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THE FACTORS INFLUENCING ADOPTION TOWARDS E-HAILING SERVICES AMONG USERS IN MELAKA

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The report submitted in partial fulfilment of the requirements for a Bachelor's of Technology Management (Innovation Technology) with Honours

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DECLARATION

"I admit that this report is the result of my own except a summary and excerpts of everything I have explained the source"

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DEDICATION

This research is dedication to my parents, Mr. Embong Bin Mohd Zin and Madam Simah Binti Abdullah, who have given me supports and motivations in my studies. Without their inspirations and spirits I would not be able to complete this research successfully. To all my family thank you because give me advice and be there to lighten my problems.

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ABSTRACT

E-hailing is a process of ordering a taxi via mobile devices. Previously, the users always hail empty-cruising taxis on streets, which may offer low lower of comfort. The advance of technology helps to improve the efficiency of overall taxi system and enable the idea of using applications to locate a taxi. The objective of the research is to identify the factor influence adoption towards e-hailing services in Melaka. The research model includes basic concept of Unified Theory of Acceptance and use of Technology (UTAUT). A survey questionnaire was developed to collect the data from 384 respondents in Melaka. This study used quantitative method to describe the variable, analyse relationship among variable and indicate the most influence factor of the adoption. This research study on four independent variable based on UTAUT model; 1) Performance Expectancy, 2) Effort Expectancy, 3) Social Influence and 4) Facilitating Condition towards adoption of e-hailing. The sample technique used is simple random sampling. Data collected was analysed using Statistical Package Social Science (SPSS) to find out the relationship and factor of adoption towards e-hailing by user in Melaka. The finding indicated that facilitating condition is the most influence factor on adoption towards e-hailing.

ABSTRAK

E-hailing adalah proses pesanan teksi melalui peranti mudah alih. Sebelum ini, para pengguna kebiasaannya menahan teksi kosong di jalanan, yang mungkin menawarkan keselesaan yang rendah. Kemajuan teknologi membantu meningkatkan kecekapan sistem teksi keseluruhan dan membolehkan idea menggunakan aplikasi untuk mencari teksi. Objektif penyelidikan adalah untuk mengenal pasti faktor yang mempengaruhi penerimaan pengguna terhadap perkhidmatan e-hailing di Melaka. Model kajian merangkumi konsep asas Teori Bersepadu Penerimaan dan Penggunaan Teknologi (UTAUT). *Soal selidik kajian telah dijalankan untuk mengumpul data daripada 384 responden di Melaka. Kajian ini menggunakan kaedah kuantitatif untuk menerangkan pembolehubah, menganalisis hubungan antara pembolehubah dan menunjukkan faktor yang paling mempengaruhi Penerimaan. Kajian ini mengkaji empat pembolehubah bebas berdasarkan model* UTAUT*;* 1) Performance Expectancy, 2) Effort Expectancy, 3) Social Influence *dan* 4) Facilitating Condition *ke arah penggunaan e-hailing. Teknik sampel yang digunakan adalah persampelan rawak mudah. Data yang dikumpul telah dianalisa menggunakan* Statistical Package Social Science (SPSS) *untuk mengetahui hubungan dan faktor penerimaan terhadap e-hailing oleh pengguna di Melaka. Hasil kajian telah menunjukkan bahawa* Facilitating Condition *adalah faktor yang paling mempengaruhi peneriamaan terhadap e-hailing.*

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LIST OF ABBREVIATION

ATE	=	Adoption Towards E-hailing
EF	=	Effort Expectancy
FC	=	Facilitating Condition
ICTs	=	Information and Communications Technologies
IS	=	Information System
IBL	=	Intermediation Business Licence
PE	=	Performance Expectancy
Puspakom	=	Computerised Vehicle Inspection Centre
RTD	=	Road Transport Department
RA	=	Ridesharing Application
SI	=	Social Influence
SPAD	=	Land Public Transport Commission
SPSS	=	Statistical Package for Social Science
TAM	=	Technology Acceptance Model
TNC	=	Transportation Network Companies
TPEP	=	Taxi Passenger Enhancement Program
UTAUT	=	Unified Theory of Acceptance and Use of Technology

LIST OF SYMBOL

%	=	Percentage
<	=	Less than
>	=	More than
=	=	Equal
α	=	Alpha
β	=	Beta
r	=	Coefficient
R^2	=	R square

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter describes about background of study and then follows by problem statement, research question, and research objective, research scope limitation, significant of study and structure of proposal.

1.2 Background of Study

An e-hailing service is a process of ordering a car, taxi, limousine, or any of transportation pick up via computer or mobile application. Transportation has become an important element for daily life. Taxis perform as an important element of mobility in the transportation system of any city. People prefer to choose taxis rather than other public transportation because of the speediness, privacy, comfort, lack of parking fees, and door-to door and 24-h-a-day attribute. Traditionally, customers always hail empty-cruising taxis on streets, which may offer low lower of comfort and efficiency especially during rush hours or rainy days (Fang and Zuo-Jun, 2015).

The advance technologies have been established to increase the efficiency of the overall taxi system. The adoption of smartphones has been increasing rapidly. It

is predicted that the number of smartphones will triple to 5.6 billion globally by 2019 (Ericsson, 2013). With the proliferation of smartphones, smartphone-based e-hailing applications, such as Uber, Grabcar, Lyft, Kuaidi, and Didi, are experiencing fast growth globally. (Santi et al. ,2014) found that if a customer hails a cab from his/her smartphone, waits for up to one minute for a shared taxi, and could tolerate a delay of up to five minutes in a shared taxi service trip, 32% of the total travel times can be saved. This statement support by (Fang and Zuo-Jun, 2015) introducing the e-hailing application can reduce the average taxi waiting time, increase the average taxi utilization rate and attract more travellers to take taxis.

According to the past research reviewed, not much research carried out in Malaysia because of the e-hailing is still new and still in monitoring process. Therefore, this research is to investigate the factors affecting adoption of e-hailing services in Melaka Tengah. This research is to help e-hailing provider and transportation sector understand the factor affecting the adoption of e-hailing services into a form acceptable to customer.

1.3 Problem Statement

E-hailing service is one of the latest technologies using mobile platform to access a transportation services and most of the countries have implemented and use e-hailing services in their daily life. Traditionally, customers always hail empty-cruising taxis on streets, which may offer low lower of comfort and efficiency especially during rush hours or rainy days (Fang and Zuo-Jun, 2015). Even though e-hailing has been launched in Malaysia since 2014, the transportation user still no aware and noticed about this services. According to Taxi operators in Nairobi survey findings (July, 2013) the main challenges affecting operators are insecurity (37.5%), traffic congestion (26.5%) and competition (15.6%). Others challenges include inexistence of meterized rides, overcharging rejection by taxi drivers, drivers not being familiar with routes and generally poor service delivery. Combined together, both customers and taxi operators have been exposed to these challenges (Onyango, 2016). While taxis are often regulated to charge static fares, ridesourcing often uses

market-rate pricing, typically known as ‘surge pricing’ – when prices usually go up during periods of high demand to incentivize more drivers to take ride requests (Shaheen & Chan, 2016).

Reducing the need for additional parking at park-and-ride lots, this would increase the need for curb-space access (Shaheen & Chan, 2016). The logistics and transport sector is calculated to account for 5.5% of the total greenhouse gas emissions globally (equivalent to 2800 mega-tonnes CO2e), for which transportation constitutes the major part (World Economic Forum, 2009). In support for e-hailing services, (Veloso et al., 2011) argued that the services dynamically connect customers with speed, dynamic routes and precision on start and end locations. This shows app-based taxi services are flexible in terms of route operation and offer easy accessibility. The App-based Taxi fills a critical gap of providing transportation either as substitute or as complement to both individual drivers and public transport (Rayle et al., 2014).

In order to understanding adoption towards e-hailing service, this information can help developer in building of e-hailing system that make customer to more interested in using it. It is necessary to identify what factor promote or hinder the adoption of e-hailing services. Therefore, to understanding adoption of e-hailing services this information can help developer in building of e-hailing system that make customer to more interest to using it.

1.4 Research Questions

1. What are the factors that influence adoption towards e-hailing services?
2. What are the relationships between the factors influence adoption towards e-hailing services?
3. What is the most influence factor of adoption towards e-hailing services in Melaka?

1.5 Research Objectives

1. To identify the factors that influence adoption towards e-hailing services.
2. To analyse the relationships between the factors influence adoption towards e-hailing services.
3. To justify the most influence factor of adoption towards e-hailing services in Melaka.

1.6 Research Scope

This study will discuss the factors that influence user in adoption of e-hailing services as well as the relationship between factors in adoption of e-hailing services. This study also discusses the role of moderator in influence users to adopt e-hailing services. The respondent of this study is e-hailing user in Melaka Tengah.

1.7 Limitation/Key Assumptions of the Study

The researcher face constrains in term of data obtained from respondent. This is because, the researcher were not able to check whether respondent provided the honest answer. Besides, respondent know or understand about the topic of the study.

1.8 Significant of Study

Understanding the factors or variables that affect user's adoption of e-hailing services will provide information on customer's behaviour towards e hailing services to the e-hailing provider, transportation sector and related sector.

1. Investigate the factors that affect e-hailing user in the adoption of e-hailing services.

2. Provide the potential factors that encourage people to using e-hailing services and also to the e hailing providers or other related industry.

1.9 Structure of Proposal

Chapter 1	This chapter describes the overview of background of study, research problem, research question, research objectives. Hence, the scope of study, limitations, important of the study and structure of this research.
Chapter 2	The researcher will clarify about the literature review related to the adoption of e-hailing from previous research and construct conceptual framework that relates with the research objectives.
Chapter 3	Describe briefly about the method used in this research. The explanation of the chosen methodological approach and research techniques also will be included.
Chapter 4	This chapter analyse and discuss about the data collection. The data analyse by using Statistical Package for the Social Science (SPSS) software (IBM SPSS Statistical 23).
Chapter 5	The researcher will provide overall conclusion of the research project. The conclusion have been summarizing of each section. Hence, the researcher provides recommendation for future study.

1.10 Summary

The first chapter indicate about the basic understanding about the way to conduct this research paper. This chapter functions as the body of research. Besides, this chapter briefly provides guidelines for further explanation explain background of study, problem statement, research question, research objective, the scope of study, limitations, important of the study and structure of this research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In this chapter reviews the existing literature on factors influencing users in regard to use and adoption of e-hailing services application as well as some of the relevant research models used to measure the adoption of new technology. Next, it briefly the research model of this study and development of hypothesis.

2.2 Definitions of terms

The research will begin looking the definition in order to find the key words and related term for the past literature that related to the study. The purpose is to address a specific, focus and relevant research question.

2.2.1 E-hailing

E-hailing service is a process of ordering a car, taxi, limousine, or any of transportation pick up via computer or mobile application. An E-Hail Application can be defined as a software program licensed by TNC (Transportation Network Companies) residing on a smartphone or other electronic device and integrated with the TPEP (Taxi Passenger Enhancement Program) (Onyango, 2016).