Proposing a Quantitative Model Towards Building Trust in B2C E-Commerce

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ABSTRACT

This article aims to develop a novel model for ranking the parameters that influence the building of trust on online shopping in the context of Iran. A multi-criteria decision making (MCDM) model based on a fuzzy analytic network process (ANP) method is developed to systematically clarify the interdependent relationships among the evaluation criteria of trust and then, scientifically evaluate the feasible parameters and rank the priorities of the trust. The results of the proposed model reveal that under the characteristics of trustor (TR) sub-factors, the most important indicator which can affect the trust is propensity to trust. Furthermore, regarding the characteristics of trustee (TE) sub-factors, data quality with a priority of 0.064 is the most important indicator. Also, in the environmental factors (EN) sub-factors, promotions and advertising with a weight of 0.151 is the most significant indicator.

KEYWORDS

B2C, E-Commerce, Fuzzy Analytic Network Process (ANP), Multi-Criteria Decision Making (MCDM), Online Shopping, Small to Medium Sized Enterprises (SMEs)

INTRODUCTION

Electronic commerce can be considered as the interaction between one company and other companies or customers (Shamsafar & Sharbafazari, 2008). E-commerce is the process of buying, selling, or exchanging products, services, and information via computer networks, including the Internet (Ma & Wei, 2012; Tulani et al., 2010). It facilitates many benefits across a wide range from small businesses to big firms’ processes and business transactions. During the period 2012 to 2019, e-commerce sales are projected to grow at an annual rate of 14.9%, over five times faster than traditional “bricks and mortar” retail sales so that, by 2019, e-commerce will account for almost one fifth of applicable retail sales (www.supplychain247).

On the other hand, the reason behind the emphasis of this study on Small-to-Medium-Sized Enterprises as Afshar Jahashahi et al. (2011) note is that they are important to economic development in developing countries such as Iran. The second reason is that they are in a very good position to adapt to new technology like e-commerce; they may be able to adapt faster than larger companies that can be slowed by bureaucracy and stricter staffing hierarchies. According to the forecasts, the

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implementation of e-commerce in Iran will approximately cost 210 billion dollars during third development plan period. It is economically justifiable because since this is a kind of investment. In addition, this rapid growth of e-commerce in developed countries necessitates policy makers of developing countries, including Iranian policy makers reconsider business policies and strategies (Valmohammadi, Dashti, 2016).

E-commerce as a part of E-business has a noteworthy proportion of on-line transactions in today’s on-line world. There are thousands of the motivational factors for these companies to participate in cyberspace. Although e-commerce has become more and more popular, shopping in on-line stores or on-line auctions is still riskier than shopping in a brick and mortar shop (Utz et al. 2012). Customers of these firms have their own concerns for using online services which they can be called hindering factors. Most of these factors pointed to the lack of trust and information security. As quoted in literature, customers’ attitudes and intentions appear to be the key predictors that influence their acceptance of e-commerce. To date, there have been very few researches that investigate the trust as one of the hindering factors for consumers to use this kind of business’s e-commerce websites, especially in a developing country like Iran. The aim of present study is to examine factors that are affecting the formation of trust. In this article we intend to scrutiny trust-related issues facing small medium enterprises in Iran from the customers’ perspective. Consequently, it is necessary to develop the robust methodologies that are capable of handling the uncertainty involved in the process of modeling as well as accurately assessing the level of trust connected with businesses.

**THE RELEVANT LITERATURE REVIEW**

The topic of trust is an important issue in the context of various businesses. Because, indeed without trust no business could achieve its determined goals. On the other hand Asf et al. (2015) in their study found that consumer attitudes toward online shopping is determined by trust and perceived benefits. Trust is a product of perceived web quality and e-WOM and that the latter is a function of perceived web quality. Hence, trust and perceived benefits are key predictors of consumer attitudes toward online shopping. Papadopoulou et al. (2001) by literature argue that the foundation of a successful and lasting relationship with the customer is trust, as it largely determines the customer’s future behavior and loyalty towards the business.

Choi and Nazareth (2014) in their study examined the critical role of trust in e-commerce in the context of establishing initial trust between trading partners. They mention that ongoing trust between partners can quickly be vanished through security or other trust violations. So they investigate to determine whether customers are willing to transact with an e-commerce vendor in light of security and trust violations. Based on the aforementioned discussion the purpose of this study is to utilize a quantitative approach to identify which factor play a pivotal role in the formation of trust among the Iranian customers toward leveraging e-commerce web site with a focus on SMEs.

The merit of using multi-criteria decision making (MCDM) methods is their ability to solve complex and sophisticated problems. The MCDM methods provide powerful tools for determining the best alternative among the feasible alternatives according to the evaluation criteria. These methods are recommended as being helpful in reaching important decisions that cannot be determined in a straightforward manner (Wu et al, 2010).

Due to the complexity of working systems makes it difficult to manage such a system by the help of a single set of guidelines. Applying a suitable decision process can help decision makers in reducing the decision failures. The analytic network process (ANP), which is an extension of the analytic hierarchy process (AHP), is a powerful methodology that deals with dependence and feedback (Saaty, 1996). Despite many conventional MCDM methods are based on the independence assumption, the ANP technique takes into account the dependence assumption among individual criteria that is more adapted with real-world application.
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