FACTORS AFFECTING ADOPTION OF CONTACTLES PAYMENT APPLICATIONS IN THE FINTECH ENVIRONMENT.

KORISHA A/P BRAGALATHAN

B061910345

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

KORISHA A/P BRAGALATHAN

This thesis is submitted in partial fulfillment of the requirements for the award of

Bachelor of Technoprenuership with Honours

Faculty of Technology Management and Technopreneurship

Universiti Teknikal Malaysia Melaka

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

22 JANUARY 2023

I hereby acknowledge that this project paper has been accepted as part of fulfillment for the degree of Bachelor of Technoprenuership with Honors.

SIGNATURE :

DR. NOR AZAH BINTI ABDUL AZIZ
PENSYARAH KANAN
JABATAN TEKNOUSAHAWANAN
FAKULTI PENGURUSAN TEKNOLOGI & TEKNOUSAHAWANAN
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

NAME OF SUPERVISOR : DR.NOR AZAH BINTI ABDUL AZIZ

DATE : 22 JANUARY 2023

SIGNATURE :

NAME OF PANEL : ASSOC.PROF DR. JUHAINI BINTI JABAR

DATE : 22 JANUARY 2023

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DECLARATION OF ORIGINAL WORK

I hereby declare that all the work of this thesis entitled “Trends, Security challenges, Privacy information, performance affecting Contactless Payment Application in the Fintech environment” is original done by myself and no portion of the work encompassed in this research project proposal has been submitted in support of any application for any other degree or qualification of this or any other institute or university of learning.

SIGNATURE :

NAME : KORISHA A/P BRAGALATHAN

DATE : 22 January 2023

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DEDICATION

I would like to appreciate the dedication of my beloved family members who educated me and motive me to learn until degree level. And also, I express a deep sense of gratitude to my lecturer whom also my supervisor for my final year project, DR.Nor Azah Binti Abdul Aziz and my fellow friends. They have provided me fully support and advice throughout this research. Without their blessing and encouragement, this research is impossible to complete within short period of time.

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ACKNOWLEDGEMENT

First and foremost, I would like to express my gratitude to God for giving me good health, strength, and the opportunity to gain my knowledge successfully to complete this Final Year Project (FYP) within a given time. I would like to thanks my parents for their support and patient in waiting for me to finish my degree. I also express my sincere thanks to my friends for giving timely pieces of advice to this research project. They are sharing a lot of knowledge related to proceed this research project. It helps me to complete this research project more efficiently.

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ABSTRACT

The introduction of mobile devices has altered the lives of customers in numerous ways, most notably in the way they make payments. Mobile payment is one of the newer developments introduced by financial institutions. Mobile payment is a rapidly increasing payment mechanism that can be used as an alternative to traditional payment methods. However, despite the fact that mobile payments provide several benefits to customers, adoption intentions are low in Malaysia. The study will concentrate on consumers due to their traits of being resistant to technological changes, having a strong purchasing power, and being one of Malaysia's most populous groups.

As a result, the purpose of this study is to investigate the resistance factors in order to better understand consumer in Malaysia is slow to accept new technologies. The Trends, security challenges, privacy information and performance of mobile payment app. The outcomes of this study will help financial providers and business practitioners understand how to improve the rate of adoption Fintech in Malaysia by allowing them to identify individual resistance behaviour and design strategies to overcome resistance obstacles. The research was completed using a quantitative strategy, and the examination was completed using a Pearson connection to assess the relationship between free components and ward variables. The relapse inquiry was used to evaluate theories. As a result, it is expected that this examination paper has been useful to business experts and academicians for future reference.

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Keywords: Trends, Security challenges, Privacy information, performance, contactless payment application, Fintech environment

ABSTRAK

Pengenalan peranti mudah alih telah mengubah kehidupan pelanggan dalam pelbagai cara, terutamanya dalam cara mereka membuat pembayaran. Pembayaran mudah alih adalah salah satu perkembangan baru yang diperkenalkan oleh institusi kewangan. Pembayaran mudah alih ialah mekanisme pembayaran yang meningkat pesat yang boleh digunakan sebagai alternatif kepada kaedah pembayaran tradisional. Walau bagaimanapun, walaupun pada hakikatnya pembayaran mudah alih memberikan beberapa faedah kepada pelanggan, niat pakai adalah rendah di Malaysia. Kajian ini akan tertumpu kepada pengguna kerana sifat mereka yang tahan terhadap perubahan teknologi, mempunyai kuasa beli yang kukuh, dan menjadi salah satu kumpulan paling ramai penduduk di Malaysia.

Hasilnya, tujuan kajian ini adalah untuk menyiasat faktor rintangan agar lebih memahami pengguna di Malaysia lambat menerima teknologi baharu. Trend, cabaran keselamatan, maklumat privasi dan prestasi aplikasi pembayaran mudah alih. Hasil kajian ini akan membantu penyedia kewangan dan pengamal perniagaan memahami cara meningkatkan kadar penggunaan Fintech di Malaysia dengan membenarkan mereka mengenal pasti tingkah laku rintangan individu dan mereka bentuk strategi untuk mengatasi halangan rintangan. Kajian telah disiapkan menggunakan strategi kuantitatif, dan peperiksaan telah diselesaikan menggunakan sambungan Pearson untuk menilai hubungan antara komponen bebas dan pembolehubah wad. Siasatan berulang digunakan untuk menilai teori. Hasilnya, diharapkan kertas peperiksaan ini berguna kepada pakar perniagaan dan ahli akademik untuk rujukan masa hadapan.

Kata kunci: Trend, Cabaran keselamatan, Maklumat privasi, prestasi, aplikasi pembayaran tanpa sentuh, persekitaran Fintech.

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LIST OF SYMBOLS

$\bar{x}$	Sample mean
N	Number of Item
σ	Standard Deviation (S.D.)
c	Length of Class Interval
X^2	Squares of The Deviations of Scores from the Assumed Mean
f	Frequency of Class Interval
c^2	Square of Correction
N	Total Number of Score
v	Average Variance
X_i	The *i*th Independent Variable

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LIST OF ABBREVIATIONS

ABBREVIATION	MEANING
Fintech	Financial Technology
SAP	secure authentication protocol
SMS	Short message service
NFC	near-field communication
QR code	quick response code
Gen Y	Generation Y

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter will discuss about the Trends,Security Challenges,Privacy Information and Performance, affecting Contactless Payment Applications in Fintech environment. The background of study, problem statement, research questions, research objectives, scope and limitation of the study, significant of study and summary has been discussed in this chapter.

1.2 Background of Study

Due to numerous legislation and marketability, contactless payment services are only employed in limited regions, despite the fact that the financial system is already largely digitalize. However, as more mobile devices are available around the world and online purchasing becomes more popular, the digital contactless payment sector has increased significantly. The demand for simplified payment has grown as the contactless payment business has matured and users' contactless payment frequency has increased. The need for quick and convenient contactless payment services is growing in all digital contexts, including those with well-established financial infrastructure and those in developing countries where currencies such as cash are not widely dispersed.

According to a 2014 Gartner estimate, because contactless payment transactions began in Africa and developing Asian countries, the contactless payment population is predicted to rise rapidly until 2016. Financial Technology (Fintech), which combines finance and technology, is being created around the world to provide these customers

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with streamlined contactless payment services as well as financial services tailored to consumers and service providers.

Customers may now use their mobile devices to pay for goods and services they buy anywhere and at any time, making transactions more convenient, effective, and secure. contactless payment is an emerging payment method that can be used to enhance or replace traditional payment methods (Tan, Ooi, Chong, Hew, 2014). Both customers and retailers can benefit from contactless payments. Customers would no longer have to wait in long queues at the checkout counter if contactless payment options were introduced, boosting their satisfaction with the store, motivating them to spend more frequently, and improving business.

As of today, thousands of online and mobile retailers allow customers to pay via a contactless payment platform. Despite the fact that contactless payment is simple to use and useful to users, Malaysia's acceptance rate is still lower than in other nations, especially among Malaysian customers. According to Wikipedia, Generation Y refers to anyone born between the early 1980s and the early 1994s. They account for 40% of Malaysia's total population. They are in a high-earning, high-spending stage of life, therefore digital tools are inextricably linked to their purchasing decisions. Generation y is a popular target demographic due to its big population and high spending power (Jian Ai, 2021).

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1.3 Problem Statement

In several markets, cash payment reigns supreme, accounting for more than 90% of all payments in practically all developing countries (S. F. Verkijika, 2020). As a result, it is critical to recognize the significance of contactless payment acceptability. Following the first Contactless payment transaction in 1997, multiple research studies on contactless payment were undertaken by various researchers (T. Dahlberg, J. Guo, J. Ondrus, 2015). Several research on contactless payment deployment has emphasized the importance of user involvement. It is critical to consider user behavior on contactless payment in order to promote contactless payment services and increase users' acceptance intentions. (S. Saxena, 2019) attempted to answer certain questions

about the security of online payment systems, and proposes many methods for dealing with various security threats linked with online payment systems.

Credit cards, e-wallets, debit cards, net banking, smart card, Paypal, and amazon pay are all examples of contactless payments (A. Thangamuthu, 2020). Integrity and authorization, out-of-band authorization, password authorization, signature authorization, secrecy, and availability, and dependability are among the requirements presented by the authors for online payments. For contactless payment, a new secure authentication protocol (SAP) has been proposed. Despite the fact that many studies on contactless payment are underway, we are unaware of any research that highlights the security needs by comparing and analyzing present payment services and mobile Fintech payment services. It is vital to establish Fintech payment service criteria and identify security concerns in order to deliver mobile Fintech payment services securely and conveniently in the quickly increasing contactless payment market.

According to the Fintech Malaysia study for 2018, internet penetration in Malaysia is 85.7 percent, online banking penetration is 85.1 percent, and Fintech application mobile penetration is just 40%. Though data shows that Fintech application mobile transactions have a smaller value, it is clear that Fintech application mobile is a preferred alternative for micro payments, as the research demonstrates that transaction volume is higher (V. Fong, 2018). Customers' trust in the security of Fintech applications on mobile is still low, as evidenced by this statistic. Lower Fintech application mobile penetration could be due to a variety of factors, including word of mouth, where dissatisfied customers encourage their friends, colleagues, and family members to stick with traditional banking and internet banking rather than adopting new alternatives, such as Fintech application mobile, for banking activities that provide greater benefits.

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The study explained the mobile Fintech payment infrastructure by comparing existing payment services to demonstrate the relationship between them, then analyzing recent trends in mobile Fintech payment services to classify them into different types of payment services and organizing the requirements that mobile Fintech payment services should meet. In addition, the study studied and classified the security

difficulties that mobile Fintech payment services face, as well as recommending requirements.

1.4. Research Objectives

1. To examine factors (Trends,Security Challenges,Privacy Information and Performance) that affect the Contactless Payment Applications in Fintech environment.
2. To study the most significant factor influence the contactless Payment application.
3. To investigate the relationship between the factors and the Contactless payment application .

1.5 Research Questions

1. What are the factors (Trends,Security Challenges,Privacy Information and Performance) that affect the Contactless Payment Applications in Fintech environment ?
2. What is the most significant factor that influence the Contactless Payment application ?
3. How do the factors affecting the Contactless Payment application ?

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1.6 Scope and Limitation of the Study

This research paper is focusing on the Trends,Security Challenges,Privacy Information and Performance,affecting Contactless Payment Applications in Fintech environment. This study has been conducted among 385 respondents from all states of Malaysia. The selected respondents has been chosen randomly among Gen Y. The researcher has been carried out by distributing questionnaires to the respondents.

The limitation of the study is the inaccurate data from respondents due to them was chosen randomly by the researcher. The researcher may not focus on every single state of Malaysia. Besides, the researcher experienced the time limitation in conducting the study. The research faced time constraints since the study needed to be completed in a short period of time which is 10 months.

1.7 Operational definition.

contactless payment

Contactless payment is a safe payment technique that employs RFID technology and near-field communication to enable the use of a debit or credit card, smart-card, or other payment device. To use the system, a customer taps their credit card near a point-of-sale terminal that has the technology installed. Because it does not need users to enter a PIN, contactless payment is seen as a quick and convenient method of payment. Contactless payment, which is popular in Australia, Canada, South Korea, and the United Kingdom, has yet to gain traction with American consumers (Julia Kagan, 2020).

FinTech environment

The term "FinTech," which is an abbreviation for Financial Technology, refers to businesses or representatives of businesses that integrate financial services with current, innovative technologies. 3 New market entrants typically offer Internet-based and application-oriented products. FinTech often seek to attract customers by offering more user-friendly, efficient, transparent, and automated products and services. Traditional banks have not yet exhausted the opportunities for development in this area (EBF, 2015; Mackenzie, 2015).

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contactless payment Application

A mobile payment is a monetary transaction done using a portable electronic device such as a tablet or cell phone to purchase a product or service. Contactless payment systems, such as PayPal and Venmo, can also be used to send money to friends and family members. Contactless payments were initially more popular in Asia and Europe, but they quickly moved to North America and witnessed significant development. Merchants' unwillingness to retool current terminals has contributed to contactless pay's modest growth as compared to physical credit cards. When compared to conventional cards, contactless payments provide more privacy and