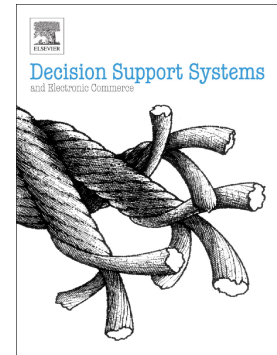


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# Comparing Fingerprint-based Biometrics Authentication versus Traditional Authentication Methods for e-Payment

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## Abstract

Biometrics authentication for electronic payment is generally viewed as a quicker, convenient and a more secure means to identify and authenticate users for online payment. This view is mostly anecdotal and conceptual in nature. The aim of the paper is to shed light on the comparison of perceptions and beliefs of different authentication methods for electronic payment (i.e., credit card, credit card with PIN, and fingerprint biometrics authentication) in an e-commerce context. As theoretical foundation, the valence framework is used in understanding and explaining the individual's evaluation of benefit and risk concerning the payment methods. We propose a research model with hypotheses that evaluate and compare the individual's perceptions of the payment authentication methods, trust of the online store, and the willingness to continue using the website account associated with the payment authentication method. An experiment is used to test the hypotheses. The results show that biometrics authentication significantly influences the individual's security concern, perceived usefulness, and trust of online store. Theoretically, through the study's context – biometrics versus credit card authentication – evidence is provided

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