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Qian Xiao
Eastern Kentucky University

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Qian Xiao
Department of Management, Marketing and International Business
Eastern Kentucky University
521 Lancaster Avenue, Richmond, KY 40475
Tel: +1.859.622.7349
Email: qian.xiao@eku.edu

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Introduction

A significant amount of online transactions have occurred through the widespread usage of e-commerce portals as intermediaries. These e-commerce portals such as www.ebay.com and www.amazon.com, manage the online exchange network, and facilitate the peer-to-peer business transactions. Researchers have developed different measures of e-commerce platform quality and explored its relationships to the user experience and firm performance. Built on the literature of online transaction quality, this study develops a conceptual framework that illustrates how the e-commerce platform quality and the transaction handling process will shape users' perceived transaction value and the resulting experience evaluation.

Literature Overview

This study focuses on the e-commerce portals that mainly function as third-party intermediaries to facilitate the online business transactions. Previous research on the e-commerce portals mainly touches on the design of the websites itself in terms of easy access, ease of using technology, payment security, etc.; yet when the e-commerce portals serve as an intermediary platform, both the technical aspects of online platforms and the transaction handling process (for example, whether items are delivered as promised such as in time and in proper conditions; or whether the online transaction issues would be addressed in a timely manner, etc.) will influence the users' perceived transaction value and the transaction results. Consequently, we propose that effectively managing e-commerce transaction should involve an investigation of both functionality of the web site itself, and the transaction handling process expected from the small business owners and other individual sellers independent of the web site.

First, we drew upon the prior studies of e-commerce as business transaction intermediaries and integrated multiple scales of e-service quality (e.g., Bauer, Falk, and Hammerschmidt, 2006; Collier and Bienstock, 2006; Liu, Guo, and Hsieh, 2010). We developed a comprehensive measure of technical functionality of the e-commerce portal which consists of five attribute dimensions: system availability (e.g., a reliable and accurate ordering system), efficiency (i.e., the ease and speed of accessing and using the website), privacy (i.e., the degree to which the website has adequate security features to protect user information and facilitate safe transactions), website service (i.e., responsive services such as live support 24/7, resolving user complaints, etc.), and fairness (e.g., addressing service failure, and assisting users in attaining a fair solution if users report potential transaction issues, etc.). These five dimensions taken together impact the e-commerce portals' performance in both routine and nonroutine transaction environments.

Meanwhile, this study tries to fill the research gap of managing the e-commerce transaction quality in the third-party website context by calling for the attention to the transaction handling process expected of business owners operating on the e-commerce portals. Specifically, additional components of e-commerce transaction quality are proposed that involve evaluations of transaction handling process such as transaction fulfillment (i.e., the degree to which the business owners provide accurate display and description of a product and deliver the right product within the promised time frame and obey the shipping agreement), and post-transaction

service (i.e., the degree to which business owners are willing to professionally answer and address requests or complaints in a timely manner).

Finally, we propose that e-commerce transaction quality, reflected in the functionality of the e-commerce portals, and the proper management of transaction handling, will influence users' cognitive assessment (Rosen and Purinton, 2004) of online transaction value, which will in turn impact users' evaluations of online transaction experience. For example, if users are comfortable with the functionality of the website, and satisfied with the transaction process, they are more likely to generate a higher level of value assessment of online transaction, and conclude with the positive feeling of the transaction experience.

Consequently, a structural model of managing e-commerce transaction quality is proposed.

Methodology

Data were collected using an online survey administration tool (www.qualtrics.com). A series of pretests to validate construct measures. A final sample of 196 respondents was retained for the empirical data analysis.

All constructs were measured using 7-point Likert-type multi-item scales. Each scale's reliability, measured by Cronbach's alpha, exceeded the threshold of 0.70 recommend by Hair et al. (2010). Confirmatory factory analysis (CFA) was used to assess construct validity. LISREL 8.80 was applied for data analysis.

Results and Implications

The correlation analysis suggested that all seven quality components were significantly associated with perceived online transaction value, with seven quality components explaining 74% of the variance in perceived online transaction value ($R^2 = 74\%$). The structural equation model analysis found system availability and transaction fulfillment were significant drivers of the perceived online transaction value and displayed most explanatory power when the impacts of seven quality components of e-commerce platforms were simultaneously assessed in a holistic structural model. The results also suggested that perceived online transaction value displayed a positive impact on users' experience evaluation ($\beta = .82$, $p < .01$).

This study presents meaningful theoretical implications. First, this study integrates multiple measures of e-commerce transaction quality from different literature contexts, and empirically tests them within a holistic model simultaneously to further the generalization of a comprehensive measurement of e-commerce transaction quality. Second, this study tries to fill the research gap of managing the e-commerce transaction quality in the third-party website context by calling for the attention to the transaction handling process expected of business owners operating on the e-commerce portals, and propose that effectively managing e-commerce transaction should involve an emphasis on both functionality of the web site, and the quality transaction handling process. Third, the empirical analysis identified system availability and transaction fulfillment as significant drivers of users' perceived online transaction value and the related experience evaluation, among other influential factors; this has significant practical

implications for e-commerce platform managers in terms of monitoring and controlling efforts in order to best serve the e-commerce portal users.

Conclusion

Reach points to a massive online market; there's $300 billion online and it's growing to half a trillion soon. There's a huge market out there. Thus it is of great importance and significance to continue with this research topic in the future. This study represents some of the early works in this direction.

References

Bauer, H.H., Falk, T. and Hammerschmidt, M. (2006), "eTransQual: a transaction process-based approach for capturing service quality in online shopping", *Journal of Business Research*, Vol. 59 No. 7, pp. 866-875.

Collier, Joel E. and Bienstock, Carol C. (2006), "Measuring Service Quality in E-Retailing," *Journal of Service Research*, Vol.8(3): 260-275.

Hair, Joseph F. Jr., Black, William C., Babin, Barry J. and Anderson, Rolph E. (2010). Multivariate data analysis 7th ed. Upper Saddle River, NJ: Prentice Hall.

Liu, C.T., Guo, Y.M. and Hsieh, T.Y. (2010), "Measuring user perceived service quality of online auction sites", *The Service Industries Journal*, Vol. 30 No. 7, pp. 1177-1197.

Rosen, D.E. and Purinton, E. (2004), "Website design: viewing the web as a cognitive landscape", *Journal of Business Research*, Vol. 57 No. 7, pp. 787-79