8-9-2021

A Behavioral Intention for Biometric Payment Card: A Swedish Perspective

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TREO Talk Paper

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Abstract

Technological innovations are re-writing the norm of payments throughout the world. In the past few years, several innovative payment solutions have been continuously introduced into the market. This research is interested in an innovation named *biometric payment card*, which is a card payment using a combination of token, i.e., the card itself, and biometric authentications, i.e., fingerprints. Card owners are required to authenticate in-person card transactions with a fingerprint placed onto the card.

In Sweden, there is an exceptionally high level of payment card penetration rate, i.e., at 97 percent (Riksbank 2019). There is also a high amount of yearly average payment card transaction per user at 319, compared to the EU average at 116 (Riksbank 2019). Therefore, a card-based payment solution is argued to be a relevant choice for the Swedish market despite growth in other technological-driven payment categories, especially mobile payments. Biometric payment card will arrive in Sweden for pilot testing in 2021. Hence, it is crucial to study a behavioral intention innovation to accept this technology among prospective users in Sweden to ensure a smooth transition to the biometric technology.

This study plans to explore a behavioral intention to accept biometric payment cards. It will combine classical technology acceptance model (TAM) constructs - like perceived ease of use (PEOU), perceived usefulness (PU) and attitude (ATT) - with trust (T). Since the biometric payment cards are not yet implemented in Sweden for the time being, an online survey will be designed in a way that respondents are required to watch a 30 second video instruction on how the biometric payment card will work once it is implemented. Structural equation modelling (SEM) will be used for data analysis.

This study will contribute specifically to the academic research on biometric card innovation acceptance. To the best of our knowledge, it is believed to be the first study that provides an acceptance insight on this innovation. Second, this study will contribute to an importance of trust in the context of biometric technologies. For practitioners, this study will provide an insight toward factors that should be considered to promote biometric card acceptance among Swedish consumers.

References

Riksbank. 2019. "Payments in Sweden 2019." https://www.riksbank.se/globalassets/media/rapporter/sa-betalar-svenskarna/2019/engelska/payments-in-sweden-2019.pdf