
THE EFFECT OF INFORMATION SECURITY SYSTEMS ON SERVICE QUALITY IN E-COMMERCE SYSTEMS

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ABSTRACT

The current development of information technology has brought significant changes in the business world, including the e-commerce system. However, this technological development also brings new risks, namely the threats to information security in e-commerce systems. Therefore, e-commerce companies must develop an effective information security system to minimize security risks and improve service quality. This study aims to analyze the effect of information security systems on service quality in e-commerce systems. The method used in this research is qualitative by conducting interviews with several e-commerce system users and management of e-commerce companies related to information security systems. The results show that an effective information security system significantly influences the quality of service in e-commerce systems. E-commerce system users have more confidence in systems with robust information security systems, improve data integrity, and reduce the possibility of problems or failures in e-commerce systems. In addition, management who is actively involved in paying attention to information security systems will show concern for the security of user data and increase user trust in the e-commerce system being operated. e-commerce companies must prioritize developing and continuously improving their information security systems and ensure management involvement in maintaining data security to gain user trust and loyalty. This, in turn, can enhance the service quality provided and positively impact future business growth.

Keywords: security system, service quality, e-commerce.

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INTRODUCTION

The Internet and information technology have significantly changed various aspects of human life, including trade and business (Hanim, 2011). E-commerce or electronic commerce is becoming an increasingly popular alternative for consumers to make transactions without visiting a physical store (Sitompul & Aslami, 2022). As a result, e-commerce is growing, and more businesses are switching to online business models (Barkatullah, 2019).

However, more and more businesses are switching to the e-commerce business model, which means more and more data is being sent and stored via the Internet (Budiarta et al., 2020). This increases the risk of cyberattacks and breaches of user data privacy. Therefore, information security is one of the critical factors that must be considered in the e-commerce business (Romla & Ratnawati, 2018).

One of the critical aspects of e-commerce is the quality of services offered to consumers. Service quality is a significant factor in determining the success of an e-commerce business (Setiawan et al., 2016). However, poor information security can hurt the quality of services offered by e-

commerce businesses, for example, by increasing system response times, reducing system availability, and reducing consumer confidence in the e-commerce business (Tannady, 2018).

Based on previous research, this study aims to analyze the effect of the Information Security Management System (SMSI) on service quality in e-commerce systems in Indonesia (Hidayanto, AN, & Pratama, 2020). The study results show that SMSI positively and significantly influences service quality in e-commerce systems.

Research that has been researched, aims to understand the factors that influence the adoption of cloud computing for e-commerce systems (Abou-Shouk, MA, Limayem, M., & Papazafeiropoulou, 2013). One of the factors discussed is information security, which is considered essential to improve service quality in e-commerce systems (Pekasa & Sanica, 2021).

Research that has been researched, aims to analyze the effect of information security management on user trust in e-commerce systems, considering the institutional trust factor as a moderator (Choi, JH, Kim, JH, & Hong, 2018). The study results show that information security management positively and significantly influences user trust in e-commerce systems.

Therefore, in this research, a study will be carried out on the influence of information security systems on service quality in e-commerce systems. This research aims to find out how much information security systems influence service quality in e-commerce systems and how to improve service quality in e-commerce systems by improving information security systems.

This research is expected to benefit e-commerce businesses to improve the quality of services offered to consumers. It can also provide input for further research regarding the factors influencing service quality in e-commerce systems.

METHODS

In this study, the method used is qualitative. A qualitative research approach collects and analyzes data in non-numeric forms, such as words, narratives, or pictures. This method is used to understand complex phenomena. It can provide in-depth explanations of individual or group experiences of a phenomenon.

The following are the stages of the qualitative method used in this study:

1. Data collection

Data was collected through in-depth interviews with e-commerce users and information security experts. E-commerce users were randomly selected from various age and gender groups. In contrast, information security experts were selected based on their experience and expertise in information security.

2. Data analysis

The data obtained from the interviews will be analyzed using content analysis techniques. This technique is used to identify themes and patterns in the interview data so that conclusions and findings can be drawn relating to the influence of information security systems on service quality in e-commerce systems.

3. Data verification

Data verification is done by checking the validity and accuracy of the interview data. This is done by comparing data obtained from different sources and triangulating the data to ensure the accuracy of the data obtained.

4. Data interpretation

Data interpretation is made by analyzing data holistically, which involves understanding the broader context. Data interpretation also involves reflection on the experiences of e-commerce users and information security experts to produce a more in-depth explanation of the influence of information security systems on service quality in e-commerce systems.

By using qualitative methods, this research can provide a deeper understanding of the influence of information security systems on service quality in e-commerce systems so that they can provide input for e-commerce businesses in improving the quality of services offered.

RESULTS AND DISCUSSION

The results of this study indicate that information security systems significantly influence service quality in e-commerce systems. Based on the data analysis that has been carried out, several significant findings were found as follows:

1. User trust in the e-commerce system increases when the information security system implemented by the e-commerce company is considered solid and practical. Users feel safer and more comfortable transacting and interacting with e-commerce systems (Sari et al., 2020).
2. An effective information security system also improves data integrity in e-commerce systems so users can access valid and reliable information. This helps users make the right decisions and increases user satisfaction with the services offered by e-commerce systems (Sudirman et al., 2020).
3. Management involvement in paying attention to information security systems is a key factor in improving service quality in e-commerce systems. Management actively involved in developing and improving information security systems will show concern for the security of user data and increase user confidence in the e-commerce system being operated (Prasetio et al., 2021).
4. It was also found that an effective information security system can increase user satisfaction and reduce the possibility of problems or failures in e-commerce systems. This can increase user loyalty and positively impact e-commerce business growth in the long term.

Based on the results of this study, it can be concluded that information security systems significantly influence service quality in e-commerce systems. Therefore, e-commerce companies need to develop an effective information security system and continuously improve existing systems, as well as pay attention to management involvement in ensuring the security of user data on e-commerce systems (Rakhman et al., 2023).

Based on the results of the research that has been done, information security systems have a significant influence on service quality in e-commerce systems. An effective information security system can increase user trust in e-commerce systems, improve data integrity, and reduce the possibility of problems or failures in e-commerce systems. This can increase user loyalty and positively impact e-commerce business growth in the long term.

In the context of e-commerce, user trust in the e-commerce system is very important because users must provide personal information and carry out financial transactions through the e-commerce system (Irmawati, 2011). Suppose the information security system is considered weak or unreliable. In that case, users will not feel comfortable using the e-commerce system and may choose another e-commerce system or even return to traditional transaction methods.

In addition, data integrity in e-commerce systems is also essential. Users must be able to access valid and reliable information to make the right decisions and avoid losses or errors in transactions. An effective information security system can help improve data integrity in e-commerce systems, so users can feel more confident using the system (Islek & Oguducu, 2022).

Management involvement in paying attention to information security systems is also essential in improving service quality in e-commerce systems (Pradnyaswari & Aksari, 2020). Management actively involved in developing and improving information security systems will show concern for the security of user data and increase user trust in the e-commerce system being operated.

Overall, this study shows that information security systems are essential in improving service quality in e-commerce systems. E-commerce companies need to pay attention to developing an effective information security system and continuously improving existing systems, as well as pay attention to management involvement in ensuring the security of user data on e-commerce systems (Vučković et al., 2018). In the long run, this can help e-commerce companies increase user trust, improve data integrity, and increase user loyalty to their e-commerce system.

CONCLUSION

Based on the results of the research that has been done, it can be concluded that information security systems have a significant influence on service quality in e-commerce systems. An effective information security system can increase user trust in e-commerce systems, improve data integrity, and reduce the possibility of problems or failures in e-commerce systems. This research also shows that management actively paying attention to information security systems will show concern for the security of user data and increase user trust in the e-commerce system being operated. Therefore, e-commerce companies need to develop an effective information security system and continuously improve existing systems, as well as pay attention to management involvement in ensuring the security of user data on e-commerce systems. This conclusion is essential for e-commerce companies to pay attention to because information security and service quality are critical factors in winning the business competition in an increasingly competitive market. By improving information security systems, e-commerce companies can gain user trust and loyalty and improve the service quality, positively impacting future business growth.

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