to the SME which has invested in the system, from the persepective of owners /managers who ultimately determine the success of their venture. In an SME context, however, owners/managers are individuals in their organisation, but also they represent their organisation. The oraganisational-level impact in this research focuses on the benefits that ECS brings to the organisation.

Because using the web to do business is still relatively new to many organisations, and thus forecasting sales and profits is typically imprecise (Epstein 2004), managers are likely to rely on subjective measures for their expenditure. Many different studies have shown that subjective measures of performance (managers' perceptions of performance) are closely correlated with various objective measures of return on assets and sales growth (Dess and Robinson 1984; Venkatraman and Ramanujam 1987). However, and as noted by Epstein (2004), it is only by making a "business case" for eCommerce expenditure that managers can truly integrate eCommerce impacts into their business. A clear business case can be presented by identifying metrics (with indicators) of eCommerce performance and their impact on profitability. These indicators empower managers with the information to evaluate whether the eCommerce program is achieving its stated objectives and is contributing ultimately to profitability.

Organisational benefits will satisfy or dissatisfy managers according to their eCommerce objectives. Huinzingh (2007) defines eCommerce success in terms of managerial satisfaction - a proxy measure of the financial payoff, along with other organisational benefits, to justify eCommerce expenditure. This research prefers to separate managerial satisfaction from organisational benefits on the grounds that managers determine their IT expenditure according to their satisfaction. Also, organisational benefits and managerial satisfaction are not substitutes for one another.

When the website drives traffic, communicates certain features that enhance customers' experience, generates trust and strengthens the competitive position of the company, then managers are inclined to be satisfied as they feel that web presence is paying off. The extent to which this has been realised is either in monetary terms (sales increased or cost reduction) or in the form of intangible benefits (Huizingh 2002). Finally, if the eCommerce initiatives are well designed and well executed, the identified website quality features and the traffic flowing to the site will benefit the organisation and satisfy their managers.

In summary, the organisation's eCommerce expenditure is justified by the financial payoff resulting from customers' interaction with the website. These interactions impact on the organization. Benefits accrued to the

organisation determine the satisfaction of their mangers that in turn will enhance the functions presented in the website (See Fig.3).
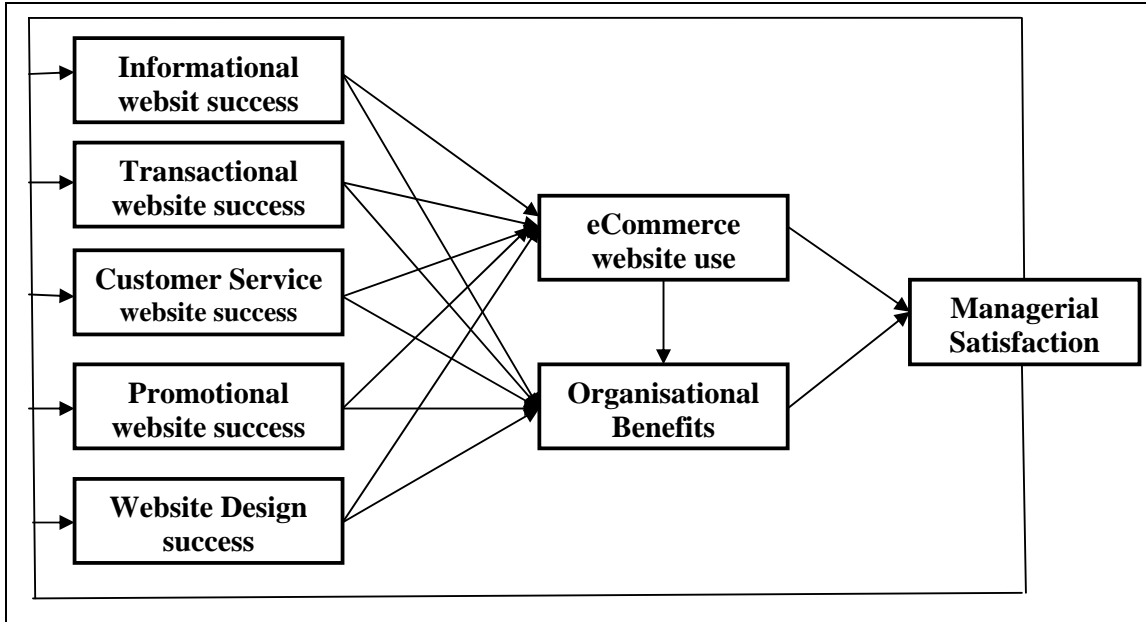

Figure 3: eCommerce website success measure constructs

DISCUSSION AND RESEARCH IMPLICATIONS

The objective of the current research is to contribute to the theoretical and practical understanding of how to develop an instrument to measure eCommerce website success from the perspective of the organisation. The approach has been to draw on theories of IS success and communications, and to develop and test a theory for management of websites for eCommerce. The research model used here was partially based on the work of DeLone and McLean (1992, 2003), who built their model on the work of Shannon and Weaver (1949) and Mason (1978). Thus, the various factors in the conceptual model fall into the different categories of technical, semantic and effectiveness. Since the DeLone and McLean (1992, 2003) model is based on the customer experience of the website (customer perspective), some changes were necessary in order to make the conceptual model more relevant to the organisation owner/manager perspective. The conceptual model shown in Figure 3 elucidates various website capabilities along with the design features that are related to website usage and benefits perceived by the organisation. Both usage and benefits determine the owner /manager satisfaction with the website.

This study should assist business managers to assess their eCommerce initiative as well as to identify measures for the performance of their website. Such measures help managers not only to allocate resources as they develop their eCommerce strategy, but also to evaluate impacts on profitability. Thus, in order to maximise the likelihood of success of such systems the managers may consider focusing on those success dimensions identified in this study.

CONCLUSION

The significance of the research presented here is the conceptualisation of website effectiveness. However, eCommerce website performance seems to be a concept that cannot be captured in a single measure, but should be treated as a multidimensional phenomenon. The increased attention to identification and measurement of the metrics of website performance is echoed in popular measurement frameworks such as the DeLone and McLean model. However, the provision of such measures as outlined in this paper will increase accountability for firms' eCommerce operations.

Further empirical research will be required for the purpose of validation. Such a study will strengthen or refute claims of other related studies and will offer theoretical and practical contributions to the field of eCommerce.

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