

# A Model to Demonstrate the Common CSFs in E-Commerce Business Satisfaction for Measuring E-Commerce Success

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## INTRODUCTION

Since 2005, the number of small to medium enterprises (SMEs) involved in electronic commerce (e-commerce) has grown significantly. While there were some early success stories resulting from the use of Internet (e.g. Ebay, Dell, Cisco, and Amazon), there were also numerous stories of businesses that failed in their quest for success, such as Webvan, eToys, Boo, etc. (Apigian, Ragu-Nathan, Ragu-Nathan & Kunnathur 2005, p.123). Even for businesses that did not fail, there is still the question of whether there are any benefits from the use of IT/e-commerce since it may be hard to determine whether the benefits of doing business via the Internet outweigh its costs (Apigian, Ragu-Nathan, Ragu-Nathan & Kunnathur 2005, p.123). In the meantime, some businesses are satisfied with e-commerce systems and some are not. More and more researchers have focused therefore trying to gain better understanding of e-commerce success. Thus, the demand is becoming more urgent to find effective methods to measure e-commerce success.

In recent years, researchers have enunciated the need for measuring e-commerce success. Eid, Trueman and Ahmed (2002, p.121) believe that there is a need to evaluate the degree of criticality and importance of the success factors. Identifying the key determinants for successful e-commerce adoption decisions by SMEs is a crucial prerequisite for launching effective strategies for developing and expanding e-commerce for SMEs (Jeon, Han & Lee 2004). Although the availability of critical success factors (CSFs) does not guarantee e-commerce success, the better understanding of CSFs might increase the chance of e-commerce success. Al-Qirim (2007, p.54) further highlighted the importance of certain factors to the adoption decision of e-commerce in SMEs. CSFs become thus the key to measuring e-commerce success.

According to most current research, however, it is considered that businesses successful in adopting e-commerce are strongly dependent on the local business culture. Little research on e-commerce success has crossed country boundaries (Wu, Jewell & Gide 2012, pp.170-171). The research aims to determine if common CSFs exist for the adoption of e-commerce systems with EBS across different countries. If the common CSFs exist, they might be further used as a global benchmark business performance indicator to develop a better and more effective measure for SMEs successfully adopting e-commerce system.

## BACKGROUND

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Gide and Soliman (1998,1999) developed a model for the implementation of e-commerce in manufacturing industry and then studied on the use of e-commerce as a strategic tool in intelligent manufacturing and business operations. This study was one of the first early studies in the field. At the beginning of 2000, Benbasat, Ives and Piccoli conducted a survey of the ISWorld Community on the “Electronic Commerce Top Research Questions” which indicated that e-commerce success was one of the most important e-commerce research issues (Molla & Licker 2001, p.131). Thus, a growing number of studies discussed e-commerce success (Molla & Licker 2001, p.134). By integrating strategy content and process perspectives, researchers begin to more fully explain why, when and how certain firms are successful with e-commerce systems, while others remain hesitant, unwilling or unable to change (Coltman, Devinney & Midgley 2007, p.98).

### Importance of Measuring E-Commerce Success

In past years, researchers have enunciated the need for measuring e-commerce success as:

1. *Avoiding failure again.* Even though many cases of successful e-commerce implementation have been widely reported, a number of noteworthy failures have also occurred worldwide. On the one hand, even “best practice” companies will display weaknesses in some areas of systems management, while organisations with poor delivery records for new systems will exhibit strengths (IBM Global Services 2001, p.2). It is no wonder that business executives regard new systems development as a “black art” (IBM Global Services 2001, p.2). On the other hand, many analysts consider the failure of e-commerce as a major cause of the dot-com crash (Umesh, Huynh & Jessup 2005, p.86). Table 1 shows that some failed cases have been reported in evaluation of e-commerce and information systems (IS) in recent years.
2. *Learning from experience.* The development of new systems is a complex matter (IBM Global Services 2001, p.2). These companies who have not yet adopted e-commerce should learn from the experience of those companies already doing so (Daniel & Myers 2000).
3. *Indicating actual business benefits.* Ai-Qirim (2004) highlights that devising robust techniques and tools to detect true e-commerce use and success is essential to the e-commerce area in SMEs. Early research in Australia (Singh 2000 cited in Singh & Byrne 2005, p.71) highlights the need for e-commerce metrics to evaluate benefits. Numerous SMEs fail to exploit the opportunities of e-commerce because of their lack of awareness of the potential and direct real benefits (Bologna 2000, p.11, Bunker & Yin 2005, p.60). Organisations need to identify performance measures that will allow them to assess the effectiveness of the introduction of IT/e-commerce (Apigian, Ragu-Nathan, Ragu-Nathan & Kunnathur 2005, p.123). One could expect them to be the high adopters of e-commerce if a business case was made (Egan, Clancy & O’Toole 2003, p.151). Gilmore, Gallagher and Henry (2007, p.244) highlighted that SMEs need to weigh up the value of utilising the technology to gain return on their investment. If companies do not believe that e-commerce can provide them with relative advantage after they have already adopted it, it is likely that the implementation would be discontinued (Chong & Pervan 2007, p.15). When a firm can observe the benefits that e-commerce has brought to the business, it is very likely that the firm will increase the depth and breadth of e-commerce implementation (Chong & Pervan 2007, p.16). Metrics can help a company capture a more complete picture of whether the e-commerce initiative is meeting its objectives effectively (Epstein 2005, p.28).

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