


# Creating and Validating an Information Quality Scale for E-Commerce Platforms

Chung-Tzer Liu, Soochow University, Taiwan

Yi Maggie Guo, University of Michigan, Dearborn, USA\*

 <https://orcid.org/0000-0003-3128-159X>

Jo-Li Hsu, Soochow University, Taiwan

## ABSTRACT

The rise of e-commerce technology has transformed the traditional retail industry. This study proposes and validates an information quality scale suitable for e-commerce platforms. The scale consists of four dimensions—content validity, information scope, presentation quality, and hedonic quality—and 16 questions. Data analysis results support the second-order structure of information quality. The quality of information on e-commerce platforms has a significant positive impact on consumer behavioral intentions. Thus, operators of e-commerce platforms can improve the competitiveness and sustainability of these platforms by improving the quality of information.

## KEYWORDS

E-Commerce, Information Quality, Scale Development

## INTRODUCTION

Nowadays, coping with too much information still presents a big challenge for information consumers (Eppler & Mengis, 2004; Flanagin et al., 2014; O'Reilly, 1980; Peter, 2019). When shopping online, a search may return tens, hundreds, if not thousands of products. When faced with a large amount of information, what kind of content enables us to fully understand the issue and quickly make a decision? From the information providers' perspective, presenting quality information in a way that is easy to understand is one of the keys for continued success.

From an information system point of view, an e-commerce platform is a medium for transferring information between enterprises and consumers. It is part of the pervasive digital information world. According to the information asymmetry theory proposed by Akerlof (1970), during the transaction process, if the information held by both parties is not equal, it may induce the party with more information to deceive the party with less information. This can easily result in an unstable market of information, including online environments. E-commerce platforms provide consumers with both

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\*Corresponding Author

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physical and virtual services online. A main value of e-commerce lies in information transmission. Information on the platform is not only about the content, but also about data volume, form of presentation, and more. From the consumer perspective, in addition to competitive prices, high information quality leads to consumers' willingness to trust the platform and vendors (Detlor et al., 2013; Nicolaou, 2013), satisfaction (Ghasemaghahi & Hassanein, 2015; Koivumaki et al., 2008), and eventually purchase intention and loyalty (Kang & Namkung, 2019; Pearson et al., 2012). From the perspective of e-commerce platforms, high information quality helps increase consumer traffic and enhance the platform's brand image (Detlor et al., 2013; Kullada & Kurniadjie, 2020).

Many scholars have explored characteristics of information quality in different fields (Baškarada & Koronios, 2014; Eysenbach et al., 2002; Fehrenbacher, 2016; Klein, Guo, & Zhou, 2011; Klein, Valera, & Guo, 2011; Miller, 1996; Yaari et al., 2011). Many scholars also use characteristics of information quality to explore the effects on an array of organizational impacts and outcomes (Gorla et al., 2010), such as trust (Yi et al., 2013), user satisfaction (Urbach et al., 2010; Zheng et al., 2013), perceived usefulness and benefits (Lin, 2010; Zheng et al., 2013), and intention to use (Muslichah, 2018; Stefanovic et al., 2016). It has been shown that high information quality has a positive impact on customer satisfaction and attitude (Chen et al., 2013; Xu et al., 2013).

Every industry relies on digitized information for management and development, and this shift demonstrates the importance of information quality. In a world of ubiquitous digital intermediation, issues of information quality need to be addressed. One aspect is to expand traditional information quality and better present complex human experiences (Lukyanenko, 2016). This study focuses on the information quality of e-commerce platforms, attempting to develop a suitable scale for it. The purpose of this study is twofold:

1. Construct an information quality scale appropriate for e-commerce platforms.
2. Verify the correlation between the information quality scale and consumer behavioral intentions.

From the research motivation, a research framework was created based on an extensive analysis of the relevant literature on e-commerce platforms and information quality. Then, an information quality scale for e-commerce platforms was developed and tested on sample data. Recommendations based on the results are presented.

## **LITERATURE REVIEW**

The main purpose of this research is to develop an information quality scale for e-commerce platforms. It is necessary to understand e-commerce platform definitions, types, and properties before delving into further discussion. We will first review e-commerce and the relevant research on information quality issues.

### **E-Commerce**

Since its early days, e-commerce has attracted great attention in the retail market. Significant progress has been made in the strategic use of e-commerce and the development of e-commerce applications (Bidgoli, 2001; Varshney & Vetter, 2002; Kalakota & Robinson, 2001). According to the fourth revision of the United Nations International Standard Industrial Classification, e-commerce is defined as "any business transaction that transfers the ownership of the goods or service through the Internet or by other electronic means" (United Nations, 2008, p. 28). There are various types of e-commerce: B2B (business to business), B2C (business to customer), C2C (customer to customer), C2B (customer to business), and O2O (online to offline, or offline to online). For the newer O2O model, an example is Amazon and Whole Foods, in which online and offline businesses form a partnership and consumers can visit physical stores to pick up product, or a local store will deliver to customers. Another example

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