

# **mINFORMATION QUALITY ON mSATISFACTION, mTRUST, AND mLOYALTY GO-JEK APPLICATION MOBILE AS INNOVATION TECHNOLOGY**

**Tundung Subali Patma, Malang State of Polythecnic  
Ludfi Djajanto, Malang State of Polythecnic  
Yusri Abdillah, Brawijaya University  
Shujahat Ali, Mirpur University of Science and Technology**

## **ABSTRACT**

*This study aims to identify the dimensions of Information Quality and investigate the relationship between Information Quality and mSatisfaction, mTrust, and its impact on mLoyalty on all things felt by students using the GO-JEK application the city of Malang. Data were collected from 205 respondents and analyzed using Partial Least Square (PLS). This study provides input and material for consideration in developing service quality and information to increase GO-JEK user satisfaction and Loyalty. The results of this study indicate directly that Information Quality has a significant effect on mSatisfaction, mInformation Quality has a significant effect on mTrust, mInformation Quality has a significant effect on mloyalty. mSatisfaction has a significant effect on mtrust, mSatisfacion has a significant effect on Loyalty and mTrust has a significant effect on Loyalty. The information factor is an essential factor related to existing products or services in application services. The information is valuable and relevant in predicting the quality and usefulness of the product or service.*

**Keywords:** mInformation Quality, mSatisfaction, mTrust, mLoyalty, GO-JEK Application, Indonesia.

## **INTRODUCTION**

Sustainable competitive advantage to adapt to the changes digital world today, businesses must also follow the differences in the marketing system and update them according to this transformation. In order to survive and overcome competition, companies must improve digital marketing performance (Akkaya & Tabak, 2017). From different theoretical approaches to adopting innovation, Davis's (1989) technology acceptance model (TAM) is widely accepted (Venkatesh, 2000) and has been compared to other models such as TRA and TPB. Moreover, in a technology-mediated environment, consumer characteristics can play a significant role as a moderator of the relationship to predict consumer tastes (Yang & Jolly, 2008).

The availability of an increasingly fast internet connection and increasingly advanced cellphones has indirectly influenced consumer behavior in Indonesia. Internet users in Indonesia amounted to 143.26 million or 54.68% of the total population in 2017. This data has increased rapidly compared to 2016, namely 132.7 million and 32.19% of whom use the internet to use transportation modes. In connection with the development of a transportation system integrated with technology, it is necessary to study long-term business strategies. In recent decades, large

organizations have paid more attention to topics such as creativity and innovation at the organizational level due to changes and evolution in the field of increasing competition and unreliable environmental conditions (Tajpour et al., 2018a)

The development of a mobile application-based transportation service system has raised many demands that must be seen both from the service provider to satisfy customers who use their services. Satisfaction is very closely related to consumer loyalty. Santouridis & Travellas (2010) explain that in discussions related to mobile application-based transportation services, loyalty is a crucial factor for service provider companies. Because it plays a crucial role in revenue and growth of transportation services, satisfaction and loyalty will provide competitive and differentiation advantages. Competitive from competitors. Several factors can create satisfaction and loyalty, and one of these factors is customer service (Kursunluoglu, 2014).

Loyalty is related to the satisfaction generated by the quality of service, but the transportation service mode contains the information displayed in the mobile application system. Therefore, Information Quality records various application feature problems, which then the displayed content must be personalized, complete, relevant, easy to understand. Furthermore, safe for consumers to use for transactions and re-use application transportation services regularly (DeLone & McLean, 2004). Trust can increase loyalty and motivate purchases through application-based transportation services (Jimenez et al., 2016). With the increase in service quality, consumers' expectations will be fulfilled; this affects the level of consumer trust and loyalty in mobile application-based online transportation services. In addition, there is a fundamental aspect in determining customer trust, satisfaction, and loyalty, namely the quality of information.

The aspect of information quality has a positive influence on consumer satisfaction because there is some information displayed on the online transportation service application. It becomes a benchmark for visitors and potential consumers to assess the application's performance. Quality information is related to the use of application systems, user satisfaction, and perceived benefits. As with service quality, information quality can become two blades, namely attracting consumers to use the service or even leave the application service. So that the quality of information presented in the application features is one of the main factors in customer satisfaction. Especially online transportation services (Szymanski & Hise, 2000), millennials who have a high intensity in using technology can positively respond to the use of online transportation services. So that young people have a higher level of satisfaction as service users when compared to the older generation. Therefore, students are considered following this study, reflecting the first generation that grew up with the internet (Howard et al., 2001). Students reflect the adult population who can easily access the internet and routinely use the internet in daily activities (Azam et al., 2012).

There are two leading startups driving the application for online transportation services in Indonesia, namely GO-JEK and Grab. However, both business players have their respective competitive advantages to get the attention of visitors or consumers. GO-JEK with application service features that are more varied than Grab. GO-JEK offers many services such as transport and logistics, food delivery and shopping, payments, daily needs, news and entertainment, environmental products, and medical assistance with top rewards such as no busy hours fee, prioritized booking, prioritized support.

These various services need attention by providers to get loyal customers, such as providing good service quality, providing clear enough information to provide satisfaction, and

increasing consumer confidence, which impacts the loyalty of Go-Jek application users. With GO-JEK in Malang City, it has become affordable alternative transportation and helps the mobility of the community, especially students. Therefore this shift is an integral part of a more in-depth study based on business innovation through technology acceptance models (TAM) and consumer behavior theory, which states that online transportation mode services. Namely, GO-JEK must pay attention to consumer desires in following the development of mobile application-based services. The purpose of this study was to validate the effect of the relationship between Information Quality on mSatisfaction, mTrust, and its impact on mLoyalty on the whole things felt by students using the GO-JEK application in Indonesia.

## Theoretical Framework

### Technology acceptance model (TAM)

TAM was developed by Davis (1989) to explain the behavioral theory of the use of computer technology. TAM was adopted from the popular theory, namely Theory of Reason Action (TRA) from Fishbein's & Ajzen (1977). TRA theorizes human behavior in general, while TAM explicitly describes the determinants of technology acceptance between end-users and user populations (Rauniar et al., 2014). TAM is a model that predicts and describes the process of how technology users can receive and use technology related to user activities.

The basic framework for the technology acceptance model (TAM) involves two variables, namely the perceived usefulness and purpose of use (Chong et al., 2012). Both of these variables cover the user's internal perceptions (Zhang et al., 2013) and have been widely recognized as strong predictors of an individual's intention to accept new technology. Perceived usefulness refers to the extent to which the use of a particular system will improve user performance (Davis, 1989). Usability suggested includes the level of utility provided by application users in determining usage or purchases via mobile devices. Perceived ease of use is defined as the extent to which a person considers the use of service applications to be easy (Davis, 1989).

## LITERATUR REVIEW

### mInformation Quality

Information is data that has been processed to increase a person's knowledge in using that data (McFadden et al., 1999). Meanwhile, according to Davis (1989), information is data that has been processed and provides benefits to recipients in decision making. The quality of information can measure the output or reports of the online work system. The content must be completely personalized, relevant, easy to understand, and safe when visitors carry out transactions via the internet and regularly return to the application or site.

Measurement of information quality can be used to predict organizational outcomes (Madnick et al., 2009). The quality of data and information is recognized as playing a primary role in a data-rich, knowledge-based economy. Data quality and information quality are used interchangeably. However, there is a tendency to use data quality to refer to technical problems and information quality to refer to non-technical problems (Madnick et al., 2009). Data can be said as a product produced by the organization through the process of making data. Information

consists of facts and data that are arranged for specific purposes, and the quality of information is the main criterion for measuring the success of an information system. The quality of decisions is a function of the quality of information (Jung, 2004).

### **mSatisfacion**

Satisfaction in a virtual environment has become a crucial topic of analysis and is a crucial factor in competing with competitors and achieving success in the market (Anderson & Srinivasan, 2003; Cox & Dale, 2001; Zeglal et al., 2016). Satisfaction is closely related to consumer expectations. The narrower the distance between consumer expectations and the actual performance of the product or service, the higher customer satisfaction (Hutcheson & Moutinho, 1998). According to Fornell et al. (1996), customer satisfaction is three antecedents, namely perceived quality, perceived value, and customer expectations. Customers who are satisfied with the use of services will have the intention to buy or reuse and even tend to have the desire to recommend the product or service to others. Customer satisfaction with mobile internet services when linked between satisfaction and adoption of new technology, four factors can affect overall satisfaction, namely information quality, connection quality, ease of use, and service costs (Kim & Steinfield, 2004).

### **mTrust**

The definition of trust in an online environment includes a set of different beliefs in a person's integrity, virtue, and abilities (Gefen et al., 2003). According to McKinney et al. (2002), mTrust relies on security assurance, reputation, web searches to help with loyalty and satisfaction. Trust development is illustrated as a process of expectations of a person's behavior, which is then evaluated to confirm these expectations (Garbarino & Johnson, 1999). In the context of digital business, trust is crucial when viewed from the impersonal nature of the internet infrastructure (Pavlou, 2003). In particular, mTrust relies on security assurance, reputation, web search, compliance, web quality, technology, and two-way interaction between visitors and service providers (Zahedi, 2002). With the help of information technology, the virtual shopping environment effectively encourages transactions, thus building trust, which has an essential role in technology acceptance and the desire to make online purchases (Lee & Chung, 2009).

### **mLoyalty**

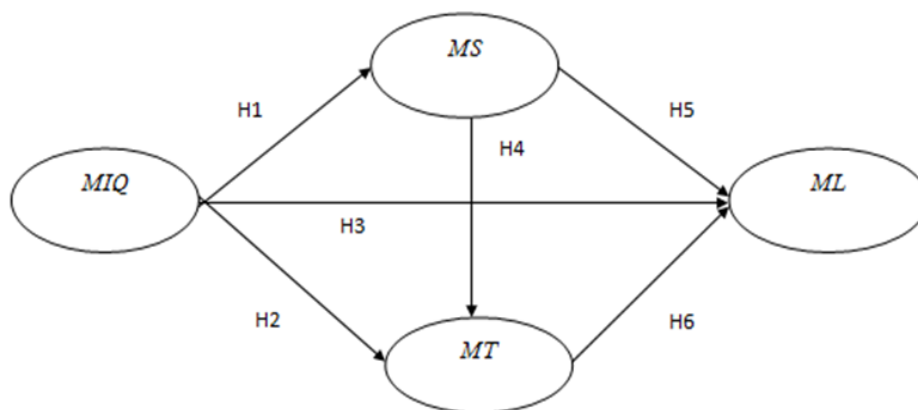
E-business customer loyalty is a mindset with a favorable attitude for service providers because they commit to repurchase and recommend products or services to others. In the context of online services, companies use e-mail media, websites, call centers. Online loyalty has a level parallel to the concept of loyalty to a company, in the sense that loyalty to a company results in purchasing behavior and repeated visits to application services (Anderson & Srinivasan, 2003; Gommans et al., 2001). Loyalty refers to a positive attitude that leads to repetitive behavior (Soltani & Gharbi, 1970) and is considered true loyalty.

## METHODOLOGY

This research is quantitative research with an explanatory research type. The population in this study was all users of GO-JEK application services in Indonesia, with two-stage sampling as a sampling technique. The large number of samples based on Bernoulli's approach obtained a proportion of 205 respondents. The questionnaire was developed based on a review of the gap theory and research related to Information Quality, mSatisfaction, mTrust, and mLoyalty by adopting the research model of Ribbink et al. (2004) combined with the research model of Tam & Oliveira (2017).

A Likert scale ranging from "*strongly disagree*" (1) to "*strongly agree*" (5) was used to measure all independent and dependent variables in this study—collected data. Research To analyze the research data obtained were used two kinds of methods, namely descriptive statistical analysis and inferential statistical analysis. The descriptive statistical analysis aims to describe the characteristics of respondents under study—each variable in the number of respondents and the percentage number. Meanwhile, inferential analysis determines the solid or weak influence between the independent variables and the dependent variable, which is the effect of causality. The analysis tool used is PLS (Partial Least Square), where the processing uses SmartPLS 3.0 software. PLS has two model specifications, namely the inner model and the outer model.

There are four variables in this study, namely Information Quality, mSatisfaction, mTrust, and mLoyalty. The type of data used is primary data related to respondents' statements on information quality, mSatisfaction, mTrust, and mLoyalty, sourced from respondents (students using the GO-JEK application) by distributing questionnaires. The conceptual research model in this study is based on each of these variables, as shown in Figure 1.



**FIGURE 1**  
**CONCEPTUAL MODEL HYPOTHESIS**

## RESULTS

This study examines the effect of Information Quality on mSatisfaction, mTrust, and mLoyalty among students using GO-JEK online transportation services. The characteristics of the respondents, the samples of this study were 205 students using the GO-JEK application in Malang. The results of the analysis characteristics respondents show that the majority of users

have an age between 17-21 years of 46% with a female gender as much as 64% and dominated level of undergraduate education of 63% and the intensity of using online services from GO-JEK 3-5 times a week 76%.

Hypothesis testing is done by comparing t-tables and t-statistics. T-table can be obtained from 205 respondents with a significance value  $<0.05$  and a t-table value  $> 1.960$ . The test results (Table 1) through bootstrapping are as follows:

<b>Path Coefficients</b>						
<b>Hypothesis</b>	<b>Variable</b>	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics ( O/STDEV )</b>	<b>P Values</b>
H1	MIQ -> MS	0.700	0.702	0.026	26.944	0.000
H2	MIQ -> MT	0.494	0.497	0.051	9.695	0.000
H3	MIQ -> ML	0.335	0.338	0.084	6.962	0.000
H4	MS -> MT	0.345	0.342	0.051	6.833	0.000
H5	MS -> ML	0.249	0.247	0.051	4.863	0.000
H6	MT -> ML	0.311	0.311	0.051	6.077	0.000

The H1 test results show that the path coefficient of Information Quality on mSatisfaction is 0.700 with a t-count value of 26.944 and a p-value of 0.000, so it can be said that Information Quality has a positive and significant effect on mSatisfaction. The H2 test results show that the path coefficient value of the mInformation Quality variable on mTrust is 0.494 with a t-count value of 9.695 and a p-value of 0.000, so it can be said that Information Quality has a positive and significant effect on mTrust. The results of the H3 test show that the path coefficient of the Information Quality variable on mLoyalty is 0.335 with a t-count value of 6.962 and a p-value of 0.000, so it can be said that Information Quality has a positive and significant effect on mLoyalty. The H4 test results show the mSatisfaction variable path coefficient value to mTrust of 0.345 with a t-count value of 6.833 and a p-value of 0.000, so it can be said that mSatisfaction has a positive and significant effect on mTrust. The results of the H5 test show that the mSatisfaction variable path coefficient to mLoyalty is 0.249 with a t-count value of 4.863 and a p-value of 0.000, so it can be said that mSatisfaction has a positive and significant effect on mLoyalty. The H6 test results show that the mTrust variable path coefficient to mLoyalty is 0.311 with a t-count value of 6.077 and a p-value of 0.000, so it can be said that mTrust has a positive and significant effect on mLoyalty.

Based on the results of the hypothesis testing above, the results show that 6 (six) hypotheses have a direct and significant effect. This study shows that information quality is a source for the formation of mSatisfaction, mTrust, mLoyalty among students using the GO-JEK application in Indonesia. GO-JEK in Indonesia is an alternative mode of transportation that is affordable, safe, and helps community activities, including students in Malang. Information Quality from the GO-JEK mobile application can lead to mSatisfaction, where user satisfaction can be felt by students who make transactions through the GO-JEK application service. Which can be done anywhere and anytime, as well as lower costs and easier access to information. The quality of the information in the performance of a website or application measures the level of user satisfaction with technical and functional performance. When making transactions, users will rely on descriptions and photos provided in the application features to understand the

product and emphasize system properties such as ease of use of the application, ease of navigation, time to respond. If the application features can provide a clear layout, systematic category items, and various dining options will help users find deals more quickly and avoid extra costs.

The information factor is an essential factor related to existing products or services in application services. The information is valuable and relevant in predicting the quality and usefulness of the product or service. To give high satisfaction and trust to students, GO-JEK must provide up-to-date information, help users make decisions. The challenge is to gain trust when users cannot see and feel the service through the application. Although various attractive offers have been displayed, many situations can leave doubts. Information quality, user-friendliness, and a sense of security are needed to use the application system. There are no direct human service providers in an online-based environment, then the quality of service influences creating satisfaction and loyalty. Loyal users are students whose satisfaction is fulfilled; students consider the performance of the system in detail and the ease of using application services so that users can efficiently complete transactions without any problem with the application system. In this case, we can conclude that the application in the field of online transportation technology provides new opportunities for the business world to continue to develop in the face of existing competition. Tajpour et al. (2018b) argue that managers must take advantage of current opportunities in creating a business strategy.

## DISCUSSION, IMPLICATIONS, AND CONCLUSION

This study examines the effect of information quality on GO-JEK application services on the satisfaction, trust, and loyalty of GO-JEK mobile applications. Based on table 1, all hypotheses are accepted. The quality of information is considered to influence perceived satisfaction. Users will be more confident in using the application if it provides an operating system that is reliable and easy to use. The quality of information is affected not only by the type of product but also by the completeness and recency of the information. Electronic service is undoubtedly different from services in offline stores. In an online environment, consumers do not have direct contact with employees, so that all services are obtained virtually. Good service guarantees consumers to find information, place orders, and wait for orders. From this research, it can be concluded that students are loyal to the GO-JEK application and are satisfied with the online services provided, the availability of well-personalized quality information. Results in satisfaction, and students will continue to use the application to order transportation services and other optional features and recommend others. Satisfaction by consumers is an important thing that service providers do if GO-JEK wants to remain in students' hearts and get loyal customers because they can maintain affordable costs rather than getting new customers.

This study provides a practical contribution that can be used as input or consideration for service providers, namely GO-JEK, in determining steps for developing service and information quality to increase satisfaction and trust in obtaining user loyalty to GO-JEK. This research also contributes to the basic framework of the technology acceptance model (TAM) that the presence of applications in online transportation can provide convenience for users and can make solutions to support daily activities; thus, following TAM's goal of providing comfort for users. Limitations This research object is limited to students who use the GO-JEK application in Indonesia. It cannot be generalized to students who use the GO-JEK application, which has a more comprehensive level of coverage or at the provincial, even national level. The

characteristics of the respondents only apply to students in Indonesia, so that the sample of users does not include other occupations. Future research suggests developing existing research models by adding other variables such as advocacy and experience quality in applications and expanding the object of study.

## REFERENCES

- Akkaya, B., & Tabak, A. (2017). The impact of dynamic capabilities on firm perceived marketing performance of small and medium sized enterprises. *Transnational Marketing Journal*, 5(2), 121-125.
- Anderson, R.E., & Srinivasan, S.S. (2003). E-satisfaction and e-loyalty: A contingency framework. *Psychology & Marketing*, 20(2), 123-138.
- Azam, A., Qiang, F., & Abdullah, M.I. (2012). E-satisfaction in business-to-consumer electronic commerce. *The Business & Management Review*, 3(1), 18.
- Chong, A.Y.L., Chan, F.T., & Ooi, K.B. (2012). Predicting consumer decisions to adopt mobile commerce: Cross country empirical examination between China and Malaysia. *Decision Support Systems*, 53(1), 34-43.
- Cox, J., & Dale, B.G. (2001). Service quality and e-commerce: an exploratory analysis. *Managing Service Quality: An International Journal*.
- Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 319-340.
- DeLone, W.H., & McLean, E.R. (2004). Measuring e-commerce success: Applying the DeLone & McLean information systems success model. *International Journal of Electronic Commerce*, 9(1), 31-47.
- Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research.
- Fornell, C., Johnson, M.D., Anderson, E.W., Cha, J., & Bryant, B.E. (1996). The American customer satisfaction index: nature, purpose, and findings. *Journal of Marketing*, 60(4), 7-18.
- Garbarino, E., & Johnson, M.S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*, 63(2), 70-87.
- Gefen, D., Karahanna, E., & Straub, D.W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 51-90.
- Gommans, M., Krishnan, K.S., & Scheffold, K.B. (2001). From brand loyalty to e-loyalty: A conceptual framework. *Journal of Economic & Social Research*, 3(1).
- Howard, P. E., Rainie, L., & Jones, S. (2001). Days and nights on the Internet: The impact of a diffusing technology. *American Behavioral Scientist*, 45(3), 383-404.
- Hutcheson, G.D., & Moutinho, L. (1998). Measuring preferred store satisfaction using consumer choice criteria as a mediating factor. *Journal of marketing Management*, 14(7), 705-720.
- Jimenez, N., San-Martin, S., & Azuela, J.I. (2016). Trust and satisfaction: the keys to client loyalty in mobile commerce. *Academia Revista Latinoamericana de Administración*.
- Jung, W. (2004). A review of research: an investigation of the impact of data quality on decision performance. In *Proceedings of the 2004 international symposium on information and communication technologies* (pp. 166-171).
- Kim, D., & Steinfield, C. (2004). Consumers mobile internet service satisfaction and their continuance intentions. *AMCIS 2004 Proceedings*, 332.
- Kursunluoglu, E. (2014). Shopping centre customer service: creating customer satisfaction and loyalty. *Marketing Intelligence & Planning*.
- Lee, K.C., & Chung, N. (2009). Understanding factors affecting trust in and satisfaction with mobile banking in Korea: A modified DeLone and McLean's model perspective. *Interacting with Computers*, 21(5-6), 385-392.
- Madnick, S.E., Wang, R.Y., Lee, Y.W., & Zhu, H. (2009). Overview and framework for data and information quality research. *Journal of Data and Information Quality (JDIQ)*, 1(1), 1-22.
- McFadden, F.R., Hoffer, J.A., Prescott, M.B. (1999). *Modern database management 5<sup>th</sup> edition*. Boston: Addison Wesley.



- McKinney, V., Yoon, K., & Zahedi, F.M. (2002). The measurement of web-customer satisfaction: An expectation and disconfirmation approach. *Information Systems Research*, 13(3), 296-315..
- Pavlou, P.A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7(3), 101-134.
- Rauniar, R., Rawski, G., Yang, J., & Johnson, B. (2014). Technology acceptance model (TAM) and social media usage: an empirical study on Facebook. *Journal of Enterprise Information Management*.
- Ribbink, D., Van Riel, A.C., Liljander, V., & Streukens, S. (2004). Comfort your online customer: quality, trust and loyalty on the internet. *Managing Service Quality: An International Journal*.
- Santouridis, I., & Trivellas, P. (2010). Investigating the impact of service quality and customer satisfaction on customer loyalty in mobile telephony in Greece. *The TQM Journal*.
- Soltani, I., & Gharbi, J.E. (1970). Determinants and consequences of the website perceived value. *The Journal of Internet Banking and Commerce*, 13(1), 1-13.
- Szymanski, D.M., & Hise, R.T. (2000). E-satisfaction: an initial examination. *Journal of Retailing*, 76(3), 309-322.
- Tajpour, M., Hosseini, E., & Moghaddm, A. (2018a). The effect of managers strategic thinking on opportunity exploitation. *Scholedge International Journal of Multidisciplinary & Allied Studies*, 5(2), 68-81.
- Tajpour, M., Moradi, F., & Jalali, S.E. (2018b). Studying the influence of emotional intelligence on the organizational innovation. *International Journal of Human Capital Urban Management*, 3(1), 45-52.
- Tam, C., & Oliveira, T. (2017). Understanding mobile banking individual performance: The DeLone & McLean model and the moderating effects of individual culture. *Internet Research*.
- Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research*, 11(4), 342-365.
- Yang, K., & Jolly, L.D. (2008). Age cohort analysis in adoption of mobile data services: Gen Xers versus baby boomers. *Journal of Consumer Marketing*.
- Zeglat, D., Shrafat, F., & Al-Smadi, Z. (2016). The impact of the e-service quality (E-SQ) of online databases on users' behavioural intentions: A perspective of postgraduate students. *International Review of Management and Marketing*, 6(1).
- Zhang, R., Chen, J.Q., & Lee, C.J. (2013). Mobile commerce and consumer privacy concerns. *Journal of Computer Information Systems*, 53(4), 31-38.