A Practical Approach for Improving B2C e-Commerce Services with a Trust Capability Maturity Model

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ABSTRACT

Trust is mentioned as a key success factor for e-Commerce services. While many researchers have conducted comprehensive studies to investigate the antecedents and consequences of consumer trust, there has been little work on trust development framework. This paper therefore introduces the Trust Capability Maturity Model (TCMM) that proposes to identify trust and progressive improvement in Business-to-Customer (B2C) e-Commerce websites. Trust metrics in TCMM are mainly inherited from the quality aspects in the Delone and Mclean IS success model. TCMM is composed of three main components as follows: 1) internal structure, 2) maturity levels, and 3) assessment tool. After performing some minor modifications for TCMM, the practical evaluation of modified TCMM is demonstrated by two regional online bookstores. Based on both case studies, the evaluation results can be applied to determine the level of trust in other vendors. Following the TCMM roadmap, online vendors will be able to develop a trust-building strategy for creating value and maintaining trust in their websites.

Keywords: Business to Customers (B2C), Electronic Commerce, Electronic Services, Trust, Trust Capability Maturity Model (TCMM), Trust Management

INTRODUCTION

Today, service activities are considered to be the most important drivers of economic growth. The service functions are complicated and associated with business activities in everyday life. Focusing on customer success, service providers require interdisciplinary knowledge to walk through. A traditional economy relies on delivering products with high quality standards. Unlike traditional cycle, business services are shifting from product centered approaches to customer-oriented approaches (Rust, Kannan, & Ramachandran, 2005). Customer satisfaction is a key to drive revenue in customer-oriented business. The phenomenon of demand-side...
effect is increasingly becoming a vital factor in the world of business services, and this is not an exception for B2C e-Commerce. It is generally accepted that effective e-Commerce application alone cannot bring consumer trust, and gain competitive advantage over the rivals in B2C market (Gefen, Karahanna, & Straub, 2003; Reichheld & Schefter, 2000; Ren & Hassan, 2009).

Preferable services in B2C e-Commerce have moved beyond the scope of system and industry standards, doing this business is more associated with customer experience and perception management. The proper way to respond to this clue is to reach the balance between operational efficiency and customer satisfaction. If customers perceive a website as the best destination for delivering high quality of products and services, they will trust the website and not hesitate to come back.

Trust is mentioned as a prerequisite for B2C e-Commerce interaction, and also acts as a vital key to succeed in this business (Reichheld & Schefter, 2000). Customers may perceive risk even when they use a system that has already been secured (Salam, Iyer, Palvia, & Singh, 2005). Therefore, trust issues should be embedded along with the process improvement for B2C e-Commerce services. If website managers can understand trust formation process, they can develop the trusted process in their websites. In our previous work, we proposed Trust Capability Maturity Model (TCMM) with the minimum number of trust attributes for assessing both trust and quality in B2C e-Commerce websites. TCMM was developed by using the following concepts: 1) CMM/CMMI principle, 2) trust formation process, 3) Delone and Mclean IS success model, 4) ISO/IEC 9126 standard, and 5) SERVQUAL (Jairak & Praneetpolgrang, 2011). In this study, we begin with some modifications that we need to clarify for TCMM, and designate the revised version as “modified TCMM”. Next, we perform a practical evaluation of modified TCMM with two regional online bookstores.

The purpose of this paper is to demonstrate the utility of modified TCMM for improving trust in B2C e-Commerce services. The remainder of this paper is structured as follows. The second section describes the relevant concepts for TCMM development and the details of internal modification for TCMM. The third section presents the research methodology. In fourth section the case study for modified TCMM assessment is demonstrated, and in the fifth section its findings are discussed. Finally, the conclusions are drawn and recommendations are summarized in the sixth section.

LITERATURE REVIEW

There are many research studies that have been conducted for investigating the antecedents and consequences of consumer trust, but there has been little work done on trust development framework. Therefore, in our prior work (Jairak & Praneetpolgrang, 2011), we have proposed the TCMM model that can be used as the framework for assessing trust and quality improvement in B2C e-Commerce websites. Trust metrics in TCMM are mainly inherited from the quality aspects in the Delone and Mclean IS success model. In this section, we first describe the relevant concepts for TCMM development. We then describe the structure of TCMM and the modification details for the modified TCMM. Furthermore, we also compare modified TCMM with international standard for IT services such as ISO/IEC 20000 and best practice framework for providing services such as CMMI-SVC that can leverage the TCMM concept to be more rigorous and systematic.

Trust Formation Process in B2C e-Commerce

It is widely agreed that lack of trust in online vendors is the important barrier to obstruct internet users to exchange personal information or money online (Hoffman, Novak, & Peralta, 1999; Othman, Hussin, & Rakhmadi, 2008). Trust is a prerequisite in B2C e-Commerce interaction, and also acts as a key to gain competitive advantage over other vendors (Jairak, Praneetpolgrang, & Mekhabunchakij,
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